

FREMONT ENVIRONMENTAL INC.

September 27, 2023

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

Subject: **Facility Closure Data Submittal**
Bethyl GW 30-16
SESE Sec. 30, T8N, R63W
Weld County, Colorado
Fremont Project No. C023-253
Facility # 429642, Remediation # 30292

Dear Mr. Peterson:

As you requested, Fremont Environmental Inc. (Fremont) personnel conducted facility closure activities for the Noble Energy Inc. (Noble) Bethyl GW 30-16. Organic soil impacts were not encountered during abandonment activities. Details of the Bethyl GW 30-16 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 Report

Tank Battery Closure Checklist

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

Additional attachments (optional):		Pit Closure		Wellhead Closure		Flowline Closure		Partially Buried Vault Closure
Site Name & COGCC Facility Number:		Date:						Remediation Project #:
Associated Wells:		Age of Site:						Number of Photos Attached:
Location: (GPS coordinates of southeaster berm)							Estimated Facility Size (acres):	

General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)

USCS Soil Type:	Estimated Depth to Groundwater:
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Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)

Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)

Tanks

Tank Contents								
Size (barrels)								
Age								
Construction Material								
Tank type (AST/DRV, etc.)								
Visual Integrity of Tank								
Condition of tank footprint								
PID Readings								
Soil impacts present at valves or hatches?								
PID Readings								
Sample taken? Location/ Sample ID#								
Photo Number(s)								

Other observations regarding tanks:

Separators

Separator size								
Vertical or Horizontal								
Age								
Soil impacts observed? If yes,								
PID Readings								
Sample taken? Location/ Sample ID#								
Photo Number(s)								

Other observations regarding separators

Third Party Equipment

Type								
Age								

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

Other Facility Equipment

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

Other observations regarding other facility or third party equipment:

Summary

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

Buried or Partially Buried Vessel Closure Checklist

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

Additional attachments (optional):		Pit Closure		Wellhead Closure		Flowline Closure		Tank Battery Closure	
Site Name & COGCC Facility Number:		Date:						Remediation Project #:	
Associated Wells:		Age of Site:						Number of Photos Attached:	
Location: (GPS coordinates of vault or southeastern tank berm for multiple)							Estimated Facility Size (acres):		
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)									
USCS Soil Type:				Estimated Depth to Groundwater:					
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)									
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)									
Buried or Partially Buried Vessels									
Tank Contents									
Size (barrels)									
Age									
Construction Material									
Visual Integrity of Tank									
Condition of tank									
PID Readings									
Condition of Dumpline									
PID Readings									
Sample taken? Location/Sample ID#									
Photo Number(s)									
Other observations regarding partially buried vessels: The eastern sidewall of PWV excavation was the tie-in point for the dumpline to the separator. Dumplines were pulled.									
Summary									
Was impacted soil identified? No Yes - less than 10 cubic yards Yes - more than 10 cubic yards									
Total number of samples field screened:				Total number of samples collected:					
Highest PID Reading:				Total number of samples submitted to lab for analysis:					
If more than 10 cubic yards of impacted soil were observed:									
Vertical extent:				Estimated spill volume:					
Lateral extent:				Volume of soil removed:					
Is additional investigation required?									
Was groundwater encountered during the investigation? No Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils									
Measured depth to groundwater:				Was remedial groundwater removal conducted? Yes No					
Date Groundwater was encountered:				Commencement date of removal:					
Sheen on groundwater? Yes No				Volume of groundwater removed prior to sampling:					
Free product observed? Yes No				Volume of groundwater removed post sampling:					
Total number of samples collected:				Total Volume of groundwater removed:					
Total number of samples submitted to lab for analysis:									

TABLE 1
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
BETHYL GW 30-16 TANK, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-253

Sample ID	Sample Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4-Trimethyl-Benzene (mg/kg)	1,3,5-Trimethyl-Benzene (mg/kg)	Naphthalene (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500**		
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500**		
AST01@0.5'	09/21/2023	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST02@0.5'	09/21/2023	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST03@0.5'	09/21/2023	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST04@0.5'	09/21/2023	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST05@0.5'	09/21/2023	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST06@0.5'	09/21/2023	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST07@0.5'	09/21/2023	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST08@0.5'	09/21/2023	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST09@0.5'	09/21/2023	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST10@0.5'	09/21/2023	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST11@0.5'	09/21/2023	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST12@0.5'	09/21/2023	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
PWV W Wall 3'	09/26/2023	3'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SEP01 DL 3'	09/27/2023	3'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SEP02 DL 3'	09/27/2023	3'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SEP03 DL01 3'	09/27/2023	3'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SEP03 DL02 3'	09/27/2023	3'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST13@0.5'	12/14/2023	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST14@0.5'	12/14/2023	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50

Bold faced values exceed the ECMC Table 915-1 concentrations

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

* Indicates laboratory minimum detection limit in excess of SSL

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

NA - Not analyzed

TABLE 2
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
BETHYL GW 30-16 TANK, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-253

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
AST01@0.5'	09/21/2023	0.5'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST02@0.5'	09/21/2023	0.5'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST03@0.5'	09/21/2023	0.5'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST04@0.5'	09/21/2023	0.5'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST05@0.5'	09/21/2023	0.5'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST06@0.5'	09/21/2023	0.5'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST07@0.5'	09/21/2023	0.5'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST08@0.5'	09/21/2023	0.5'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST09@0.5'	09/21/2023	0.5'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00525	0.0104
AST10@0.5'	09/21/2023	0.5'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST11@0.5'	09/21/2023	0.5'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST12@0.5'	09/21/2023	0.5'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
PWV W Wall 3'	09/26/2023	3'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP01 DL 3'	09/27/2023	3'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP02 DL 3'	09/27/2023	3'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP03 DL01 3'	09/27/2023	3'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP03 DL02 3'	09/27/2023	3'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST13@0.5'	12/14/2023	0.5'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST14@0.5'	12/14/2023	0.5'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Bold faced values exceed the ECMC Table 915-1 concentrations

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

* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed

TABLE 3
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE ENERGY INC.
BETHYL GW 30-16 TANK, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-253

Sample ID	Sample Date	Depth (ft)	pH	EC (mmhos/cm)	SAR	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
AST01@0.5'	09/21/2023	0.5'	4.44	0.821	0.0502	0.107
AST02@0.5'	09/21/2023	0.5'	4.54	1.13	0.994	0.178
AST03@0.5'	09/21/2023	0.5'	6.21	0.909	1.77	0.407
AST04@0.5'	09/21/2023	0.5'	5.57	1.23	0.886	0.249
AST05@0.5'	09/21/2023	0.5'	5.21	0.190	0.124	0.0932
AST06@0.5'	09/21/2023	0.5'	6.98	0.0678	0.207	0.0339
AST07@0.5'	09/21/2023	0.5'	7.75	0.382	0.959	0.0152
AST08@0.5'	09/21/2023	0.5'	4.36	0.860	0.0707	<0.0100
AST09@0.5'	09/21/2023	0.5'	6.34	0.144	0.263	<0.0100
AST10@0.5'	09/21/2023	0.5'	7.62	1.74	0.502	0.0817
AST11@0.5'	09/21/2023	0.5'	7.13	0.629	0.688	0.0108
AST12@0.5'	09/21/2023	0.5'	6.83	0.174	0.123	<0.0100
PWV W Wall 3'	09/26/2023	3	8.14	0.127	0.0900	<2.00
SEP01 DL 3'	09/27/2023	3	7.57	0.766	0.812	<2.00
SEP02 DL 3'	09/27/2023	3	7.49	3.75	10.7	<2.00
SEP03 DL01 3'	09/27/2023	3	7.82	0.183	0.106	<2.00
SEP03 DL02 3'	09/27/2023	3	7.87	0.208	0.190	<2.00
AST01@0.5'	12/14/2023	0.5	8.07	NA	NA	NA
AST02@0.5'	12/14/2023	0.5	8.18	NA	NA	NA
AST04@0.5'	12/14/2023	0.5	8.41	NA	NA	NA
AST05@0.5'	12/14/2023	0.5	8.56	NA	NA	NA
AST08@0.5'	12/14/2023	0.5	8.55	NA	NA	NA
AST13@0.5'	12/14/2023	0.5	8.42	0.153	0.127	<2.00
AST14@0.5'	12/14/2023	0.5	8.74	0.174	0.261	<2.00
SEP02 DL 3'	12/14/2023	3	NA	NA	0.807	NA

Sample ID	Sample Date	Depth (ft)	pH	EC (mmhos/cm)	SAR	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
BKG01@0.5'	09/21/2023	0.5'	6.26	0.109	0.0186	0.0214
BKG01@4'	09/21/2023	4'	6.31	0.0665	0.0474	0.252
BKG02@0.5'	09/21/2023	0.5'	6.35	0.182	0.0166	0.433
BKG02@4'	09/21/2023	4'	7.63	0.228	0.0596	0.237
BKG03@0.5'	09/21/2023	0.5'	6.21	0.113	0.0233	0.141
BKG03@4'	09/21/2023	4'	6.14	0.0848	0.0288	0.0857
BKG04@0.5'	09/21/2023	0.5'	6.25	0.145	0.0145	0.0773
BKG04@4'	09/21/2023	4'	6.48	0.196	0.027	0.147
BKG05@0.5'	09/21/2023	0.5'	6.23	0.110	0.00989	0.0971
BKG05@4'	09/21/2023	4'	7.74	0.283	0.105	0.180
BKG01 6'	09/26/2023	6	7.81	0.295	0.496	<2.00
BKG02 6'	09/26/2023	6	7.78	0.287	0.364	<2.00
BKG03 6'	09/26/2023	6	7.78	0.281	0.376	<2.00
BKG04 6'	09/26/2023	6	7.79	0.296	0.363	<2.00
BKG05 6'	09/26/2023	6	7.83	0.234	0.329	<2.00

Bold faced values exceed the ECMC Table 915-1 concentrations

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

NA - Not analyzed

TABLE 4
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
BETHYL GW 30-16 TANK, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-253

Sample ID	Sample Date	Depth (ft)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
125% Max. Background Concentration			3.4	150	0.25	-	-	-	-	-	-	-
AST01@0.5'	09/21/2023	0.5'	1.21	2.62	<0.200	<0.30	1.77	1.56	0.868	<0.260	<0.0200	6.88
AST02@0.5'	09/21/2023	0.5'	0.466	2.58	<0.200	<0.30	1.04	1.44	0.531	<0.260	<0.0200	3.18
AST03@0.5'	09/21/2023	0.5'	0.333	1.92	<0.200	<0.30	0.639	0.632	<0.400	<0.260	<0.0200	2.03
AST04@0.5'	09/21/2023	0.5'	0.762	3.31	<0.200	<0.30	1.31	1.83	1.55	<0.260	<0.0200	8.21
AST05@0.5'	09/21/2023	0.5'	0.314	2.79	<0.200	<0.30	0.691	0.817	<0.400	<0.260	<0.0200	2.50
AST06@0.5'	09/21/2023	0.5'	0.577	5.66	<0.200	<0.30	1.36	1.10	0.859	<0.260	<0.0200	13.9
AST07@0.5'	09/21/2023	0.5'	0.507	4.79	<0.200	<0.30	2.22	0.957	1.76	<0.260	<0.0200	4.27
AST08@0.5'	09/21/2023	0.5'	0.649	5.39	<0.200	<0.30	0.826	0.598	0.518	<0.260	<0.0200	2.89
AST09@0.5'	09/21/2023	0.5'	0.313	3.77	0.530	<0.30	0.684	1.93	0.500	<0.260	<0.0200	9.72
AST10@0.5'	09/21/2023	0.5'	1.43	48.8	<0.200	<0.30	3.22	3.81	2.44	<0.260	<0.0200	22.7
AST11@0.5'	09/21/2023	0.5'	1.58	5.53	<0.200	<0.30	2.50	1.92	1.18	<0.260	<0.0200	5.01
AST12@0.5'	09/21/2023	0.5'	0.688	3.63	<0.200	<0.30	1.40	0.848	1.08	<0.260	<0.0200	3.29
PWV W Wall 3'	09/26/2023	3'	0.728	35.3	<0.200	<0.30	0.785	9.26	0.826	<0.260	<0.0200	2.55
SEP01 DL 3'	09/27/2023	3'	1.07	83.7	0.210	<0.30	1.67	7.19	1.48	<0.260	<0.0200	5.39
SEP02 DL 3'	09/27/2023	3'	2.05	64.4	0.213	<0.30	1.74	6.35	1.42	<0.260	<0.0200	4.53
SEP03 DL01 3'	09/27/2023	3'	1.08	69.9	<0.200	<0.30	1.70	5.88	1.75	<0.260	0.0365	6.21
SEP03 DL02 3'	09/27/2023	3'	0.994	69.6	<0.200	<0.30	1.96	5.58	1.60	<0.260	<0.0200	6.31
AST13@0.5'	12/14/2023	0.5	1.62	53.3	<0.200	<0.30	2.93	5.09	2.03	<0.260	<0.0200	8.94
AST14@0.5'	12/14/2023	0.5	1.57	70.8	<0.200	<0.30	2.97	2.82	2.25	<0.260	<0.0200	9.15
BKG01@0.5'	09/21/2023	0.5'	1.29	43.7	<0.200	<0.30	2.81	5.46	1.89	<0.260	<0.0200	10.5
BKG01@4'	09/21/2023	4'	1.81	73.3	<0.200	<0.30	2.79	8.22	2.95	<0.260	<0.0200	7.35
BKG02@0.5'	09/21/2023	0.5'	1.40	46.2	<0.200	<0.30	2.80	5.76	1.99	<0.260	<0.0200	9.25
BKG02@4'	09/21/2023	4'	2.70	66.2	<0.200	<0.30	2.51	6.98	2.42	<0.260	<0.0200	7.83

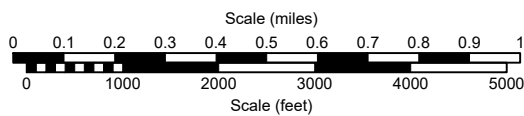
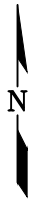
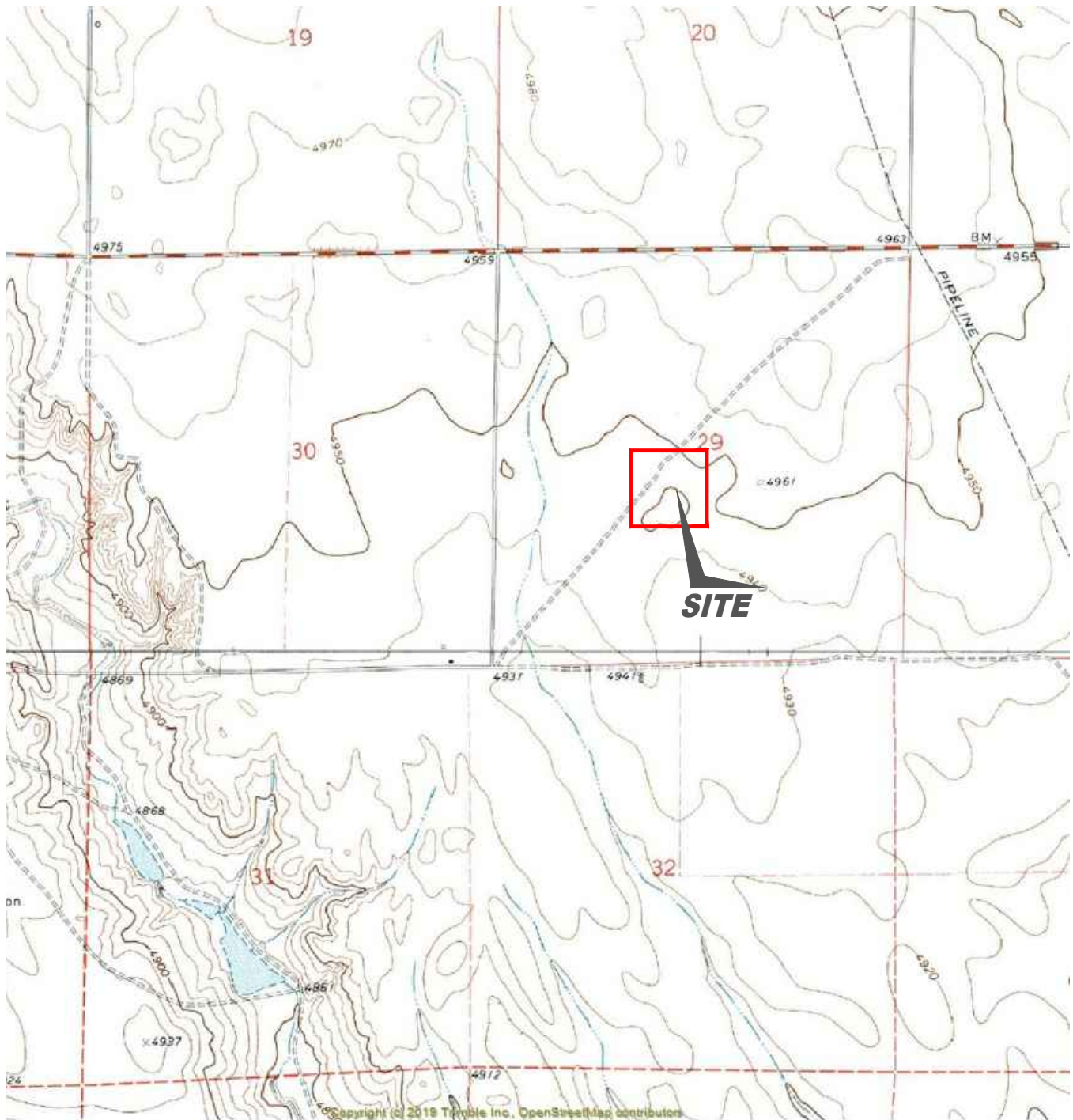
Sample ID	Sample Date	Depth (ft)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
BKG03@0.5'	09/21/2023	0.5'	1.28	49.5	<0.200	<0.30	3.28	6.18	2.29	<0.260	<0.0200	10.6
BKG03@4'	09/21/2023	4'	1.56	61.3	<0.200	<0.30	3.46	7.23	3.48	<0.260	<0.0200	11.4
BKG04@0.5'	09/21/2023	0.5'	1.19	48.6	<0.200	<0.30	3.04	5.40	2.52	<0.260	<0.0200	9.36
BKG04@4'	09/21/2023	4'	1.40	48.5	<0.200	<0.30	2.61	3.91	2.89	<0.260	0.0202	8.82
BKG05@0.5'	09/21/2023	0.5'	0.649	51.4	<0.200	<0.30	1.00	5.46	1.22	<0.260	<0.0200	4.14
BKG05@4'	09/21/2023	4'	1.07	101	<0.200	<0.30	1.07	6.44	1.81	<0.260	0.0396	4.73
BKG01 6'	09/26/2023	6'	1.48	107	<0.200	<0.30	1.75	6.33	1.98	<0.260	0.0301	6.10
BKG02 6'	09/26/2023	6'	1.53	102	<0.200	<0.30	1.89	6.69	2.05	<0.260	0.031	6.13
BKG03 6'	09/26/2023	6'	1.50	96.4	<0.200	<0.30	1.83	6.91	1.97	<0.260	0.0338	6.06
BKG04 6'	09/26/2023	6'	1.52	120	<0.200	<0.30	2.12	7.24	2.13	<0.260	0.0465	6.29
BKG05 6'	09/26/2023	6'	1.88	103	0.201	<0.30	1.90	7.45	2.13	<0.260	0.0334	6.12

Bold faced values exceed the ECMC Table 915-1 concentrations

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

* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed



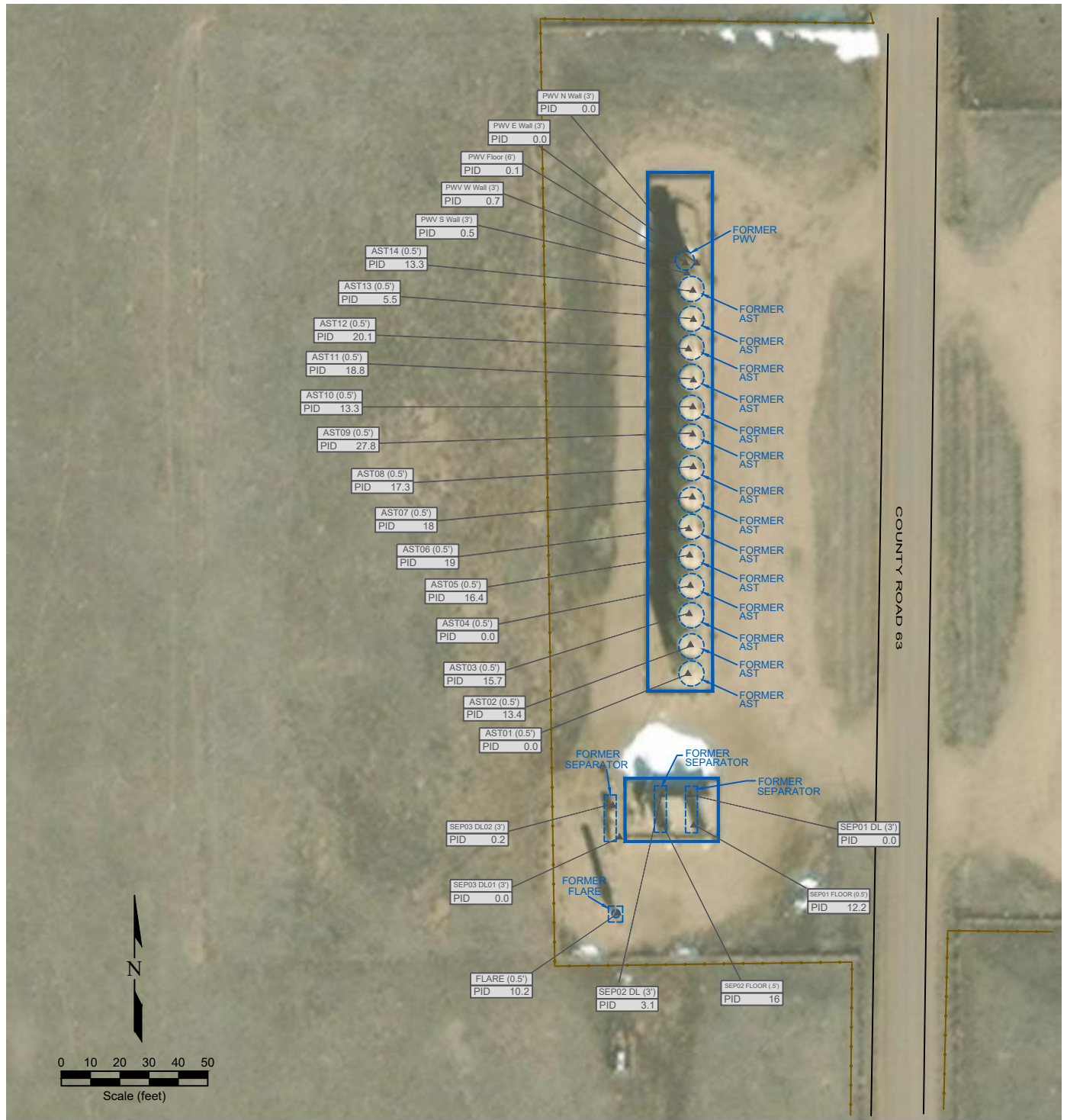
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

Noble Energy, Inc. ~ Bethyl GW 30-16
 SESE Sec. 30, T8N, R63W, 6th PM
 Weld County, Colorado
 40.628372°, -104.468776°

Project No. CO23-253	API #	Facility # 429642
Date 1/17/24	Remediation # 30292	Filename 23253TTB





LEGEND

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

AST12 (0.5') PID 13.3
 PID 13.3
 PID 13.3

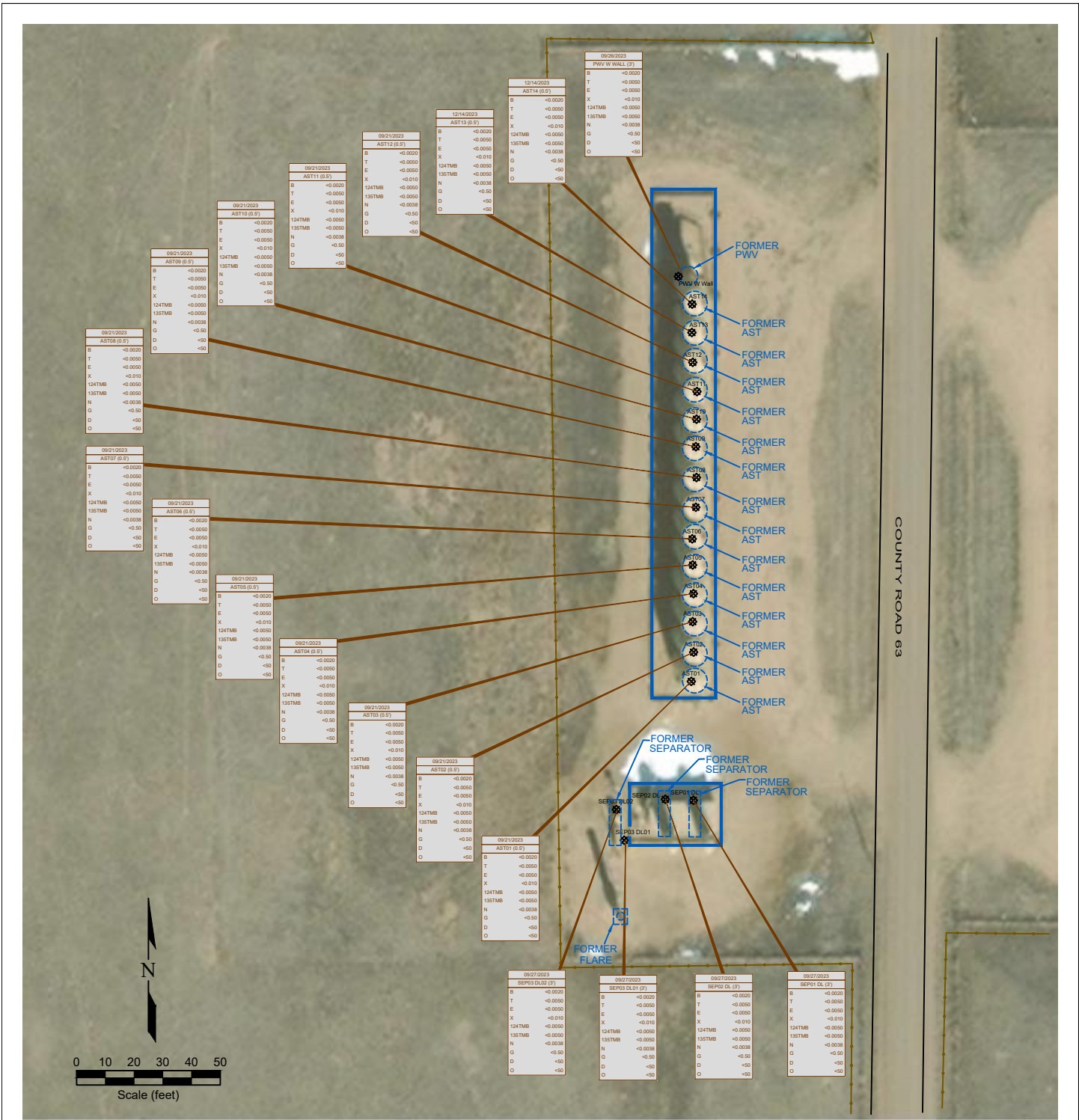
PID READING SAMPLE LOCATION AND DEPTH (ft)
 PHOTO IONIZATION DETECTION: PARTS PER MILLION

**Figure 2
 SITE MAP**

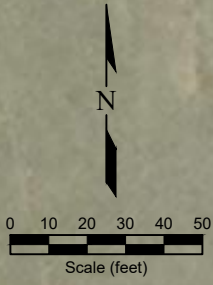
Noble Energy, Inc. ~ Bethyl GW 30-16
 SESE Section 30, T8N, R63W, 6th PM
 Weld County, Colorado
 40.628372°, -104.468776°

Project No. C023-253	API #	Facility # 429642
Date 1/17/24	Remediation # 30292	Filename 23253QTB





COUNTY ROAD 63



LEGEND

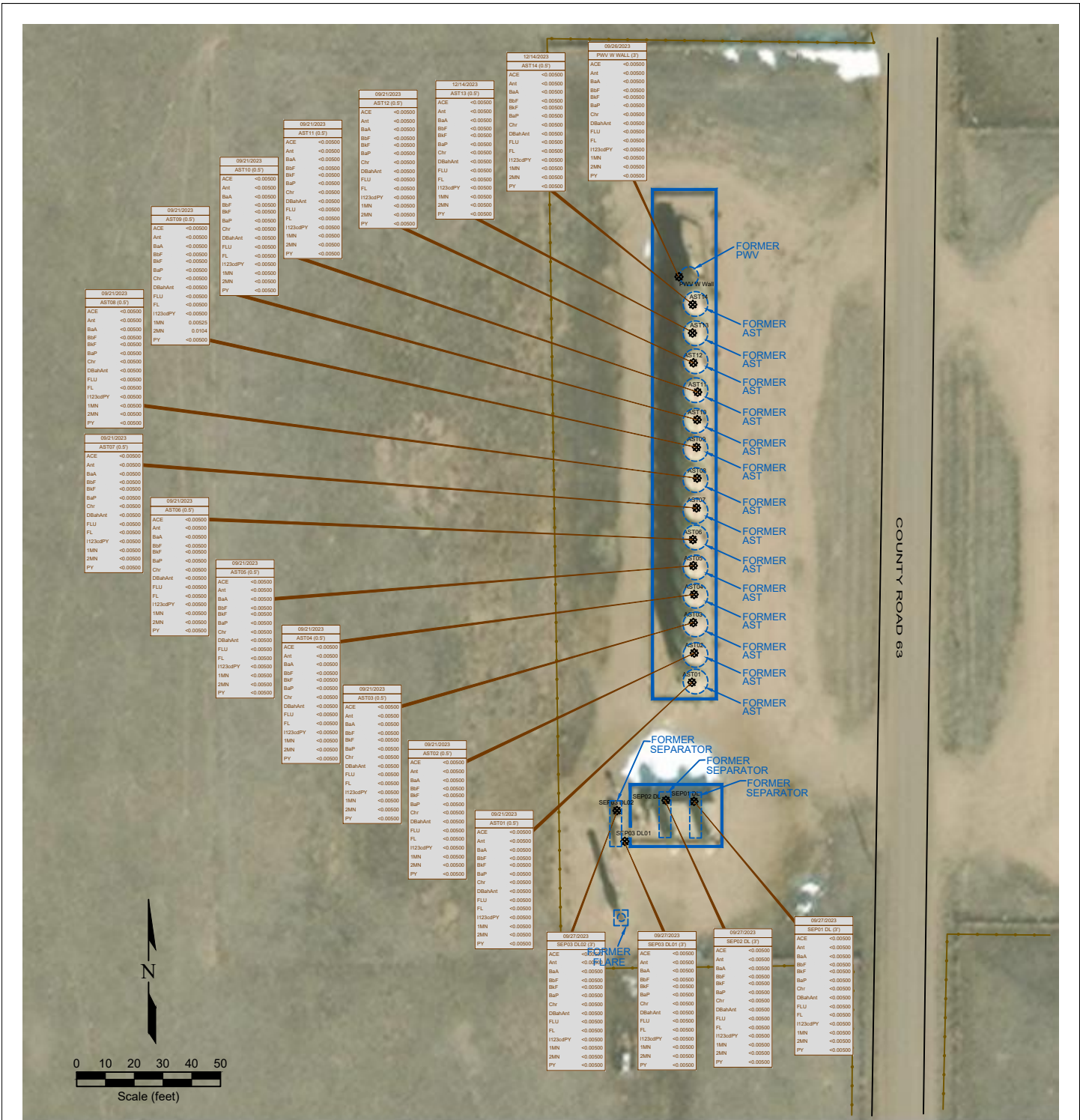
	SOIL SAMPLE LOCATION		ABOVE GROUND STORAGE TANK		FORMER FACILITY		CONTAINMENT BERM		CONTAINMENT WALL		FENCE LINE
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DATE SAMPLED	SAMPLE ID and DEPTH (ft)	DATE SAMPLED	SAMPLE ID and DEPTH (ft)
09/20/2023	TF-1 (0.5')	09/20/2023	SS-N (0.5')
ACE	<0.0020	B	<0.0020
Acz	<0.0050	T	<0.0050
BaA	<0.0050	E	<0.0050
BaP	<0.0050	X	<0.010
BbF	<0.0050	124TMB	<0.0050
BbP	<0.0050	135TMB	<0.0050
ChF	<0.0050	N	<0.0038
Dib(a,h,f)	<0.0050	D	<0.50
FLU	<0.0050	O	<0.50
Flu(1,2,3,4,6,8)	<0.0050		
Flu(1,2,3,4,6,8)	<0.0050		
INDENO (1,2,3-CD)	<0.0050		
1-METHYLNAPHTHALENE	<0.0050		
2-METHYLNAPHTHALENE	<0.0050		
PH	<0.0050		

DATE SAMPLED	SAMPLE ID & DEPTH (ft)	DATE SAMPLED	SAMPLE ID & DEPTH (ft)
09/20/2023	TF-1 (0.5')	09/20/2023	TF-1 (0.5')
As	0.010	As	0.010
Cd	<0.0020	Cd	<0.0020
Co	2.20	Co	2.20
Cu	4.60	Cu	4.60
Fe	2.31	Fe	2.31
Mn	<0.0010	Mn	<0.0010
Ni	<0.0010	Ni	<0.0010
Pb	<0.0010	Pb	<0.0010
Sr	<0.0010	Sr	<0.0010
Zn	<0.0010	Zn	<0.0010

Figure 3
VOLATILE SOIL CHEMISTRY MAP
Noble Energy, Inc. ~ Bethyl GW 30-16
SESE Section 30, T8N, R63W, 6th PM
Weld County, Colorado
40.628372°, -104.468776°

Project No. C023-253	API #	Facility # 429642
Date 1/17/24	Remediation # 30292	Filename 23253QTB1



LEGEND

- SOIL SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- CONTAINMENT BERM
- CONTAINMENT WALL
- FENCE LINE

DATE SAMPLED	SAMPLE ID and DEPTH (ft)	DATE SAMPLED	SAMPLE ID and DEPTH (ft)
09/20/2023	TF-1 (0.5')	09/20/2023	SS-N (0.5')
ACE <math><0.00500</math>	ACENAPHTHENE (mg/kg)	B <math><0.00500</math>	BENZENE (mg/kg)
Ant <math><0.00500</math>	ANTHRACENE (mg/kg)	T <math><0.00500</math>	TOLUENE (mg/kg)
BaA <math><0.00500</math>	BENZO (A)ANTHRACENE (mg/kg)	E <math><0.00500</math>	ETHYLBENZENE (mg/kg)
BbF <math><0.00500</math>	BENZO (B) FLUORANTHENE (mg/kg)	X <math><0.01000</math>	TOTAL XYLENES (mg/kg)
BkF <math><0.00500</math>	BENZO (K) FLUORANTHENE (mg/kg)	10ATMB <math><0.00500</math>	1,2,4-TRIMETHYLBENZENE (mg/kg)
BaP <math><0.00500</math>	BENZO (A)PYRENE (mg/kg)	10BTMB <math><0.00500</math>	1,3,5-TRIMETHYLBENZENE (mg/kg)
ChR <math><0.00500</math>	CHRYSENE (mg/kg)	N <math><0.00380</math>	NAPHTHALENE (mg/kg)
DBaHant <math><0.00500</math>	DBENZ (A,H) ANTHRACENE (mg/kg)	D <math><0.00500</math>	TPH-ORO (mg/kg)
FLU <math><0.00500</math>	FLUORANTHENE (mg/kg)	O <math><0.00500</math>	TPH-ORO (mg/kg)
FL <math><0.00500</math>	FLUORENE (mg/kg)		
1123aPY <math><0.00500</math>	INDENO (1,2,3-CD) PYRENE (mg/kg)		
1MN <math><0.00500</math>	1-METHYLNAPHTHALENE (mg/kg)		
2MN <math><0.00500</math>	2-METHYLNAPHTHALENE (mg/kg)		
PY <math><0.00500</math>	PYRENE (mg/kg)		

DATE SAMPLED	SAMPLE ID & DEPTH (ft)	DATE SAMPLED	SAMPLE ID & DEPTH (ft)
09/20/2023	SAF-1 (0.5')	09/20/2023	SAF-2 (0.5')
PH 8.910	pH (pH units)	EC 0.010	EC (microhm/cm)
EC 0.010	EC (microhm/cm)	BORDN 0.010	BORDN (mg/L)

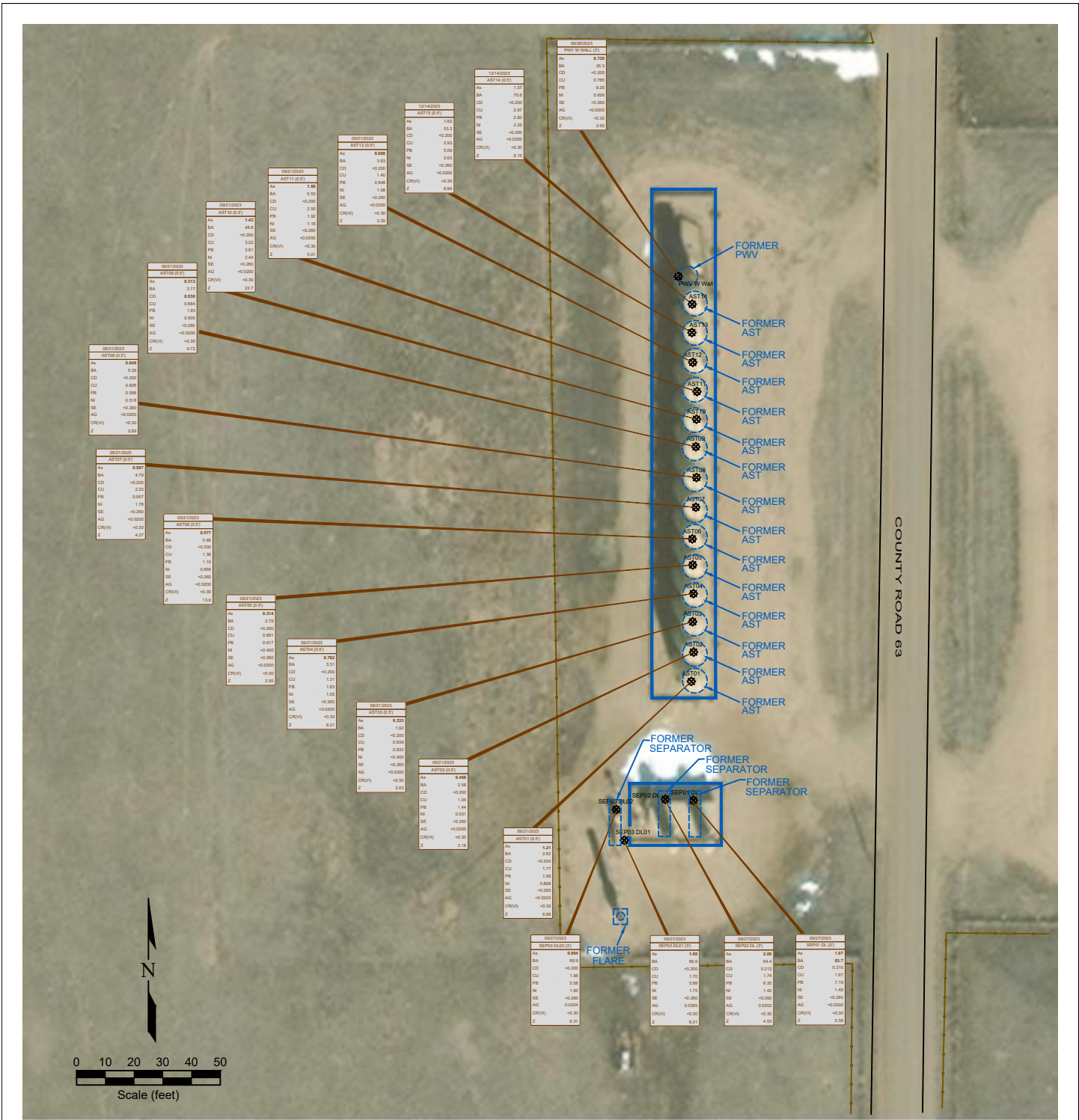
DATE SAMPLED	SAMPLE ID & DEPTH (ft)	DATE SAMPLED	SAMPLE ID & DEPTH (ft)
09/20/2023	AR-1 (0.5')	09/20/2023	AR-2 (0.5')
AS 0.010	ARSENIC (mg/kg)	BA 0.010	BARIUM (mg/kg)
CU 0.010	CADMIUM (mg/kg)	CO 0.010	COPPER (mg/kg)
NI 0.010	LEAD (mg/kg)	NI 0.010	NICKEL (mg/kg)
SE 0.010	SILVER (mg/kg)	SE 0.010	SELENIUM (mg/kg)
CR(VI) 0.010	HEXAVALENT CHROMIUM (mg/kg)	ZN 0.010	ZINC (mg/kg)

NOT ANALYZED

Figure 4
PAH SOIL CHEMISTRY MAP

Noble Energy, Inc. ~ Bethyl GW 30-16
 SESE Section 30, T8N, R63W, 6th PM
 Weld County, Colorado
 40.628372°, -104.468776°

Project No. C023-253	API #	Facility # 429642
Date 1/17/24	Remediation # 30292	Filename 23253QTB1



09/20/2023 AST14 (S.S.)	09/20/2023 AST13 (S.S.)	09/20/2023 AST12 (S.S.)	09/20/2023 AST11 (S.S.)	09/20/2023 AST10 (S.S.)	09/20/2023 AST9 (S.S.)	09/20/2023 AST8 (S.S.)	09/20/2023 AST7 (S.S.)	09/20/2023 AST6 (S.S.)	09/20/2023 AST5 (S.S.)	09/20/2023 AST4 (S.S.)	09/20/2023 AST3 (S.S.)	09/20/2023 AST2 (S.S.)	09/20/2023 AST1 (S.S.)
As	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
BA	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5
CD	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200
CU	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94
NI	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
SE	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200
AG	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
CR(V)	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30
Z	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15

09/20/2023 AST10 (S.S.)	09/20/2023 AST9 (S.S.)	09/20/2023 AST8 (S.S.)	09/20/2023 AST7 (S.S.)	09/20/2023 AST6 (S.S.)	09/20/2023 AST5 (S.S.)	09/20/2023 AST4 (S.S.)	09/20/2023 AST3 (S.S.)	09/20/2023 AST2 (S.S.)	09/20/2023 AST1 (S.S.)
As	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977
BA	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.79
CD	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200
CU	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22
NI	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977
SE	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200
AG	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
CR(V)	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30
Z	4.27	4.27	4.27	4.27	4.27	4.27	4.27	4.27	4.27

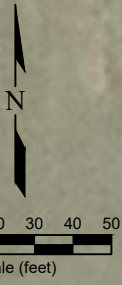
09/20/2023 AST13 (S.S.)	09/20/2023 AST12 (S.S.)	09/20/2023 AST11 (S.S.)	09/20/2023 AST10 (S.S.)	09/20/2023 AST9 (S.S.)	09/20/2023 AST8 (S.S.)	09/20/2023 AST7 (S.S.)	09/20/2023 AST6 (S.S.)	09/20/2023 AST5 (S.S.)	09/20/2023 AST4 (S.S.)	09/20/2023 AST3 (S.S.)	09/20/2023 AST2 (S.S.)	09/20/2023 AST1 (S.S.)
As	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848
BA	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3
CD	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200
CU	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94
NI	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
SE	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200
AG	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
CR(V)	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30
Z	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15

09/20/2023 AST14 (S.S.)	09/20/2023 AST13 (S.S.)	09/20/2023 AST12 (S.S.)	09/20/2023 AST11 (S.S.)	09/20/2023 AST10 (S.S.)	09/20/2023 AST9 (S.S.)	09/20/2023 AST8 (S.S.)	09/20/2023 AST7 (S.S.)	09/20/2023 AST6 (S.S.)	09/20/2023 AST5 (S.S.)	09/20/2023 AST4 (S.S.)	09/20/2023 AST3 (S.S.)	09/20/2023 AST2 (S.S.)	09/20/2023 AST1 (S.S.)
As	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.848
BA	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3
CD	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200
CU	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94
NI	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
SE	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200
AG	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
CR(V)	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30
Z	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15

09/20/2023 AST13 (S.S.)	09/20/2023 AST12 (S.S.)	09/20/2023 AST11 (S.S.)	09/20/2023 AST10 (S.S.)	09/20/2023 AST9 (S.S.)	09/20/2023 AST8 (S.S.)	09/20/2023 AST7 (S.S.)	09/20/2023 AST6 (S.S.)	09/20/2023 AST5 (S.S.)	09/20/2023 AST4 (S.S.)	09/20/2023 AST3 (S.S.)	09/20/2023 AST2 (S.S.)	09/20/2023 AST1 (S.S.)
As	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991	0.991
BA	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CD	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200
CU	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98
NI	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
SE	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200
AG	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009
CR(V)	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30
Z	9.31	9.31	9.31	9.31	9.31	9.31	9.31	9.31	9.31	9.31	9.31	9.31

09/20/2023 AST14 (S.S.)	09/20/2023 AST13 (S.S.)	09/20/2023 AST12 (S.S.)	09/20/2023 AST11 (S.S.)	09/20/2023 AST10 (S.S.)	09/20/2023 AST9 (S.S.)	09/20/2023 AST8 (S.S.)	09/20/2023 AST7 (S.S.)	09/20/2023 AST6 (S.S.)	09/20/2023 AST5 (S.S.)	09/20/2023 AST4 (S.S.)	09/20/2023 AST3 (S.S.)	09/20/2023 AST2 (S.S.)	09/20/2023 AST1 (S.S.)
As	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977
BA	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CD	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200
CU	2.29	2.29	2.29	2.29	2.29	2.29	2.29	2.29	2.29	2.29	2.29	2.29	2.29
NI	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
SE	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200
AG	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009
CR(V)	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30
Z	9.31	9.31	9.31	9.31	9.31	9.31	9.31	9.31	9.31	9.31	9.31	9.31	9.31

COUNTY ROAD 63



LEGEND

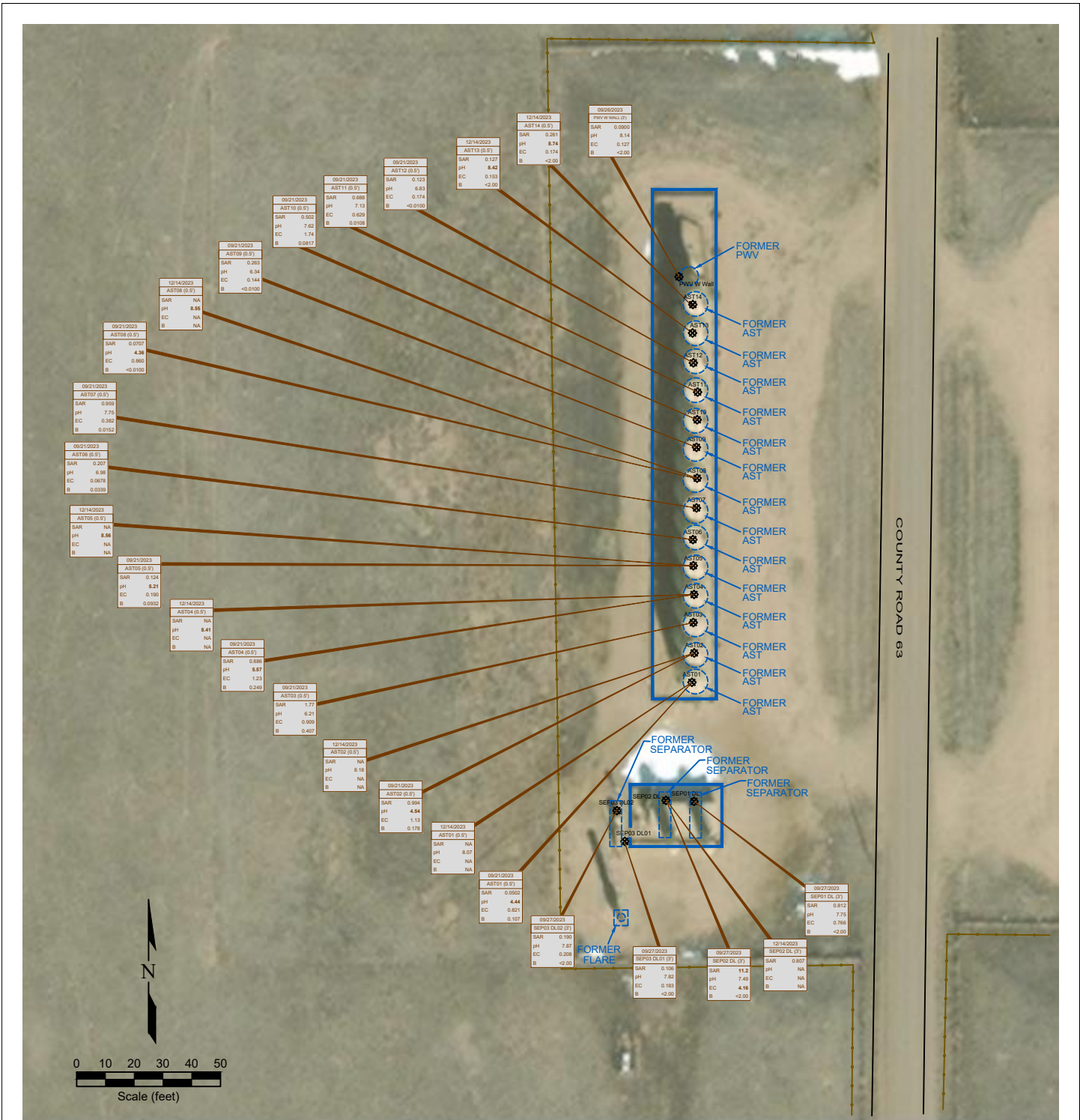
- SOIL SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- CONTAINMENT BERM
- CONTAINMENT WALL
- FENCE LINE

09/20/2023 TF-1 (S.S.)	DATE SAMPLED SAMPLE ID and DEPTH (ft)	09/20/2023 SS-N (S.S.)	DATE SAMPLED SAMPLE ID and DEPTH (ft)	09/20/2023 TF-1 (S.S.)	DATE SAMPLED SAMPLE ID & DEPTH (ft)
As	<0.0050	B	<0.0020	As	0.977
BA	<0.0050	T	<0.0050	BA	0.01
BaP	<0.0050	E	<0.0050	CD	-0.200
BaF	<0.0050	X	<0.010	CU	1.98
BaP	<0.0050	10ATMB	<0.0050	NI	1.03
ChF	<0.0050	10BTMB	<0.0050	SE	-0.200
DL1a/Art	<0.0050	N	<0.0038	AG	0.009
FLU	<0.0050	D	<0.50	CR(V)	-0.30
FL	<0.0050	O	<0.50	Z	9.31
H2SO4/PT	<0.0050				
IND	<0.0050				
MN	<0.0050				
MN	<0.0050				
PT	<0.0050				
PT	<0.0050				

**Figure 5
METALS IN SOIL CHEMISTRY MAP**

**Noble Energy, Inc. ~ Bethyl GW 30-16
SESE Section 30, T8N, R63W, 6th PM
Weld County, Colorado
40.628372°, -104.468776°**

Project No. C023-253	API #	Facility # 429642	
Date 1/17/24	Remediation # 30292	Filename 23253QTB1	



COUNTY ROAD 63

LEGEND

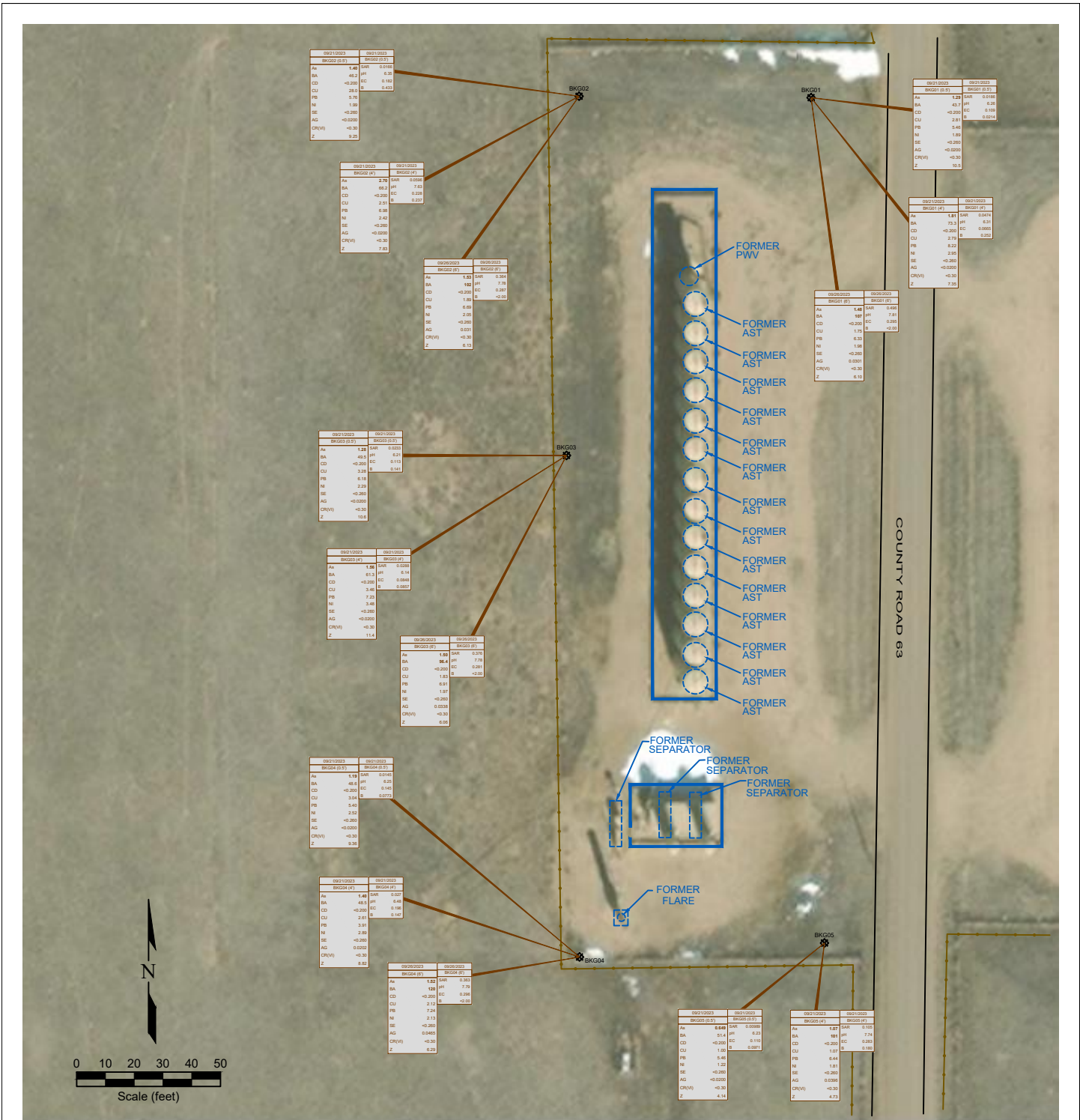
- SOIL SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- CONTAINMENT BERM
- CONTAINMENT WALL
- FENCE LINE

DATE SAMPLED	SAMPLE ID and DEPTH (ft)	DATE SAMPLED	SAMPLE ID and DEPTH (ft)
09/20/2023	TF-1 (0.5)	09/20/2023	SS-N (0.5)
ACE	<0.0020	B	<0.0020
Acz	<0.0050	T	<0.0050
BaA	<0.0050	E	<0.0050
BaP	<0.0050	X	<0.0100
BaF	<0.0050	1047MB	<0.0050
BaP	<0.0050	1057MB	<0.0050
Ch	<0.0050	N	<0.0038
Dib(a,h,f)	<0.0050	D	<0.50
FLU	<0.0050	O	<0.50
FL	<0.0050		
HCB(a,p)	<0.0050		
MAN	<0.0050		
MAN	<0.0050		
PAH	<0.0050		
PH	<0.0050		
Py	<0.0050		
NA	NOT ANALYZED		

DATE SAMPLED	SAMPLE ID and DEPTH (ft)	DATE SAMPLED	SAMPLE ID and DEPTH (ft)
09/20/2023	SS-N (0.5)	09/20/2023	SS-N (0.5)
As	0.978	As	0.978
Ba	0.113	Ba	0.113
Ca	0.239	Ca	0.239
Co	0.000	Co	0.000
Cu	0.000	Cu	0.000
Fe	0.000	Fe	0.000
Mn	0.000	Mn	0.000
Ni	0.000	Ni	0.000
Pb	0.000	Pb	0.000
Se	0.000	Se	0.000
Ag	0.000	Ag	0.000
Cr(VI)	0.000	Cr(VI)	0.000
Zn	0.000	Zn	0.000

Figure 6
INORGANIC SOIL CHEMISTRY MAP
 Noble Energy, Inc. ~ Bethyl GW 30-16
 SESE Section 30, T8N, R63W, 6th PM
 Weld County, Colorado
 40.628372°, -104.468776°

Project No. C023-253	API #	Facility # 429642
Date 1/17/24	Remediation # 30292	Filename 23253QTB1



LEGEND

- SOIL SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FORMER FACILITY
- CONTAINMENT BERM
- CONTAINMENT WALL
- FENCE LINE

DATE SAMPLED	DATE SAMPLED	DATE SAMPLED	DATE SAMPLED
09/20/2023	09/20/2023	09/20/2023	09/20/2023
TP-1 (B-3)	SS-N (B-5)	TP-1 (B-3)	TP-1 (B-3)
ACF <-0.0020	ACENAPHTHENE (mg/kg) <-0.0020	ARSENIC (mg/kg) 0.016	BARUM (mg/kg) 0.016
ANT <-0.0050	ANTHRACENE (mg/kg) <-0.0050	BENZENE (mg/kg) 0.022	BARIUM (mg/kg) 0.022
BAA <-0.0050	BENZO (A) ANTHRACENE (mg/kg) <-0.0050	BENZENE (mg/kg) 0.022	BARIUM (mg/kg) 0.022
BAP <-0.0050	BENZO (B) FLUORANTHENE (mg/kg) <-0.0050	BENZENE (mg/kg) 0.022	BARIUM (mg/kg) 0.022
BAP <-0.0050	BENZO (K) FLUORANTHENE (mg/kg) <-0.0050	BENZENE (mg/kg) 0.022	BARIUM (mg/kg) 0.022
BAP <-0.0050	BENZO (A) PYRENE (mg/kg) <-0.0050	BENZENE (mg/kg) 0.022	BARIUM (mg/kg) 0.022
CHR <-0.0050	CHRYSENE (mg/kg) <-0.0050	BENZENE (mg/kg) 0.022	BARIUM (mg/kg) 0.022
DBA <-0.0050	DIBENZ (A,H) ANTHRACENE (mg/kg) <-0.0050	BENZENE (mg/kg) 0.022	BARIUM (mg/kg) 0.022
FLU <-0.0050	FLUORANTHENE (mg/kg) <-0.0050	BENZENE (mg/kg) 0.022	BARIUM (mg/kg) 0.022
FL <-0.0050	FLUORENE (mg/kg) <-0.0050	BENZENE (mg/kg) 0.022	BARIUM (mg/kg) 0.022
IND <-0.0050	INDENO (1,2,3-CD) PYRENE (mg/kg) <-0.0050	BENZENE (mg/kg) 0.022	BARIUM (mg/kg) 0.022
1MN <-0.0050	1-METHYLNAPHTHALENE (mg/kg) <-0.0050	BENZENE (mg/kg) 0.022	BARIUM (mg/kg) 0.022
2MN <-0.0050	2-METHYLNAPHTHALENE (mg/kg) <-0.0050	BENZENE (mg/kg) 0.022	BARIUM (mg/kg) 0.022
PHY <-0.0050	PYRENE (mg/kg) <-0.0050	BENZENE (mg/kg) 0.022	BARIUM (mg/kg) 0.022

Figure 7
BACKGROUND SAMPLE SOIL CHEMISTRY MAP

Noble Energy, Inc. ~ Bethyl GW 30-16
SESE Section 30, T8N, R63W, 6th PM
Weld County, Colorado
40.628372°, -104.468776°

Project No. C023-253	API #	Facility # 429642
Date 1/17/24	Remediation # 30292	Filename 23253QTB

Photo Log



Description:

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Photo Log



Description:

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Photo Log



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Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 23, 2023

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549
RE: Noble - Bethyl 30-16
Work Order #2309432

Enclosed are the results of analyses for samples received by Summit Scientific on 09/22/23 11:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury
President



Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16

Project Number: UWRWE-A3323-ABN

Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01@0.5'	2309432-01	Soil	09/21/23 00:00	09/22/23 11:30
AST02@0.5'	2309432-02	Soil	09/21/23 00:00	09/22/23 11:30
AST03@0.5'	2309432-03	Soil	09/21/23 00:00	09/22/23 11:30
AST04@0.5'	2309432-04	Soil	09/21/23 00:00	09/22/23 11:30
AST05@0.5'	2309432-05	Soil	09/21/23 00:00	09/22/23 11:30
AST06@0.5'	2309432-06	Soil	09/21/23 00:00	09/22/23 11:30
AST07@0.5'	2309432-07	Soil	09/21/23 00:00	09/22/23 11:30
AST08@0.5'	2309432-08	Soil	09/21/23 00:00	09/22/23 11:30
AST09@0.5'	2309432-09	Soil	09/21/23 00:00	09/22/23 11:30
AST10@0.5'	2309432-10	Soil	09/21/23 00:00	09/22/23 11:30
AST11@0.5'	2309432-11	Soil	09/21/23 00:00	09/22/23 11:30
AST12@0.5'	2309432-12	Soil	09/21/23 00:00	09/22/23 11:30
BKG01@0.5'	2309432-13	Soil	09/21/23 00:00	09/22/23 11:30
BKG01@4'	2309432-14	Soil	09/21/23 00:00	09/22/23 11:30
BKG02@0.5'	2309432-15	Soil	09/21/23 00:00	09/22/23 11:30
BKG02@4'	2309432-16	Soil	09/21/23 00:00	09/22/23 11:30
BKG03@0.5'	2309432-17	Soil	09/21/23 00:00	09/22/23 11:30
BKG03@4'	2309432-18	Soil	09/21/23 00:00	09/22/23 11:30
BKG04@0.5'	2309432-19	Soil	09/21/23 00:00	09/22/23 11:30
BKG04@4'	2309432-20	Soil	09/21/23 00:00	09/22/23 11:30
BKG05@0.5'	2309432-21	Soil	09/21/23 00:00	09/22/23 11:30
BKG05@4'	2309432-22	Soil	09/21/23 00:00	09/22/23 11:30

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.



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

Lab ID	Page 1 of 2
2309432-1	

Send Data To:		Send Invoice To:
Client: Fremont Environmental	Project Manager: Paul Henehan	Company: Noble/Chevron
Address: 8305 6th Street	E-Mail: Fremont Distribution List	Project Name/Location:
City/State/Zip: Wellington, CO, 80549		AFE#: URWF - A3323 - ABN
Phone: 603-477-6907	Project Name: Bethyl 30-16	PO/Billing Codes:
Sampler Name: Aaron Otilar	Project Number:	Contact: Mike Montoya

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested							Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 915	TPH (C6-C36)	PAH	SAR, EC, pH, Boron	Metals (915-1)	TDS, Cl, SO4	
1	AST 01 @ 0.5'	9/21/23		2			X			X			X	X	X	X	X		
2	AST 02 @ 0.5'																		
3	AST 03 @ 0.5'																		
4	AST 04 @ 0.5'																		
5	AST 05 @ 0.5'																		
6	AST 06 @ 0.5'																		
7	AST 07 @ 0.5'																		
8	AST 08 @ 0.5'																		
9	AST 09 @ 0.5'																		
10	AST 10 @ 0.5'																		
11	AST 11 @ 0.5'			1															
12	AST 12 @ 0.5'			2															
13	BK601 @ 0.5'			1											X	X			
14	BK601 @ 4'			1															
15	BK602 @ 0.5'			1															

Relinquished by: <i>[Signature]</i>	Date/Time: 9/21/23 1700 ^{NO}	Received by: Summit North Dipbox	Date/Time: 9/21/23 1500 ^{NO}	TAT Business Days	Field DO	Notes:
Relinquished by: SZ	Date/Time: 9/22/23 16:30	Received by: John Ward	Date/Time: 9/22/23 11:30	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: 0.8	Corrected Temperature	IR gun #: 2	HNO3 lot #:	Standard	X	Field Turb.



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

Lab ID
2309432.2

Send Data To:		Send Invoice To:	
Client: Fremont Environmental		Company: Noble/Chevron	
Address: 8305 6th Street		Project Name/Location:	
City/State/Zip: Wellington, CO, 80549		AFE#: UWRWE -A3323-ARB	
Phone: 603-477-6907		PO/Billing Codes:	
Project Name: Bethyl 30-16		Contact: Mike Montoya	
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	BTEXN - 915	TPH (C6-C36)	PAH	SAR, EC, pH, Boron	Metals (915-1)	TDS, Cl, SO4		TMB's - 915	
1	Bkg 02 e4'	9/21/23		1			X			X						X	X				
2	Bkg 03 e0.5'																				
3	Bkg 03 e4'																				
4	Bkg 04 e0.5'																				
5	Bkg 04 e4'																				
6	Bkg 05 e0.5'																				
7	Bkg 05 e4'																				
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: <i>Aaron Otilar</i>	Date/Time: 9/21/23 1500	Received by: Summit North Dropbox	Date/Time: 9/21/23 1700	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: SZ	Date/Time: 9/22/23 16:30	Received by: John Wild	Date/Time: 9/22/23 16:30	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 0.8	Corrected Temperature	IR gun #: 2	HNO3 lot #:			

S₂

S2 Work Order# 2309432

Sample Receipt Checklist

Client: Noble Fremont Client Project ID: Bethyl 30-16

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

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

Temp (°C) Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ice
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	no sample times
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2 extra samples - AST13 + AST14
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	incomplete sample names
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

AS
Custodian Printed Name

9/22/23
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST01@0.5'
2309432-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BG10812	09/26/23	09/26/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
m,p-Xylene	ND	0.010	"	"	"	"	"	"	
o-Xylene	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0430	107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0372	92.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0358	89.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BG10813	09/26/23	09/26/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.5	108 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

AST01@0.5'
2309432-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0780	09/26/23	09/27/23	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0209	62.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0234	70.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.107	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 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 - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST01@0.5'
2309432-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.21	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	2.62	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.77	0.400	"	"	"	"	"	"	
Lead	1.56	0.200	"	"	"	"	"	"	
Nickel	0.868	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	6.88	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	159	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	9.48	0.0500	"	"	"	"	"	"	
Sodium	2.41	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0502	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

AST01@0.5'
2309432-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	99.3		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.821	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	4.44		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST02@0.5'
2309432-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0812	09/26/23	09/26/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
m,p-Xylene	ND	0.010	"	"	"	"	"	"	
o-Xylene	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0437	109 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0372	93.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0360	90.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0813	09/26/23	09/26/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.2	106 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST02@0.5'
2309432-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0780	09/26/23	09/27/23	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0262	78.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0331	99.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.178	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 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 - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST02@0.5'
2309432-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.466	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	2.58	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.04	0.400	"	"	"	"	"	"	
Lead	1.44	0.200	"	"	"	"	"	"	
Nickel	0.531	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	3.18	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	179	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	11.5	0.0500	"	"	"	"	"	"	
Sodium	50.8	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.994	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

AST02@0.5'
2309432-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	99.0		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.13	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	4.54		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST03@0.5'
2309432-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0812	09/26/23	09/27/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
m,p-Xylene	ND	0.010	"	"	"	"	"	"	
o-Xylene	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0421	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0372	93.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0361	90.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0813	09/26/23	09/26/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.6	100 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST03@0.5'
2309432-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0780	09/26/23	09/27/23	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0192	57.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0261	78.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.407	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 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 - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST03@0.5'
2309432-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.333	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	1.92	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	0.639	0.400	"	"	"	"	"	"	
Lead	0.632	0.200	"	"	"	"	"	"	
Nickel	ND	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	2.03	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	94.0	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	11.9	0.0500	"	"	"	"	"	"	
Sodium	68.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.77	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

AST03@0.5'
2309432-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	98.9		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.909	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.21		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST04@0.5'
2309432-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0812	09/26/23	09/27/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
m,p-Xylene	ND	0.010	"	"	"	"	"	"	
o-Xylene	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0424	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0372	92.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0364	91.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0813	09/26/23	09/26/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/23 00:00**

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

PAH by EPA Method 8270D SIM

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 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

AST04@0.5'
2309432-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0780	09/26/23	09/27/23	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0223	67.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0280	83.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.249	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental
PO Box 1289
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Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST04@0.5'
2309432-04 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.762	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	3.31	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.31	0.400	"	"	"	"	"	"	
Lead	1.83	0.200	"	"	"	"	"	"	
Nickel	1.55	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	8.21	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	196	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	16.1	0.0500	"	"	"	"	"	"	
Sodium	48.0	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.886	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

AST04@0.5'
2309432-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	99.3		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.23	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	5.57		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

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PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST05@0.5'
2309432-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0812	09/26/23	09/27/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
m,p-Xylene	ND	0.010	"	"	"	"	"	"	
o-Xylene	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0449	112 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0371	92.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0366	91.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0813	09/26/23	09/26/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.2	89.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST05@0.5'
2309432-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0780	09/26/23	09/27/23	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0231	69.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0306	91.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0932	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 00:00**

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

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST05@0.5'
2309432-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.314	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	2.79	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	0.691	0.400	"	"	"	"	"	"	
Lead	0.817	0.200	"	"	"	"	"	"	
Nickel	ND	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	2.50	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	24.6	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	2.75	0.0500	"	"	"	"	"	"	
Sodium	2.44	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.124	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

AST05@0.5'
2309432-05 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	98.8		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.190	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	5.21		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

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Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST06@0.5'
2309432-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0812	09/26/23	09/27/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
m,p-Xylene	ND	0.010	"	"	"	"	"	"	
o-Xylene	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0433	108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0370	92.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0364	91.1 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0813	09/26/23	09/26/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.0	87.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST06@0.5'
2309432-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0780	09/26/23	09/27/23	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0214	64.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0295	88.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0339	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental
PO Box 1289
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Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST06@0.5'
2309432-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.577	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	5.66	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.36	0.400	"	"	"	"	"	"	
Lead	1.10	0.200	"	"	"	"	"	"	
Nickel	0.859	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	13.9	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	8.10	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	0.911	0.0500	"	"	"	"	"	"	
Sodium	2.33	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.207	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

AST06@0.5'
2309432-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.8		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0678	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.98		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST07@0.5'
2309432-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0812	09/26/23	09/27/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
m,p-Xylene	ND	0.010	"	"	"	"	"	"	
o-Xylene	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0415	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0368	92.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0359	89.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0813	09/26/23	09/26/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.1	104 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST07@0.5'
2309432-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0780	09/26/23	09/27/23	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0202	60.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0288	86.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0152	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 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 - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST07@0.5'
2309432-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.507	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	4.79	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.22	0.400	"	"	"	"	"	"	
Lead	0.957	0.200	"	"	"	"	"	"	
Nickel	1.76	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	4.27	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	40.8	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	3.83	0.0500	"	"	"	"	"	"	
Sodium	23.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.959	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

AST07@0.5'
2309432-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	99.1		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.382	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.75		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST08@0.5'
2309432-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0812	09/26/23	09/27/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
m,p-Xylene	ND	0.010	"	"	"	"	"	"	
o-Xylene	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0423	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0366	91.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0355	88.7 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0813	09/26/23	09/26/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.4	99.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST08@0.5'
2309432-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0780	09/26/23	09/27/23	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0184	55.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0274	82.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 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 - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST08@0.5'
2309432-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.649	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	5.39	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	0.826	0.400	"	"	"	"	"	"	
Lead	0.598	0.200	"	"	"	"	"	"	
Nickel	0.518	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	2.89	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	158	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	8.65	0.0500	"	"	"	"	"	"	
Sodium	3.37	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0707	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

AST08@0.5'
2309432-08 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	99.1		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.860	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	4.36		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST09@0.5'
2309432-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0812	09/26/23	09/27/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
m,p-Xylene	ND	0.010	"	"	"	"	"	"	
o-Xylene	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0411	103 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0369	92.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0364	91.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0813	09/26/23	09/26/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.4	99.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST09@0.5'
2309432-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0780	09/26/23	09/27/23	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	0.00525	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0104	0.00500	"	"	"	"	"	"	

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0196	58.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0274	82.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 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 - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST09@0.5'
2309432-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.313	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	3.77	0.400	"	"	"	"	"	"	
Cadmium	0.530	0.200	"	"	"	"	"	"	
Copper	0.684	0.400	"	"	"	"	"	"	
Lead	1.93	0.200	"	"	"	"	"	"	
Nickel	0.500	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	9.72	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	14.5	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	1.98	0.0500	"	"	"	"	"	"	
Sodium	4.02	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.263	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

AST09@0.5'
2309432-09 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	99.8		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.144	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.34		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST10@0.5'
2309432-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0812	09/26/23	09/27/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
m,p-Xylene	ND	0.010	"	"	"	"	"	"	
o-Xylene	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0427	107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0370	92.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0364	91.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0813	09/26/23	09/27/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.0	80.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST10@0.5'
2309432-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0780	09/26/23	09/27/23	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0158	47.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0172	51.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0817	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 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 - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST10@0.5'
2309432-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.43	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	48.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.22	0.400	"	"	"	"	"	"	
Lead	3.81	0.200	"	"	"	"	"	"	
Nickel	2.44	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	22.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	300	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	50.5	0.0500	"	"	"	"	"	"	
Sodium	35.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.502	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

AST10@0.5'
2309432-10 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	98.6		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.74	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.62		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST11@0.5'
2309432-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0812	09/26/23	09/27/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
m,p-Xylene	ND	0.010	"	"	"	"	"	"	
o-Xylene	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0417	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0369	92.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0356	88.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0813	09/26/23	09/27/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/23 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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Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST11@0.5'
2309432-11 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0780	09/26/23	09/27/23	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0237	71.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0281	84.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0108	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 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 - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST11@0.5'
2309432-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.58	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	5.53	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.50	0.400	"	"	"	"	"	"	
Lead	1.92	0.200	"	"	"	"	"	"	
Nickel	1.18	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	5.01	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	78.6	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	16.0	0.0500	"	"	"	"	"	"	
Sodium	25.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.688	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
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 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

AST11@0.5'
2309432-11 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	99.3		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.629	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.13		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
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Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST12@0.5'
2309432-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0812	09/26/23	09/27/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
m,p-Xylene	ND	0.010	"	"	"	"	"	"	
o-Xylene	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0454	114 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0374	93.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0365	91.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0813	09/26/23	09/27/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.1	96.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST12@0.5'
2309432-12 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0780	09/26/23	09/27/23	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: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0208	62.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0259	77.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 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 - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

AST12@0.5'
2309432-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.688	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	3.63	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.40	0.400	"	"	"	"	"	"	
Lead	0.848	0.200	"	"	"	"	"	"	
Nickel	1.08	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	3.29	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	20.8	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	4.04	0.0500	"	"	"	"	"	"	
Sodium	2.35	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.123	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

AST12@0.5'
2309432-12 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	99.1		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.174	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.83		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

BKG01@0.5'
2309432-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0214	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.29	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	43.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.81	0.400	"	"	"	"	"	"	
Lead	5.46	0.200	"	"	"	"	"	"	
Nickel	1.89	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	10.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	110	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	14.9	0.0500	"	"	"	"	"	"	
Sodium	0.782	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

BKG01@0.5'
2309432-13 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0186	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.2		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.109	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.26		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

BKG01@4'
2309432-14 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.252	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.81	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	73.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.79	0.400	"	"	"	"	"	"	
Lead	8.22	0.200	"	"	"	"	"	"	
Nickel	2.95	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	7.35	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	131	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	27.7	0.0500	"	"	"	"	"	"	
Sodium	2.29	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

BKG01@4'
2309432-14 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0474	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.1		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0665	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.31		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

BKG02@0.5'
2309432-15 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	0.433	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.40	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	46.2	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.80	0.400	"	"	"	"	"	"	
Lead	5.76	0.200	"	"	"	"	"	"	
Nickel	1.99	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	9.25	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	340	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	57.2	0.0500	"	"	"	"	"	"	
Sodium	1.26	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

BKG02@0.5'
2309432-15 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0166	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.7		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.182	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.35		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

BKG02@4'
2309432-16 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.237	0.0100		mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	2.70	0.200		mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	66.2	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	2.51	0.400		"	"	"	"	"	"	
Lead	6.98	0.200		"	"	"	"	"	"	
Nickel	2.42	0.400		"	"	"	"	"	"	
Silver	ND	0.0200		"	"	"	"	"	"	
Zinc	7.83	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	41.4	0.0500		mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	8.07	0.0500		"	"	"	"	"	"	
Sodium	1.60	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

BKG02@4'
2309432-16 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0596	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.7		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.228	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.63		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

BKG03@0.5'
2309432-17 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	0.141	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.28	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	49.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.28	0.400	"	"	"	"	"	"	
Lead	6.18	0.200	"	"	"	"	"	"	
Nickel	2.29	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	10.6	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	289	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	53.1	0.0500	"	"	"	"	"	"	
Sodium	1.64	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

BKG03@0.5'
2309432-17 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0233	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.8		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.113	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.21		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

BKG03@4'
2309432-18 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0857	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.56	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	61.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.46	0.400	"	"	"	"	"	"	
Lead	7.23	0.200	"	"	"	"	"	"	
Nickel	3.48	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	11.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	436	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	82.2	0.0500	"	"	"	"	"	"	
Sodium	2.50	0.0500	"	"	"	"	"	"	

Summit Scientific

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PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

BKG03@4'
2309432-18 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0288	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.9		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0848	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.14		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

BKG04@0.5'
2309432-19 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0773	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.19	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	48.6	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.04	0.400	"	"	"	"	"	"	
Lead	5.40	0.200	"	"	"	"	"	"	
Nickel	2.52	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	9.36	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	214	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	41.0	0.0500	"	"	"	"	"	"	
Sodium	0.883	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

BKG04@0.5'
2309432-19 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0145	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.2		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.145	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.25		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

BKG04@4'
2309432-20 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.147	0.0100	mg/L	1	BGI0801	09/26/23	09/29/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.40	0.200	mg/kg dry	1	BGI0901	09/28/23	10/01/23	EPA 6020B	
Barium	48.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.61	0.400	"	"	"	"	"	"	
Lead	3.91	0.200	"	"	"	"	"	"	
Nickel	2.89	0.400	"	"	"	"	"	"	
Silver	0.0202	0.0200	"	"	"	"	"	"	
Zinc	8.82	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1250	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	270	0.0500	"	"	"	"	"	"	
Sodium	4.03	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

BKG04@4'
2309432-20 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0270	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.1		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.196	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.48		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

BKG05@0.5'
2309432-21 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.0971	0.0100		mg/L	1	BGI0802	09/26/23	09/28/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	0.649	0.200		mg/kg dry	1	BGI0900	09/28/23	09/30/23	EPA 6020B	
Barium	51.4	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	1.00	0.400		"	"	"	"	"	"	
Lead	5.46	0.200		"	"	"	"	"	"	
Nickel	1.22	0.400		"	"	"	"	"	"	
Silver	ND	0.0200		"	"	"	"	"	"	
Zinc	4.14	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	367	0.0500		mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	75.9	0.0500		"	"	"	"	"	"	
Sodium	0.797	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

BKG05@0.5'
2309432-21 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.00989	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.8		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.110	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.23		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

BKG05@4'
2309432-22 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.180	0.0100	mg/L	1	BGI0802	09/26/23	09/28/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.07	0.200	mg/kg dry	1	BGI0900	09/28/23	09/30/23	EPA 6020B	
Barium	101	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.07	0.400	"	"	"	"	"	"	
Lead	6.44	0.200	"	"	"	"	"	"	
Nickel	1.81	0.400	"	"	"	"	"	"	
Silver	0.0396	0.0200	"	"	"	"	"	"	
Zinc	4.73	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0742	09/25/23	09/25/23	EPA 7196A	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	37.8	0.0500	mg/L dry	1	BGI0855	09/27/23	09/30/23	EPA 6020B	
Magnesium	9.71	0.0500	"	"	"	"	"	"	
Sodium	2.79	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

BKG05@4'
2309432-22 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.105	0.00100	units	1	BGI0983	09/30/23	09/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.9		%	1	BGI0903	09/28/23	09/28/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.283	0.0100	mmhos/cm	1	BGI0889	09/28/23	09/28/23	EPA 120.1	

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

Date Sampled: **09/21/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.74		pH Units	1	BGI0890	09/28/23	09/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGI0812 - EPA 5030 Soil MS

Blank (BGI0812-BLK1)

Prepared & Analyzed: 09/26/23

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
m,p-Xylene	ND	0.010	"							
o-Xylene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0415</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>		<i>50-150</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0366</i>		<i>"</i>	<i>0.0400</i>		<i>91.4</i>		<i>50-150</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0368</i>		<i>"</i>	<i>0.0400</i>		<i>92.0</i>		<i>50-150</i>		

LCS (BGI0812-BS1)

Prepared & Analyzed: 09/26/23

Benzene	0.0913	0.0020	mg/kg	0.100		91.3		70-130		
Toluene	0.0956	0.0050	"	0.100		95.6		70-130		
Ethylbenzene	0.114	0.0050	"	0.100		114		70-130		
m,p-Xylene	0.217	0.010	"	0.200		108		70-130		
o-Xylene	0.109	0.0050	"	0.100		109		70-130		
1,2,4-Trimethylbenzene	0.123	0.0050	"	0.100		123		70-130		
1,3,5-Trimethylbenzene	0.123	0.0050	"	0.100		123		70-130		
Naphthalene	0.0959	0.0038	"	0.100		95.9		70-130		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0437</i>		<i>"</i>	<i>0.0400</i>		<i>109</i>		<i>50-150</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0373</i>		<i>"</i>	<i>0.0400</i>		<i>93.2</i>		<i>50-150</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0359</i>		<i>"</i>	<i>0.0400</i>		<i>89.7</i>		<i>50-150</i>		

Matrix Spike (BGI0812-MS1)

Source: 2309431-21

Prepared & Analyzed: 09/26/23

Benzene	0.0889	0.0020	mg/kg	0.100	ND	88.9		70-130		
Toluene	0.0941	0.0050	"	0.100	ND	94.1		70-130		
Ethylbenzene	0.110	0.0050	"	0.100	ND	110		70-130		
m,p-Xylene	0.208	0.010	"	0.200	ND	104		70-130		
o-Xylene	0.107	0.0050	"	0.100	ND	107		70-130		
1,2,4-Trimethylbenzene	0.118	0.0050	"	0.100	ND	118		70-130		
1,3,5-Trimethylbenzene	0.117	0.0050	"	0.100	ND	117		70-130		
Naphthalene	0.109	0.0038	"	0.100	ND	109		70-130		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0430</i>		<i>"</i>	<i>0.0400</i>		<i>108</i>		<i>50-150</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0375</i>		<i>"</i>	<i>0.0400</i>		<i>93.8</i>		<i>50-150</i>		

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

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 BGI0812 - EPA 5030 Soil MS

Matrix Spike (BGI0812-MS1)

Source: 2309431-21

Prepared & Analyzed: 09/26/23

Surrogate: 4-Bromofluorobenzene	0.0358		mg/kg	0.0400		89.5	50-150		
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Matrix Spike Dup (BGI0812-MSD1)

Source: 2309431-21

Prepared & Analyzed: 09/26/23

Benzene	0.0866	0.0020	mg/kg	0.100	ND	86.6	70-130	2.60	30
Toluene	0.0913	0.0050	"	0.100	ND	91.3	70-130	3.04	30
Ethylbenzene	0.106	0.0050	"	0.100	ND	106	70-130	3.20	30
m,p-Xylene	0.201	0.010	"	0.200	ND	101	70-130	3.53	30
o-Xylene	0.102	0.0050	"	0.100	ND	102	70-130	4.64	30
1,2,4-Trimethylbenzene	0.115	0.0050	"	0.100	ND	115	70-130	2.91	30
1,3,5-Trimethylbenzene	0.115	0.0050	"	0.100	ND	115	70-130	2.43	30
Naphthalene	0.106	0.0038	"	0.100	ND	106	70-130	2.63	30
Surrogate: 1,2-Dichloroethane-d4	0.0444		"	0.0400		111	50-150		
Surrogate: Toluene-d8	0.0374		"	0.0400		93.4	50-150		
Surrogate: 4-Bromofluorobenzene	0.0363		"	0.0400		90.7	50-150		

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 PO Box 1289
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Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

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 BGI0813 - EPA 3550A

Blank (BGI0813-BLK1)

Prepared & Analyzed: 09/26/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	13.8		"	12.5		111		30-150			

LCS (BGI0813-BS1)

Prepared & Analyzed: 09/26/23

C10-C28 (DRO)	500	50	mg/kg	500		100		70-130			
Surrogate: <i>o</i> -Terphenyl	12.6		"	12.5		100		30-150			

Matrix Spike (BGI0813-MS1)

Source: 2309431-21

Prepared & Analyzed: 09/26/23

C10-C28 (DRO)	575	50	mg/kg	500	29.7	109		70-130			
Surrogate: <i>o</i> -Terphenyl	13.3		"	12.5		107		30-150			

Matrix Spike Dup (BGI0813-MSD1)

Source: 2309431-21

Prepared & Analyzed: 09/26/23

C10-C28 (DRO)	566	50	mg/kg	500	29.7	107		70-130	1.58	20	
Surrogate: <i>o</i> -Terphenyl	13.4		"	12.5		107		30-150			

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Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

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 BGI0780 - EPA 5030 Soil MS

Blank (BGI0780-BLK1)

Prepared: 09/26/23 Analyzed: 09/27/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0325		"	0.0333		97.6	40-150			
Surrogate: Fluoranthene-d10	0.0400		"	0.0333		120	40-150			

LCS (BGI0780-BS1)

Prepared: 09/26/23 Analyzed: 09/27/23

Acenaphthene	0.0175	0.00500	mg/kg	0.0333		52.4	31-137			
Anthracene	0.0308	0.00500	"	0.0333		92.3	30-120			
Benzo (a) anthracene	0.0302	0.00500	"	0.0333		90.6	30-120			
Benzo (a) pyrene	0.0293	0.00500	"	0.0333		87.8	30-120			
Benzo (b) fluoranthene	0.0353	0.00500	"	0.0333		106	30-120			
Benzo (k) fluoranthene	0.0355	0.00500	"	0.0333		107	30-120			
Chrysene	0.0296	0.00500	"	0.0333		88.8	30-120			
Dibenz (a,h) anthracene	0.0159	0.00500	"	0.0333		47.6	30-120			
Fluoranthene	0.0301	0.00500	"	0.0333		90.4	30-120			
Fluorene	0.0169	0.00500	"	0.0333		50.8	30-120			
Indeno (1,2,3-cd) pyrene	0.0218	0.00500	"	0.0333		65.4	30-120			
Pyrene	0.0364	0.00500	"	0.0333		109	35-142			
1-Methylnaphthalene	0.0309	0.00500	"	0.0333		92.8	35-142			
2-Methylnaphthalene	0.0305	0.00500	"	0.0333		91.4	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0248		"	0.0333		74.4	40-150			
Surrogate: Fluoranthene-d10	0.0308		"	0.0333		92.3	40-150			

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Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

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 BGI0780 - EPA 5030 Soil MS

Matrix Spike (BGI0780-MS1)	Source: 2309432-01			Prepared: 09/26/23 Analyzed: 09/27/23						
Acenaphthene	0.0161	0.00500	mg/kg	0.0333	ND	48.4	31-137			
Anthracene	0.0251	0.00500	"	0.0333	ND	75.4	30-120			
Benzo (a) anthracene	0.0250	0.00500	"	0.0333	ND	74.9	30-120			
Benzo (a) pyrene	0.0234	0.00500	"	0.0333	ND	70.1	30-120			
Benzo (b) fluoranthene	0.0273	0.00500	"	0.0333	ND	81.9	30-120			
Benzo (k) fluoranthene	0.0269	0.00500	"	0.0333	ND	80.6	30-120			
Chrysene	0.0236	0.00500	"	0.0333	ND	70.7	30-120			
Dibenz (a,h) anthracene	0.0144	0.00500	"	0.0333	ND	43.3	30-120			
Fluoranthene	0.0238	0.00500	"	0.0333	ND	71.5	30-120			
Fluorene	0.0164	0.00500	"	0.0333	ND	49.1	30-120			
Indeno (1,2,3-cd) pyrene	0.0208	0.00500	"	0.0333	ND	62.5	30-120			
Pyrene	0.0291	0.00500	"	0.0333	ND	87.3	35-142			
1-Methylnaphthalene	0.0235	0.00500	"	0.0333	ND	70.5	15-130			
2-Methylnaphthalene	0.0262	0.00500	"	0.0333	ND	78.7	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0193</i>		<i>"</i>	<i>0.0333</i>		<i>57.8</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0252</i>		<i>"</i>	<i>0.0333</i>		<i>75.7</i>	<i>40-150</i>			

Matrix Spike Dup (BGI0780-MSD1)	Source: 2309432-01			Prepared: 09/26/23 Analyzed: 09/27/23						
Acenaphthene	0.0192	0.00500	mg/kg	0.0333	ND	57.6	31-137	17.4	30	
Anthracene	0.0255	0.00500	"	0.0333	ND	76.4	30-120	1.29	30	
Benzo (a) anthracene	0.0254	0.00500	"	0.0333	ND	76.1	30-120	1.64	30	
Benzo (a) pyrene	0.0237	0.00500	"	0.0333	ND	71.0	30-120	1.25	30	
Benzo (b) fluoranthene	0.0281	0.00500	"	0.0333	ND	84.4	30-120	2.93	30	
Benzo (k) fluoranthene	0.0278	0.00500	"	0.0333	ND	83.3	30-120	3.33	30	
Chrysene	0.0241	0.00500	"	0.0333	ND	72.2	30-120	2.05	30	
Dibenz (a,h) anthracene	0.0139	0.00500	"	0.0333	ND	41.6	30-120	4.03	30	
Fluoranthene	0.0248	0.00500	"	0.0333	ND	74.3	30-120	3.85	30	
Fluorene	0.0187	0.00500	"	0.0333	ND	56.0	30-120	13.2	30	
Indeno (1,2,3-cd) pyrene	0.0199	0.00500	"	0.0333	ND	59.7	30-120	4.57	30	
Pyrene	0.0297	0.00500	"	0.0333	ND	89.1	35-142	2.00	30	
1-Methylnaphthalene	0.0245	0.00500	"	0.0333	ND	73.6	15-130	4.29	50	
2-Methylnaphthalene	0.0245	0.00500	"	0.0333	ND	73.5	15-130	6.83	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0191</i>		<i>"</i>	<i>0.0333</i>		<i>57.2</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0259</i>		<i>"</i>	<i>0.0333</i>		<i>77.8</i>	<i>40-150</i>			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

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 BGI0801 - EPA 3050B

Blank (BGI0801-BLK1)				Prepared: 09/26/23 Analyzed: 09/29/23						
Boron	ND	0.0100	mg/L							
LCS (BGI0801-BS1)				Prepared: 09/26/23 Analyzed: 09/29/23						
Boron	5.68	0.0100	mg/L	5.00	114	80-120				
Duplicate (BGI0801-DUP1)				Source: 2309432-01 Prepared: 09/26/23 Analyzed: 09/29/23						
Boron	0.0460	0.0100	mg/L	0.107			79.7	20		QR-01
Matrix Spike (BGI0801-MS1)				Source: 2309432-01 Prepared: 09/26/23 Analyzed: 09/29/23						
Boron	5.59	0.0100	mg/L	5.00	0.107	110	75-125			
Matrix Spike Dup (BGI0801-MSD1)				Source: 2309432-01 Prepared: 09/26/23 Analyzed: 09/29/23						
Boron	5.63	0.0100	mg/L	5.00	0.107	110	75-125	0.636	25	

Batch BGI0802 - EPA 3050B

Blank (BGI0802-BLK1)				Prepared: 09/26/23 Analyzed: 09/28/23						
Boron	ND	0.0100	mg/L							
LCS (BGI0802-BS1)				Prepared: 09/26/23 Analyzed: 09/28/23						
Boron	4.91	0.0100	mg/L	5.00	98.2	80-120				
Duplicate (BGI0802-DUP1)				Source: 2309401-01 Prepared: 09/26/23 Analyzed: 09/28/23						
Boron	0.0620	0.0100	mg/L	0.107			53.3	20		QR-01
Matrix Spike (BGI0802-MS1)				Source: 2309401-01 Prepared: 09/26/23 Analyzed: 09/28/23						
Boron	4.85	0.0100	mg/L	5.00	0.107	94.9	75-125			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

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

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

Batch BGI0802 - EPA 3050B

Matrix Spike Dup (BGI0802-MSD1)

Source: 2309401-01

Prepared: 09/26/23 Analyzed: 09/28/23

Boron	4.98	0.0100	mg/L	5.00	0.107	97.5	75-125	2.69	25	
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Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGI0900 - EPA 3050B

Blank (BGI0900-BLK1)

Prepared: 09/28/23 Analyzed: 09/30/23

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	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							
Selenium	ND	0.260	"							

LCS (BGI0900-BS1)

Prepared: 09/28/23 Analyzed: 09/30/23

Arsenic	47.7	0.200	mg/kg wet	40.0		119	80-120
Barium	39.8	0.400	"	40.0		99.5	80-120
Cadmium	2.21	0.200	"	2.00		110	80-120
Copper	47.0	0.400	"	40.0		117	80-120
Lead	21.2	0.200	"	20.0		106	80-120
Nickel	48.1	0.400	"	40.0		120	80-120
Silver	2.10	0.0200	"	2.00		105	80-120
Zinc	47.3	0.400	"	40.0		118	80-120

Duplicate (BGI0900-DUP1)

Source: 2309432-21

Prepared: 09/28/23 Analyzed: 09/30/23

Arsenic	0.692	0.200	mg/kg dry	0.649		6.36	20
Barium	47.7	0.400	"	51.4		7.36	20
Cadmium	0.106	0.200	"	0.120		12.2	20
Copper	0.922	0.400	"	1.00		8.34	20
Lead	4.98	0.200	"	5.46		9.26	20
Nickel	1.38	0.400	"	1.22		12.1	20
Silver	0.0125	0.0200	"	0.0125		0.00	20
Zinc	4.03	0.400	"	4.14		2.70	20
Selenium	ND	0.260	"	ND			200

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

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 BGI0900 - EPA 3050B

Matrix Spike (BGI0900-MS1)

Source: 2309432-21

Prepared: 09/28/23 Analyzed: 09/30/23

Arsenic	13.4	0.200	mg/kg dry	41.8	0.649	30.5	75-125				QM-07
Barium	107	0.400	"	41.8	51.4	134	75-125				QM-07
Cadmium	2.40	0.200	"	2.09	0.120	109	75-125				
Copper	13.9	0.400	"	41.8	1.00	30.8	75-125				QM-07
Lead	25.5	0.200	"	20.9	5.46	95.9	75-125				
Nickel	14.9	0.400	"	41.8	1.22	32.7	75-125				QM-07
Silver	2.08	0.0200	"	2.09	0.0125	98.8	75-125				
Zinc	17.4	0.400	"	41.8	4.14	31.7	75-125				QM-07

Matrix Spike Dup (BGI0900-MSD1)

Source: 2309432-21

Prepared: 09/28/23 Analyzed: 09/30/23

Arsenic	13.8	0.200	mg/kg dry	41.8	0.649	31.6	75-125	3.14	25		QM-07
Barium	109	0.400	"	41.8	51.4	138	75-125	1.82	25		QM-07
Cadmium	2.48	0.200	"	2.09	0.120	113	75-125	3.12	25		
Copper	14.4	0.400	"	41.8	1.00	32.1	75-125	4.01	25		QM-07
Lead	26.7	0.200	"	20.9	5.46	102	75-125	4.55	25		
Nickel	15.3	0.400	"	41.8	1.22	33.8	75-125	3.16	25		QM-07
Silver	2.19	0.0200	"	2.09	0.0125	104	75-125	5.29	25		
Zinc	17.5	0.400	"	41.8	4.14	32.1	75-125	1.02	25		QM-07

Batch BGI0901 - EPA 3050B

Blank (BGI0901-BLK1)

Prepared: 09/28/23 Analyzed: 10/01/23

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	"								
Silver	ND	0.0200	"								
Zinc	ND	0.400	"								
Selenium	ND	0.260	"								

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 - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

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 BGI0901 - EPA 3050B

LCS (BGI0901-BS1)

Prepared: 09/28/23 Analyzed: 10/01/23

Arsenic	39.8	0.200	mg/kg wet	40.0		99.4	80-120			
Barium	42.8	0.400	"	40.0		107	80-120			
Cadmium	2.14	0.200	"	2.00		107	80-120			
Copper	44.6	0.400	"	40.0		111	80-120			
Lead	20.9	0.200	"	20.0		105	80-120			
Nickel	44.2	0.400	"	40.0		111	80-120			
Silver	1.94	0.0200	"	2.00		97.0	80-120			
Zinc	45.7	0.400	"	40.0		114	80-120			

Duplicate (BGI0901-DUP1)

Source: 2309432-01

Prepared: 09/28/23 Analyzed: 10/01/23

Arsenic	0.414	0.200	mg/kg dry		1.21			97.8	20	QR-01
Barium	2.61	0.400	"		2.62			0.231	20	
Cadmium	0.0149	0.200	"		0.0588			119	20	QR-01
Copper	0.856	0.400	"		1.77			69.4	20	QR-01
Lead	0.704	0.200	"		1.56			75.9	20	QR-01
Nickel	0.645	0.400	"		0.868			29.5	20	QR-01
Silver	ND	0.0200	"		ND				20	
Zinc	3.16	0.400	"		6.88			74.1	20	QR-01
Selenium	ND	0.260	"		ND				200	

Matrix Spike (BGI0901-MS1)

Source: 2309432-01

Prepared: 09/28/23 Analyzed: 10/01/23

Arsenic	42.3	0.200	mg/kg dry	40.3	1.21	102	75-125			
Barium	47.2	0.400	"	40.3	2.62	111	75-125			
Cadmium	2.24	0.200	"	2.01	0.0588	108	75-125			
Copper	44.4	0.400	"	40.3	1.77	106	75-125			
Lead	22.3	0.200	"	20.1	1.56	103	75-125			
Nickel	43.0	0.400	"	40.3	0.868	105	75-125			
Silver	2.01	0.0200	"	2.01	ND	99.5	75-125			
Zinc	47.0	0.400	"	40.3	6.88	99.7	75-125			

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

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 BGI0901 - EPA 3050B

Matrix Spike Dup (BGI0901-MSD1)

Source: 2309432-01

Prepared: 09/28/23 Analyzed: 10/01/23

Arsenic	41.1	0.200	mg/kg dry	40.3	1.21	98.9	75-125	2.92	25	
Barium	46.9	0.400	"	40.3	2.62	110	75-125	0.618	25	
Cadmium	2.20	0.200	"	2.01	0.0588	106	75-125	1.73	25	
Copper	43.9	0.400	"	40.3	1.77	104	75-125	1.25	25	
Lead	22.1	0.200	"	20.1	1.56	102	75-125	0.791	25	
Nickel	43.3	0.400	"	40.3	0.868	105	75-125	0.631	25	
Silver	2.00	0.0200	"	2.01	ND	99.4	75-125	0.141	25	
Zinc	46.7	0.400	"	40.3	6.88	98.8	75-125	0.780	25	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
10/23/23 10:27

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BGI0742 - 3060A Mod

Blank (BGI0742-BLK1)

Prepared & Analyzed: 09/25/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGI0742-BS1)

Prepared & Analyzed: 09/25/23

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

Duplicate (BGI0742-DUP1)

Source: 2309432-01

Prepared & Analyzed: 09/25/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGI0742-MS1)

Source: 2309432-01

Prepared & Analyzed: 09/25/23

Chromium, Hexavalent 26.2 0.30 mg/kg dry 25.2 ND 104 75-125

Matrix Spike Dup (BGI0742-MSD1)

Source: 2309432-01

Prepared & Analyzed: 09/25/23

Chromium, Hexavalent 26.0 0.30 mg/kg dry 25.2 ND 103 75-125 0.579 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

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 BGI0855 - General Preparation

Blank (BGI0855-BLK1)

Prepared: 09/27/23 Analyzed: 09/30/23

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

LCS (BGI0855-BS1)

Prepared: 09/27/23 Analyzed: 09/30/23

Calcium	4.90	0.0500	mg/L wet	5.00	98.1	70-130				
Magnesium	5.49	0.0500	"	5.00	110	70-130				
Sodium	5.39	0.0500	"	5.00	108	70-130				

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16

Project Number: UWRWE-A3323-ABN

Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

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 BGI0903 - General Preparation

Duplicate (BGI0903-DUP1)

Source: 2309432-01

Prepared & Analyzed: 09/28/23

% Solids	99.2		%		99.3			0.0386		20	
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Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

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 BGI0889 - General Preparation

Blank (BGI0889-BLK1)

Prepared & Analyzed: 09/28/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGI0889-BS1)

Prepared & Analyzed: 09/28/23

Specific Conductance (EC) 0.151 0.0100 mmhos/cm 0.150 101 95-105

Duplicate (BGI0889-DUP1)

Source: 2309432-01

Prepared & Analyzed: 09/28/23

Specific Conductance (EC) 0.821 0.0100 mmhos/cm 0.821 0.00 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl 30-16

Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 10/23/23 10:27

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 BGI0890 - General Preparation

LCS (BGI0890-BS1)

Prepared & Analyzed: 09/28/23

pH	9.15	pH Units	9.18	99.7	95-105
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Duplicate (BGI0890-DUP1)

Source: 2309432-01

Prepared & Analyzed: 09/28/23

pH	4.44	pH Units	4.44	0.00	20
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl 30-16

Project Number: UWRWE-A3323-ABN

Project Manager: Paul Henchan

Reported:
10/23/23 10:27

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-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

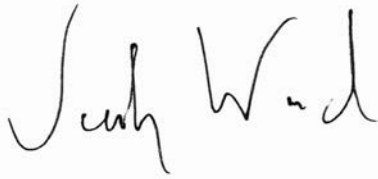
December 08, 2023

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549

RE: Noble - Bethyl GW 30-16 Tank
Work Order #2309531

Enclosed are the results of analyses for samples received by Summit Scientific on 09/27/23 16:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a long horizontal stroke at the end.

Jacob Wood For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PWV W Wall 3'	2309531-01	Soil	09/26/23 10:57	09/27/23 16:40
BKG01 6'	2309531-02	Soil	09/26/23 14:20	09/27/23 16:40
BKG02 6'	2309531-03	Soil	09/26/23 14:35	09/27/23 16:40
BKG03 6'	2309531-04	Soil	09/26/23 14:40	09/27/23 16:40
BKG04 6'	2309531-05	Soil	09/26/23 14:45	09/27/23 16:40
BKG05 6'	2309531-06	Soil	09/26/23 14:50	09/27/23 16:40
SEP01 DL 3'	2309531-07	Soil	09/27/23 12:05	09/27/23 16:40
SEP02 DL 3'	2309531-08	Soil	09/27/23 12:10	09/27/23 16:40
SEP03 DL01 3'	2309531-09	Soil	09/27/23 12:15	09/27/23 16:40
SEP03 DL02 3'	2309531-10	Soil	09/27/23 12:20	09/27/23 16:40

Summit Scientific

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

Lab ID	Page 1 of 1
2309531	

Send Data To:		Send Invoice To:	
Client: Fremont Environmental	Project Manager: Paul Henehan	Company: Noble	
Address:	E-Mail: Fremont Distribution List	Project Name/Location:	
City/State/Zip:		AFE#:	
Phone: 303-261-6246	Project Name: BETHYL GW 30-16 TANK	PO/Billing Codes: UWRWE-A3323-ABN	
Sampler Name: Stanley Gilbert	Project Number:	Contact: Mike Montoya	

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)	
1	PWV W Wall 3'	9/26/23	10:57	2			X			X			X	X	X			
2	BKG01 6'		14:20	1										X	X			
3	BKG02 6'		14:35	1										X	X			
4	BKG03 6'		14:40	1										X	X			
5	BKG04 6'		14:45	1										X	X			
6	BKG05 6'		14:50	1										X	X			
7	SEPO1 DL 3'	9/27/23	12:05	2							X	X	X	X	X			
8	SEPO2 DL 3'		12:10	1														
9	SEPO3 DLO1 3'		12:15	1														
10	SEPO3 DLO2 3'		12:20	1														
11																		
12																		
13																		
14																		
15																		

Relinquished by: <i>[Signature]</i> Date/Time: 9/27/23 15:35	Received by: Summit North Date/Time: 9/27/23 15:33	TAT Business Days	Field DO	Notes:
		Same Day	Field EC	
Relinquished by: S2 Date/Time: 9/27/23 1640	Received by: <i>[Signature]</i> Date/Time: 9/27/23 1640	1 Day	Field ORP	
		2 Days	Field pH	
		3 Days	Field Temp.	
Relinquished by: Date/Time:	Received by: Date/Time:	Standard	<input checked="" type="checkbox"/> Field Turb.	
Temperature Upon Receipt: 3.5	Corrected Temperature: —	IR gun #: 2	HNO3 lot #:	

S₂

Sample Receipt Checklist

S2 Work Order# 2309531

Client: Noble / Fremont Client Project ID: Bethy / GW 30-16 Tank

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

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

Temp (°C) 3.5 Thermometer # 2

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? (1) NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ice
If custody seals are present, are they intact? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? (1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? (1)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	no time stamps
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? (1) Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? (1) Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				
(1) If NO, then contact the client before proceeding with analysis and note in case narrative.				

AS
Custodian Printed Name

9/27/23
Date/Time

4.5



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

PWV W Wall 3'
2309531-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/26/23 10:57**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGI0975	09/29/23	09/30/23	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: **09/26/23 10:57**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0339	84.7 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0372	93.1 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0368	92.1 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/26/23 10:57**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGI0978	09/29/23	10/03/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **09/26/23 10:57**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.6	85.0 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

PWV W Wall 3'
2309531-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/26/23 10:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BG10948	09/29/23	09/30/23	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: **09/26/23 10:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0293	87.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0281	84.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/26/23 10:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGJ0034	10/02/23	10/03/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/26/23 10:57**

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 - Bethyl GW 30-16 Tank
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

PWV W Wall 3'
2309531-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.728	0.200	mg/kg dry	1	BGJ0023	10/02/23	10/03/23	EPA 6020B	
Barium	35.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	0.785	0.400	"	"	"	"	"	"	
Lead	9.26	0.200	"	"	"	"	"	"	
Nickel	0.826	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	2.55	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/26/23 10:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGJ0963	09/29/23	09/29/23	EPA 7196A	

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

Date Sampled: **09/26/23 10:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	21.5	0.0500	mg/L dry	1	BGJ0029	10/02/23	10/04/23	EPA 6020B	
Magnesium	4.76	0.0500	"	"	"	"	"	"	
Sodium	1.77	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/26/23 10:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0900	0.00100	units	1	BGJ0189	10/05/23	10/05/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 12/08/23 13:53

PWV W Wall 3'
2309531-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/26/23 10:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.5		%	1	BGJ0038	10/02/23	10/03/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/26/23 10:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.127	0.0100	mmhos/cm	1	BGJ0084	10/03/23	10/03/23	EPA 120.1	

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

Date Sampled: **09/26/23 10:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.14		pH Units	1	BGJ0083	10/03/23	10/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

BKG01 6'
2309531-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/26/23 14:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BGJ0034	10/02/23	10/03/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/26/23 14:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	1.48	0.200		mg/kg dry	1	BGJ0023	10/02/23	10/03/23	EPA 6020B	
Barium	107	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	1.75	0.400		"	"	"	"	"	"	
Lead	6.33	0.200		"	"	"	"	"	"	
Nickel	1.98	0.400		"	"	"	"	"	"	
Silver	0.0301	0.0200		"	"	"	"	"	"	
Zinc	6.10	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/26/23 14:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGI0963	09/29/23	09/29/23	EPA 7196A	

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

Date Sampled: **09/26/23 14:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	33.8	0.0500		mg/L dry	1	BGJ0029	10/02/23	10/04/23	EPA 6020B	
Magnesium	7.83	0.0500		"	"	"	"	"	"	
Sodium	12.3	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 12/08/23 13:53

BKG01 6'
2309531-02 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/26/23 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.496	0.00100	units	1	BGJ0189	10/05/23	10/05/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/26/23 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.4		%	1	BGJ0038	10/02/23	10/03/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/26/23 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.295	0.0100	mmhos/cm	1	BGJ0084	10/03/23	10/03/23	EPA 120.1	

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

Date Sampled: **09/26/23 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.81		pH Units	1	BGJ0083	10/03/23	10/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

BKG02 6'
2309531-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/26/23 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BGJ0034	10/02/23	10/03/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/26/23 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	1.53	0.200		mg/kg dry	1	BGJ0023	10/02/23	10/03/23	EPA 6020B	
Barium	102	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	1.89	0.400		"	"	"	"	"	"	
Lead	6.69	0.200		"	"	"	"	"	"	
Nickel	2.05	0.400		"	"	"	"	"	"	
Silver	0.0310	0.0200		"	"	"	"	"	"	
Zinc	6.13	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/26/23 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGI0963	09/29/23	09/29/23	EPA 7196A	

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

Date Sampled: **09/26/23 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	34.1	0.0500		mg/L dry	1	BGJ0029	10/02/23	10/04/23	EPA 6020B	
Magnesium	7.88	0.0500		"	"	"	"	"	"	
Sodium	9.08	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 12/08/23 13:53

BKG02 6'
2309531-03 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/26/23 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.364	0.00100	units	1	BGJ0189	10/05/23	10/05/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/26/23 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.2		%	1	BGJ0038	10/02/23	10/03/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/26/23 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.287	0.0100	mmhos/cm	1	BGJ0084	10/03/23	10/03/23	EPA 120.1	

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

Date Sampled: **09/26/23 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.78		pH Units	1	BGJ0083	10/03/23	10/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

BKG03 6'
2309531-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/26/23 14:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BGJ0034	10/02/23	10/03/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/26/23 14:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	1.50	0.200		mg/kg dry	1	BGJ0023	10/02/23	10/03/23	EPA 6020B	
Barium	96.4	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	1.83	0.400		"	"	"	"	"	"	
Lead	6.91	0.200		"	"	"	"	"	"	
Nickel	1.97	0.400		"	"	"	"	"	"	
Silver	0.0338	0.0200		"	"	"	"	"	"	
Zinc	6.06	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/26/23 14:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGI0963	09/29/23	09/29/23	EPA 7196A	

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

Date Sampled: **09/26/23 14:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	33.3	0.0500		mg/L dry	1	BGJ0029	10/02/23	10/04/23	EPA 6020B	
Magnesium	7.52	0.0500		"	"	"	"	"	"	
Sodium	9.23	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

BKG03 6'
2309531-04 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/26/23 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.376	0.00100	units	1	BGJ0189	10/05/23	10/05/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/26/23 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.9		%	1	BGJ0038	10/02/23	10/03/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/26/23 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.281	0.0100	mmhos/cm	1	BGJ0084	10/03/23	10/03/23	EPA 120.1	

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

Date Sampled: **09/26/23 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.78		pH Units	1	BGJ0083	10/03/23	10/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

BKG04 6'
2309531-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/26/23 14:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BGJ0034	10/02/23	10/03/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/26/23 14:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.52	0.200	mg/kg dry	1	BGJ0023	10/02/23	10/03/23	EPA 6020B	
Barium	120	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.12	0.400	"	"	"	"	"	"	
Lead	7.24	0.200	"	"	"	"	"	"	
Nickel	2.13	0.400	"	"	"	"	"	"	
Silver	0.0465	0.0200	"	"	"	"	"	"	
Zinc	6.29	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/26/23 14:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0963	09/29/23	09/29/23	EPA 7196A	

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

Date Sampled: **09/26/23 14:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	36.7	0.0500	mg/L dry	1	BGJ0029	10/02/23	10/04/23	EPA 6020B	
Magnesium	8.37	0.0500	"	"	"	"	"	"	
Sodium	9.37	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 12/08/23 13:53

BKG04 6'
2309531-05 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/26/23 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.363	0.00100	units	1	BGJ0189	10/05/23	10/05/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/26/23 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.3		%	1	BGJ0038	10/02/23	10/03/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/26/23 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.296	0.0100	mmhos/cm	1	BGJ0084	10/03/23	10/03/23	EPA 120.1	

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

Date Sampled: **09/26/23 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.79		pH Units	1	BGJ0083	10/03/23	10/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

BKG05 6'
2309531-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/26/23 14:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BGJ0034	10/02/23	10/03/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/26/23 14:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	1.88	0.200		mg/kg dry	1	BGJ0023	10/02/23	10/03/23	EPA 6020B	
Barium	103	0.400		"	"	"	"	"	"	
Cadmium	0.201	0.200		"	"	"	"	"	"	
Copper	1.90	0.400		"	"	"	"	"	"	
Lead	7.45	0.200		"	"	"	"	"	"	
Nickel	2.13	0.400		"	"	"	"	"	"	
Silver	0.0334	0.0200		"	"	"	"	"	"	
Zinc	6.12	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/26/23 14:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGI0963	09/29/23	09/29/23	EPA 7196A	

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

Date Sampled: **09/26/23 14:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	28.7	0.0500		mg/L dry	1	BGJ0029	10/02/23	10/04/23	EPA 6020B	
Magnesium	6.56	0.0500		"	"	"	"	"	"	
Sodium	7.52	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

BKG05 6'
2309531-06 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/26/23 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.329	0.00100	units	1	BGJ0189	10/05/23	10/05/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/26/23 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.5		%	1	BGJ0038	10/02/23	10/03/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/26/23 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.234	0.0100	mmhos/cm	1	BGJ0084	10/03/23	10/03/23	EPA 120.1	

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

Date Sampled: **09/26/23 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.83		pH Units	1	BGJ0083	10/03/23	10/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

SEP01 DL 3'
2309531-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0975	09/29/23	09/30/23	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: **09/27/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0341	85.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0367	91.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0375	93.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0978	09/29/23	10/03/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/27/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.7	85.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

SEP01 DL 3'
2309531-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/27/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BG10948	09/29/23	09/30/23	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: **09/27/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0260	78.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0271	81.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/27/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGJ0034	10/02/23	10/03/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/27/23 12:05**

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 - Bethyl GW 30-16 Tank
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

SEP01 DL 3'
2309531-07 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.07	0.200	mg/kg dry	1	BGJ0023	10/02/23	10/03/23	EPA 6020B	
Barium	83.7	0.400	"	"	"	"	"	"	
Cadmium	0.210	0.200	"	"	"	"	"	"	
Copper	1.67	0.400	"	"	"	"	"	"	
Lead	7.19	0.200	"	"	"	"	"	"	
Nickel	1.48	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	5.39	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/27/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0963	09/29/23	09/29/23	EPA 7196A	

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

Date Sampled: **09/27/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	95.4	0.0500	mg/L dry	1	BGJ0029	10/02/23	10/04/23	EPA 6020B	
Magnesium	12.6	0.0500	"	"	"	"	"	"	
Sodium	31.8	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/27/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.812	0.00100	units	1	BGJ0189	10/05/23	10/05/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 12/08/23 13:53

SEP01 DL 3'
2309531-07 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.6		%	1	BGJ0038	10/02/23	10/03/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/27/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.766	0.0100	mmhos/cm	1	BGJ0084	10/03/23	10/03/23	EPA 120.1	

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

Date Sampled: **09/27/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.57		pH Units	1	BGJ0083	10/03/23	10/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

SEP02 DL 3'
2309531-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BG10975	09/29/23	09/30/23	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: **09/27/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0350	87.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0374	93.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0370	92.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BG10978	09/29/23	10/03/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/27/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.7	85.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

SEP02 DL 3'
2309531-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/27/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BG10949	09/29/23	10/03/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **09/27/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0257	77.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0334	100 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/27/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGJ0034	10/02/23	10/03/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/27/23 12:10**

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

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

SEP02 DL 3'
2309531-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	2.05	0.200	mg/kg dry	1	BGJ0023	10/02/23	10/03/23	EPA 6020B
Barium	64.4	0.400	"	"	"	"	"	"
Cadmium	0.213	0.200	"	"	"	"	"	"
Copper	1.74	0.400	"	"	"	"	"	"
Lead	6.35	0.200	"	"	"	"	"	"
Nickel	1.42	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	4.53	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/27/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0963	09/29/23	09/29/23	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.8		%	1	BGJ0038	10/02/23	10/03/23	Calculation	

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

Date Sampled: **09/27/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.49		pH Units	1	BGJ0083	10/03/23	10/03/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 12/08/23 13:53

SEP02 DL 3'
2309531-08 (Soil)

Summit Scientific

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

Date Sampled: **09/27/23 12:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	116	0.0500	mg/L dry	1	BGL0170	10/02/23	12/08/23	EPA 6020B	
Magnesium	17.9	0.0500	"	"	"	"	"	"	
Sodium	467	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/27/23 12:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	10.7	0.00100	units	1	BGL0325	10/05/23	12/08/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/27/23 12:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	3.75	0.0100	mmhos/cm	1	BGJ0481	10/03/23	10/11/23	EPA 120.1	I-04

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Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

SEP03 DL01 3'
2309531-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/23 12:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGI0975	09/29/23	09/30/23	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: **09/27/23 12:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0339	84.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0374	93.4 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0370	92.4 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/23 12:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGI0978	09/29/23	10/03/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **09/27/23 12:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.0	87.6 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

SEP03 DL01 3'
2309531-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/27/23 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BG10949	09/29/23	10/03/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **09/27/23 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0235	70.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0284	85.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/27/23 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGJ0034	10/02/23	10/03/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/27/23 12:15**

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 - Bethyl GW 30-16 Tank
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

SEP03 DL01 3'
2309531-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.08	0.200	mg/kg dry	1	BGJ0023	10/02/23	10/03/23	EPA 6020B	
Barium	69.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.70	0.400	"	"	"	"	"	"	
Lead	5.88	0.200	"	"	"	"	"	"	
Nickel	1.75	0.400	"	"	"	"	"	"	
Silver	0.0365	0.0200	"	"	"	"	"	"	
Zinc	6.21	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/27/23 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGJ0963	09/29/23	09/29/23	EPA 7196A	

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

Date Sampled: **09/27/23 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	29.1	0.0500	mg/L dry	1	BGJ0029	10/02/23	10/04/23	EPA 6020B	
Magnesium	6.84	0.0500	"	"	"	"	"	"	
Sodium	2.44	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/27/23 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.106	0.00100	units	1	BGJ0189	10/05/23	10/05/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

SEP03 DL01 3'
2309531-09 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/23 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.9		%	1	BGJ0038	10/02/23	10/03/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/27/23 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.183	0.0100	mmhos/cm	1	BGJ0084	10/03/23	10/03/23	EPA 120.1	

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

Date Sampled: **09/27/23 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.82		pH Units	1	BGJ0083	10/03/23	10/03/23	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

SEP03 DL02 3'
2309531-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGI0975	09/29/23	09/30/23	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: **09/27/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0345	86.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0370	92.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0371	92.7 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGI0978	09/29/23	10/04/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/27/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.07	72.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

SEP03 DL02 3'
2309531-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/27/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BG10949	09/29/23	10/03/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **09/27/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0188	56.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0293	88.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/27/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGJ0034	10/02/23	10/03/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/27/23 12:20**

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

Project: Noble - Bethyl GW 30-16 Tank
Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

SEP03 DL02 3'
2309531-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.994	0.200	mg/kg dry	1	BGJ0023	10/02/23	10/03/23	EPA 6020B	
Barium	69.6	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.96	0.400	"	"	"	"	"	"	
Lead	5.58	0.200	"	"	"	"	"	"	
Nickel	1.60	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	6.31	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/27/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGJ0963	09/29/23	09/29/23	EPA 7196A	

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

Date Sampled: **09/27/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	28.8	0.0500	mg/L dry	1	BGJ0029	10/02/23	10/04/23	EPA 6020B	
Magnesium	4.69	0.0500	"	"	"	"	"	"	
Sodium	4.18	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/27/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.190	0.00100	units	1	BGJ0189	10/05/23	10/05/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 12/08/23 13:53

SEP03 DL02 3'
2309531-10 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.0		%	1	BGJ0038	10/02/23	10/03/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/27/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.208	0.0100	mmhos/cm	1	BGJ0084	10/03/23	10/03/23	EPA 120.1	

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

Date Sampled: **09/27/23 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.87		pH Units	1	BGJ0083	10/03/23	10/03/23	EPA 9045D	

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Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

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 BGI0975 - EPA 5030 Soil MS

Blank (BGI0975-BLK1)

Prepared: 09/29/23 Analyzed: 09/30/23

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0323		"	0.0400		80.9	50-150			
<i>Surrogate: Toluene-d8</i>	0.0369		"	0.0400		92.2	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0361		"	0.0400		90.2	50-150			

LCS (BGI0975-BS1)

Prepared: 09/29/23 Analyzed: 09/30/23

Benzene	0.0844	0.0020	mg/kg	0.100		84.4	70-130			
Toluene	0.0893	0.0050	"	0.100		89.3	70-130			
Ethylbenzene	0.106	0.0050	"	0.100		106	70-130			
m,p-Xylene	0.201	0.010	"	0.200		101	70-130			
o-Xylene	0.103	0.0050	"	0.100		103	70-130			
1,2,4-Trimethylbenzene	0.107	0.0050	"	0.100		107	70-130			
1,3,5-Trimethylbenzene	0.116	0.0050	"	0.100		116	70-130			
Naphthalene	0.0984	0.0038	"	0.100		98.4	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0328		"	0.0400		81.9	50-150			
<i>Surrogate: Toluene-d8</i>	0.0376		"	0.0400		93.9	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0370		"	0.0400		92.6	50-150			

Matrix Spike (BGI0975-MS1)

Source: 2309506-21

Prepared: 09/29/23 Analyzed: 09/30/23

Benzene	0.0821	0.0020	mg/kg	0.100	ND	82.1	70-130			
Toluene	0.0860	0.0050	"	0.100	ND	86.0	70-130			
Ethylbenzene	0.0988	0.0050	"	0.100	ND	98.8	70-130			
m,p-Xylene	0.189	0.010	"	0.200	ND	94.4	70-130			
o-Xylene	0.0962	0.0050	"	0.100	ND	96.2	70-130			
1,2,4-Trimethylbenzene	0.0966	0.0050	"	0.100	ND	96.6	70-130			
1,3,5-Trimethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130			
Naphthalene	0.0893	0.0038	"	0.100	ND	89.3	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0330		"	0.0400		82.4	50-150			
<i>Surrogate: Toluene-d8</i>	0.0374		"	0.0400		93.4	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0368		"	0.0400		92.0	50-150			

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 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 12/08/23 13:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGI0975 - EPA 5030 Soil MS

Matrix Spike Dup (BGI0975-MSD1)	Source: 2309506-21			Prepared: 09/29/23 Analyzed: 09/30/23						
Benzene	0.0791	0.0020	mg/kg	0.100	ND	79.1	70-130	3.80	30	
Toluene	0.0835	0.0050	"	0.100	ND	83.5	70-130	2.94	30	
Ethylbenzene	0.0941	0.0050	"	0.100	ND	94.1	70-130	4.88	30	
m,p-Xylene	0.181	0.010	"	0.200	ND	90.7	70-130	4.08	30	
o-Xylene	0.0931	0.0050	"	0.100	ND	93.1	70-130	3.23	30	
1,2,4-Trimethylbenzene	0.0938	0.0050	"	0.100	ND	93.8	70-130	3.03	30	
1,3,5-Trimethylbenzene	0.104	0.0050	"	0.100	ND	104	70-130	2.36	30	
Naphthalene	0.0856	0.0038	"	0.100	ND	85.6	70-130	4.26	30	
Surrogate: 1,2-Dichloroethane-d4	0.0325		"	0.0400		81.2	50-150			
Surrogate: Toluene-d8	0.0376		"	0.0400		94.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0369		"	0.0400		92.3	50-150			

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Project: Noble - Bethyl GW 30-16 Tank
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 12/08/23 13:53

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 BGI0978 - EPA 3550A

Blank (BGI0978-BLK1)

Prepared: 09/29/23 Analyzed: 10/03/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	16.3		"	12.5		130	30-150				

LCS (BGI0978-BS1)

Prepared: 09/29/23 Analyzed: 10/03/23

C10-C28 (DRO)	462	50	mg/kg	500		92.4	70-130				
Surrogate: <i>o</i> -Terphenyl	12.3		"	12.5		98.8	30-150				

Matrix Spike (BGI0978-MS1)

Source: 2309506-21

Prepared: 09/29/23 Analyzed: 10/03/23

C10-C28 (DRO)	506	50	mg/kg	500	ND	101	70-130				
Surrogate: <i>o</i> -Terphenyl	12.6		"	12.5		101	30-150				

Matrix Spike Dup (BGI0978-MSD1)

Source: 2309506-21

Prepared: 09/29/23 Analyzed: 10/03/23

C10-C28 (DRO)	521	50	mg/kg	500	ND	104	70-130	3.07	20		
Surrogate: <i>o</i> -Terphenyl	12.3		"	12.5		98.7	30-150				

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Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGI0948 - EPA 5030 Soil MS

Blank (BGI0948-BLK1)

Prepared: 09/29/23 Analyzed: 09/30/23

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>0.0431</i>		"	<i>0.0333</i>		<i>129</i>		<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0442</i>		"	<i>0.0333</i>		<i>133</i>		<i>40-150</i>			

LCS (BGI0948-BS1)

Prepared: 09/29/23 Analyzed: 09/30/23

Acenaphthene	0.0384	0.00500	mg/kg	0.0333	115	31-137
Anthracene	0.0357	0.00500	"	0.0333	107	30-120
Benzo (a) anthracene	0.0311	0.00500	"	0.0333	93.2	30-120
Benzo (a) pyrene	0.0374	0.00500	"	0.0333	112	30-120
Benzo (b) fluoranthene	0.0386	0.00500	"	0.0333	116	30-120
Benzo (k) fluoranthene	0.0396	0.00500	"	0.0333	119	30-120
Chrysene	0.0363	0.00500	"	0.0333	109	30-120
Dibenz (a,h) anthracene	0.0367	0.00500	"	0.0333	110	30-120
Fluoranthene	0.0337	0.00500	"	0.0333	101	30-120
Fluorene	0.0367	0.00500	"	0.0333	110	30-120
Indeno (1,2,3-cd) pyrene	0.0266	0.00500	"	0.0333	79.9	30-120
Pyrene	0.0354	0.00500	"	0.0333	106	35-142
1-Methylnaphthalene	0.0345	0.00500	"	0.0333	103	35-142
2-Methylnaphthalene	0.0355	0.00500	"	0.0333	106	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0403</i>		"	<i>0.0333</i>	<i>121</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0393</i>		"	<i>0.0333</i>	<i>118</i>	<i>40-150</i>

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Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

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 BGI0948 - EPA 5030 Soil MS

Matrix Spike (BGI0948-MS1)	Source: 2309528-01			Prepared: 09/29/23 Analyzed: 09/30/23					
Acenaphthene	0.0201	0.00500	mg/kg	0.0333	ND	60.2	31-137		
Anthracene	0.0190	0.00500	"	0.0333	ND	57.1	30-120		
Benzo (a) anthracene	0.0173	0.00500	"	0.0333	ND	51.9	30-120		
Benzo (a) pyrene	0.0196	0.00500	"	0.0333	ND	58.9	30-120		
Benzo (b) fluoranthene	0.0212	0.00500	"	0.0333	ND	63.7	30-120		
Benzo (k) fluoranthene	0.0214	0.00500	"	0.0333	ND	64.2	30-120		
Chrysene	0.0207	0.00500	"	0.0333	ND	62.2	30-120		
Dibenz (a,h) anthracene	0.0203	0.00500	"	0.0333	ND	61.0	30-120		
Fluoranthene	0.0196	0.00500	"	0.0333	ND	58.8	30-120		
Fluorene	0.0188	0.00500	"	0.0333	ND	56.4	30-120		
Indeno (1,2,3-cd) pyrene	0.0150	0.00500	"	0.0333	ND	45.1	30-120		
Pyrene	0.0208	0.00500	"	0.0333	ND	62.4	35-142		
1-Methylnaphthalene	0.0172	0.00500	"	0.0333	ND	51.7	15-130		
2-Methylnaphthalene	0.0153	0.00500	"	0.0333	ND	45.8	15-130		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0230</i>		<i>"</i>	<i>0.0333</i>		<i>69.0</i>	<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0195</i>		<i>"</i>	<i>0.0333</i>		<i>58.4</i>	<i>40-150</i>		

Matrix Spike Dup (BGI0948-MSD1)	Source: 2309528-01			Prepared: 09/29/23 Analyzed: 09/30/23					
Acenaphthene	0.0164	0.00500	mg/kg	0.0333	ND	49.3	31-137	19.8	30
Anthracene	0.0199	0.00500	"	0.0333	ND	59.6	30-120	4.30	30
Benzo (a) anthracene	0.0133	0.00500	"	0.0333	ND	39.9	30-120	26.1	30
Benzo (a) pyrene	0.0174	0.00500	"	0.0333	ND	52.2	30-120	12.1	30
Benzo (b) fluoranthene	0.0157	0.00500	"	0.0333	ND	47.2	30-120	29.8	30
Benzo (k) fluoranthene	0.0165	0.00500	"	0.0333	ND	49.6	30-120	25.7	30
Chrysene	0.0154	0.00500	"	0.0333	ND	46.3	30-120	29.3	30
Dibenz (a,h) anthracene	0.0156	0.00500	"	0.0333	ND	46.7	30-120	26.6	30
Fluoranthene	0.0171	0.00500	"	0.0333	ND	51.2	30-120	13.8	30
Fluorene	0.0196	0.00500	"	0.0333	ND	58.8	30-120	4.18	30
Indeno (1,2,3-cd) pyrene	0.0140	0.00500	"	0.0333	ND	42.0	30-120	7.14	30
Pyrene	0.0154	0.00500	"	0.0333	ND	46.1	35-142	30.0	30
1-Methylnaphthalene	0.0164	0.00500	"	0.0333	ND	49.2	15-130	4.97	50
2-Methylnaphthalene	0.0105	0.00500	"	0.0333	ND	31.5	15-130	36.9	50
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0160</i>		<i>"</i>	<i>0.0333</i>		<i>48.0</i>	<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0137</i>		<i>"</i>	<i>0.0333</i>		<i>41.2</i>	<i>40-150</i>		

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGI0949 - EPA 5030 Soil MS

Blank (BGI0949-BLK1)

Prepared: 09/29/23 Analyzed: 10/03/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0320</i>		<i>"</i>	<i>0.0333</i>		<i>96.0</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0309</i>		<i>"</i>	<i>0.0333</i>		<i>92.8</i>		<i>40-150</i>		

LCS (BGI0949-BS1)

Prepared: 09/29/23 Analyzed: 10/03/23

Acenaphthene	0.0291	0.00500	mg/kg	0.0333	87.4	31-137
Anthracene	0.0384	0.00500	"	0.0333	115	30-120
Benzo (a) anthracene	0.0312	0.00500	"	0.0333	93.5	30-120
Benzo (a) pyrene	0.0291	0.00500	"	0.0333	87.2	30-120
Benzo (b) fluoranthene	0.0399	0.00500	"	0.0333	120	30-120
Benzo (k) fluoranthene	0.0382	0.00500	"	0.0333	115	30-120
Chrysene	0.0346	0.00500	"	0.0333	104	30-120
Dibenz (a,h) anthracene	0.0209	0.00500	"	0.0333	62.8	30-120
Fluoranthene	0.0398	0.00500	"	0.0333	119	30-120
Fluorene	0.0274	0.00500	"	0.0333	82.3	30-120
Indeno (1,2,3-cd) pyrene	0.0365	0.00500	"	0.0333	109	30-120
Pyrene	0.0359	0.00500	"	0.0333	108	35-142
1-Methylnaphthalene	0.0367	0.00500	"	0.0333	110	35-142
2-Methylnaphthalene	0.0382	0.00500	"	0.0333	114	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0297</i>		<i>"</i>	<i>0.0333</i>	<i>89.1</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0380</i>		<i>"</i>	<i>0.0333</i>	<i>114</i>	<i>40-150</i>

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

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 BGI0949 - EPA 5030 Soil MS

Matrix Spike (BGI0949-MS1)

Source: 2309531-08

Prepared: 09/29/23 Analyzed: 10/03/23

Acenaphthene	0.0201	0.00500	mg/kg	0.0333	ND	60.2	31-137			
Anthracene	0.0329	0.00500	"	0.0333	ND	98.7	30-120			
Benzo (a) anthracene	0.0377	0.00500	"	0.0333	ND	113	30-120			
Benzo (a) pyrene	0.0270	0.00500	"	0.0333	ND	81.0	30-120			
Benzo (b) fluoranthene	0.0305	0.00500	"	0.0333	ND	91.4	30-120			
Benzo (k) fluoranthene	0.0300	0.00500	"	0.0333	ND	90.0	30-120			
Chrysene	0.0340	0.00500	"	0.0333	ND	102	30-120			
Dibenz (a,h) anthracene	0.0150	0.00500	"	0.0333	ND	44.9	30-120			
Fluoranthene	0.0351	0.00500	"	0.0333	ND	105	30-120			
Fluorene	0.0246	0.00500	"	0.0333	ND	73.7	30-120			
Indeno (1,2,3-cd) pyrene	0.0281	0.00500	"	0.0333	ND	84.2	30-120			
Pyrene	0.0378	0.00500	"	0.0333	ND	113	35-142			
1-Methylnaphthalene	0.0356	0.00500	"	0.0333	ND	107	15-130			
2-Methylnaphthalene	0.0383	0.00500	"	0.0333	ND	115	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0263		"	0.0333		79.0	40-150			
Surrogate: Fluoranthene-d10	0.0371		"	0.0333		111	40-150			

Matrix Spike Dup (BGI0949-MSD1)

Source: 2309531-08

Prepared: 09/29/23 Analyzed: 10/03/23

Acenaphthene	0.0174	0.00500	mg/kg	0.0333	ND	52.1	31-137	14.5	30
Anthracene	0.0318	0.00500	"	0.0333	ND	95.3	30-120	3.48	30
Benzo (a) anthracene	0.0366	0.00500	"	0.0333	ND	110	30-120	3.12	30
Benzo (a) pyrene	0.0258	0.00500	"	0.0333	ND	77.4	30-120	4.52	30
Benzo (b) fluoranthene	0.0273	0.00500	"	0.0333	ND	82.0	30-120	10.9	30
Benzo (k) fluoranthene	0.0273	0.00500	"	0.0333	ND	81.8	30-120	9.61	30
Chrysene	0.0323	0.00500	"	0.0333	ND	96.9	30-120	5.00	30
Dibenz (a,h) anthracene	0.0141	0.00500	"	0.0333	ND	42.4	30-120	5.66	30
Fluoranthene	0.0336	0.00500	"	0.0333	ND	101	30-120	4.23	30
Fluorene	0.0216	0.00500	"	0.0333	ND	64.9	30-120	12.8	30
Indeno (1,2,3-cd) pyrene	0.0273	0.00500	"	0.0333	ND	81.8	30-120	2.93	30
Pyrene	0.0361	0.00500	"	0.0333	ND	108	35-142	4.69	30
1-Methylnaphthalene	0.0347	0.00500	"	0.0333	ND	104	15-130	2.48	50
2-Methylnaphthalene	0.0371	0.00500	"	0.0333	ND	111	15-130	3.30	50
Surrogate: 2-Methylnaphthalene-d10	0.0240		"	0.0333		71.9	40-150		
Surrogate: Fluoranthene-d10	0.0354		"	0.0333		106	40-150		

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 12/08/23 13:53

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 BGJ0034 - EPA 3050B

Blank (BGJ0034-BLK1)

Prepared: 10/02/23 Analyzed: 10/03/23

Boron ND 2.00 mg/L

LCS (BGJ0034-BS1)

Prepared: 10/02/23 Analyzed: 10/03/23

Boron 5.31 2.00 mg/L 5.00 106 80-120

Duplicate (BGJ0034-DUP1)

Source: 2309528-01

Prepared: 10/02/23 Analyzed: 10/03/23

Boron 0.260 2.00 mg/L 0.186 33.3 20 QR-01

Matrix Spike (BGJ0034-MS1)

Source: 2309528-01

Prepared: 10/02/23 Analyzed: 10/03/23

Boron 5.99 2.00 mg/L 5.00 0.186 116 75-125

Matrix Spike Dup (BGJ0034-MSD1)

Source: 2309528-01

Prepared: 10/02/23 Analyzed: 10/03/23

Boron 5.59 2.00 mg/L 5.00 0.186 108 75-125 6.94 25

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

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 BGJ0023 - EPA 3050B

Blank (BGJ0023-BLK1)

Prepared: 10/02/23 Analyzed: 10/03/23

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

LCS (BGJ0023-BS1)

Prepared: 10/02/23 Analyzed: 10/03/23

Arsenic	41.0	0.200	mg/kg wet	40.0	102	80-120
Cadmium	2.06	0.200	"	2.00	103	80-120
Copper	38.4	0.400	"	40.0	96.1	80-120
Lead	23.8	0.200	"	20.0	119	80-120
Nickel	42.5	0.400	"	40.0	106	80-120
Silver	2.37	0.0200	"	2.00	118	80-120
Zinc	40.5	0.400	"	40.0	101	80-120

Duplicate (BGJ0023-DUP1)

Source: 2309531-01

Prepared: 10/02/23 Analyzed: 10/03/23

Arsenic	1.97	0.200	mg/kg dry	0.728	92.3	20	QR-01
Cadmium	0.169	0.200	"	0.119	34.8	20	QR-01
Copper	1.13	0.400	"	0.785	35.9	20	QR-01
Lead	10.2	0.200	"	9.26	9.17	20	
Nickel	1.31	0.400	"	0.826	45.6	20	QR-01
Silver	0.0108	0.0200	"	0.0120	10.9	20	
Zinc	3.47	0.400	"	2.55	30.6	20	QR-01
Selenium	ND	0.260	"	ND		200	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 12/08/23 13:53

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 BGJ0023 - EPA 3050B

Matrix Spike (BGJ0023-MS1)

Source: 2309531-01

Prepared: 10/02/23 Analyzed: 10/03/23

Arsenic	22.3	0.200	mg/kg dry	41.4	0.728	52.0	75-125				QM-07
Cadmium	2.51	0.200	"	2.07	0.119	115	75-125				
Copper	21.4	0.400	"	41.4	0.785	49.8	75-125				QM-07
Lead	25.6	0.200	"	20.7	9.26	78.8	75-125				
Nickel	21.7	0.400	"	41.4	0.826	50.3	75-125				QM-07
Silver	2.33	0.0200	"	2.07	0.0120	112	75-125				
Zinc	24.9	0.400	"	41.4	2.55	54.0	75-125				QM-07

Matrix Spike Dup (BGJ0023-MSD1)

Source: 2309531-01

Prepared: 10/02/23 Analyzed: 10/03/23

Arsenic	22.6	0.200	mg/kg dry	41.4	0.728	52.7	75-125	1.34	25		QM-07
Cadmium	2.51	0.200	"	2.07	0.119	116	75-125	0.0824	25		
Copper	21.4	0.400	"	41.4	0.785	49.7	75-125	0.244	25		QM-07
Lead	25.0	0.200	"	20.7	9.26	76.1	75-125	2.19	25		
Nickel	21.7	0.400	"	41.4	0.826	50.5	75-125	0.288	25		QM-07
Silver	2.31	0.0200	"	2.07	0.0120	111	75-125	0.999	25		
Zinc	25.0	0.400	"	41.4	2.55	54.2	75-125	0.345	25		QM-07

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 12/08/23 13:53

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 BGI0963 - 3060A Mod

Blank (BGI0963-BLK1)

Prepared & Analyzed: 09/29/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGI0963-BS1)

Prepared & Analyzed: 09/29/23

Chromium, Hexavalent 24.5 0.30 mg/kg wet 25.0 98.0 80-120

Duplicate (BGI0963-DUP1)

Source: 2309529-01

Prepared & Analyzed: 09/29/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGI0963-MS1)

Source: 2309529-01

Prepared & Analyzed: 09/29/23

Chromium, Hexavalent 24.2 0.30 mg/kg dry 26.6 ND 90.8 75-125

Matrix Spike Dup (BGI0963-MSD1)

Source: 2309529-01

Prepared & Analyzed: 09/29/23

Chromium, Hexavalent 24.6 0.30 mg/kg dry 26.6 ND 92.4 75-125 1.75 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 12/08/23 13:53

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 BGJ0029 - General Preparation

Blank (BGJ0029-BLK1)

Prepared: 10/02/23 Analyzed: 10/04/23

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

LCS (BGJ0029-BS1)

Prepared: 10/02/23 Analyzed: 10/04/23

Calcium	5.45	0.0500	mg/L wet	5.00	109	70-130
Magnesium	5.28	0.0500	"	5.00	106	70-130
Sodium	5.64	0.0500	"	5.00	113	70-130

Batch BGL0170 - General Preparation

Blank (BGL0170-BLK1)

Prepared: 12/05/23 Analyzed: 12/08/23

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

LCS (BGL0170-BS1)

Prepared: 12/05/23 Analyzed: 12/08/23

Calcium	6.01	0.0500	mg/L wet	5.00	120	70-130
Magnesium	5.84	0.0500	"	5.00	117	70-130
Sodium	5.68	0.0500	"	5.00	114	70-130

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 12/08/23 13:53

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 BGJ0038 - General Preparation

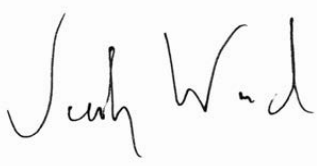
Duplicate (BGJ0038-DUP1)

Source: 2309528-01

Prepared: 10/02/23 Analyzed: 10/03/23

% Solids	90.1		%		89.7			0.415	20	
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Summit Scientific



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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
 Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 12/08/23 13:53

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 BGJ0084 - General Preparation

Blank (BGJ0084-BLK1)

Prepared & Analyzed: 10/03/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGJ0084-BS1)

Prepared & Analyzed: 10/03/23

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 103 95-105

Duplicate (BGJ0084-DUP1)

Source: 2309530-01

Prepared & Analyzed: 10/03/23

Specific Conductance (EC) 0.191 0.0100 mmhos/cm 0.190 0.157 20

Batch BGJ0481 - General Preparation

Blank (BGJ0481-BLK1)

Prepared & Analyzed: 10/11/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGJ0481-BS1)

Prepared & Analyzed: 10/11/23

Specific Conductance (EC) 0.148 0.0100 mmhos/cm 0.150 98.5 95-105

Duplicate (BGJ0481-DUP1)

Source: 2309352-24

Prepared & Analyzed: 10/11/23

Specific Conductance (EC) 3.21 0.0100 mmhos/cm 3.40 5.74 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
 Project Manager: Paul Henchan

Reported:
 12/08/23 13:53

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 BGJ0083 - General Preparation

LCS (BGJ0083-BS1)

Prepared & Analyzed: 10/03/23

pH 9.08 pH Units 9.18 98.9 95-105

Duplicate (BGJ0083-DUP1)

Source: 2309530-01

Prepared & Analyzed: 10/03/23

pH 8.00 pH Units 7.99 0.125 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN
Project Manager: Paul Henchan

Reported:
12/08/23 13:53

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-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- I-04 Sample was analyzed out of recommended holding time per clients request.
- 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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310


December 28, 2023

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549

RE: Noble - Bethyl GW 30-16 Tank
Work Order #2312270

Enclosed are the results of analyses for samples received by Summit Scientific on 12/14/23 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Jacob Wood For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
Project Number: UWRWE-A3323-ABN CO23-253
Project Manager: Paul Henchan

Reported:
12/28/23 10:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01@0.5'	2312270-01	Soil	12/14/23 11:55	12/14/23 16:30
AST02@0.5'	2312270-02	Soil	12/14/23 12:00	12/14/23 16:30
AST04@0.5'	2312270-03	Soil	12/14/23 12:05	12/14/23 16:30
AST05@0.5'	2312270-04	Soil	12/14/23 12:10	12/14/23 16:30
AST08@0.5'	2312270-05	Soil	12/14/23 12:15	12/14/23 16:30
SEP02 DL 3'	2312270-06	Soil	12/14/23 12:20	12/14/23 16:30
AST13@0.5'	2312270-07	Soil	12/14/23 12:25	12/14/23 16:30
AST14@0.5'	2312270-08	Soil	12/14/23 12:30	12/14/23 16:30

Summit Scientific

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

Lab ID	Page 1 of 1
2312270	

Send Data To:		Send Invoice To:	
Client: Fremont Environmental	Project Manager: Paul Henehan	Company: Noble	
Address:	E-Mail: Fremont Distribution List	Project Name/Location: Bethel GW 30-16 TANK	
City/State/Zip:		AFE#:	
Phone: 303-261-6246	Project Name: Bethel GW 30-16 TANK	PO/Billing Codes:	
Sampler Name: Stanley Gilbert	Project Number: C023-253	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, TMBs, Naph.	TPH	PAH (915)	EC, SAR, Ph, Boron	Metals (915)	TDS, Chloride, Sulfate		Ph	SAR				
1	AST01 @ 0.5'	12/14/23	11:55	1			X			X															
2	AST02 @ 0.5'		12:00	1			X			X															
3	AST04 @ 0.5'		12:05	1			X			X															
4	AST05 @ 0.5'		12:10	1			X			X															
5	AST08 @ 0.5'		12:15	1			X			X															
6	SEP02 DL 3'		12:20	1			X			X															X
7	AST13 @ 0.5'		12:25	2			X			X			X	X	X										
8	AST14 @ 0.5'		12:30	2			X			X			X	X	X										
9																									
10																									
11																									
12																									
13																									
14																									
15																									

Relinquished by: <i>[Signature]</i>	Date/Time: 12/14/23 15:10	Received by: Summit North	Date/Time: 12/14/23 15:10	TAT Business Days	Field DO	Notes:
				Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by: <i>[Signature]</i>	Date/Time: 12/14/23 10:30	Received by: <i>[Signature]</i>	Date/Time: 12/14/23 10:30	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 11.1	Corrected Temperature: \ominus	IR gun #:	1	HNO3 lot #:		

S₂

Sample Receipt Checklist

S2 Work Order# 2312270

Client: Famont Client Project ID: Bethyl Gw 30-116 Tank

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

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

Temp (°C) 11.1 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>ATL</u>
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Same day</u>
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>No time stamps</u>
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

AS
Custodian Printed Name

12/14/23
Date/Time

11/11/23



Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
 Project Manager: Paul Henchan

Reported:
 12/28/23 10:34

AST01@0.5'
2312270-01 (Soil)


Summit Scientific

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

Date Sampled: **12/14/23 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.07		pH Units	1	BGL0657	12/18/23	12/18/23	EPA 9045D	

Summit Scientific



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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
 Project Manager: Paul Henchan

Reported:
 12/28/23 10:34

AST02@0.5'
2312270-02 (Soil)


Summit Scientific

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

Date Sampled: **12/14/23 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.18		pH Units	1	BGL0657	12/18/23	12/18/23	EPA 9045D	

Summit Scientific



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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
 Project Manager: Paul Henchan

Reported:
 12/28/23 10:34

AST04@0.5'
2312270-03 (Soil)


Summit Scientific

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

Date Sampled: **12/14/23 12:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.41		pH Units	1	BGL0657	12/18/23	12/18/23	EPA 9045D	

Summit Scientific



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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
 Project Manager: Paul Henchan

Reported:
 12/28/23 10:34

AST05@0.5'
2312270-04 (Soil)


Summit Scientific

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

Date Sampled: **12/14/23 12:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.56		pH Units	1	BGL0657	12/18/23	12/18/23	EPA 9045D	

Summit Scientific



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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
 Project Manager: Paul Henchan

Reported:
 12/28/23 10:34

AST08@0.5'
2312270-05 (Soil)


Summit Scientific

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

Date Sampled: **12/14/23 12:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.55		pH Units	1	BGL0657	12/18/23	12/18/23	EPA 9045D	

Summit Scientific



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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
 Project Number: UWRWE-A3323-ABN CO23-253
 Project Manager: Paul Henchan

Reported:
 12/28/23 10:34

SEP02 DL 3'
2312270-06 (Soil)

Summit Scientific

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

Date Sampled: **12/14/23 12:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	67.3	0.0500	mg/L dry	1	BGL0606	12/15/23	12/21/23	EPA 6020B	
Magnesium	7.63	0.0500	"	"	"	"	"	"	
Sodium	26.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **12/14/23 12:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	0.807	0.00100	units	1	BGL0830	12/21/23	12/21/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/14/23 12:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	94.0		%	1	BGL0660	12/18/23	12/19/23	Calculation	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
Project Manager: Paul Henchan

Reported:
12/28/23 10:34

AST13@0.5'
2312270-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/14/23 12:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BGL0572	12/14/23	12/14/23	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: **12/14/23 12:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0590	148 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0448	112 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0433	108 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/14/23 12:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BGL0577	12/14/23	12/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/14/23 12:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	10.7	85.6 %	30-150	"	"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
Project Manager: Paul Henchan

Reported:
12/28/23 10:34

AST13@0.5'
2312270-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/14/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGL0591	12/15/23	12/16/23	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: **12/14/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0187	56.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0210	62.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/14/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGL0592	12/15/23	12/20/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/14/23 12:25**

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 - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
Project Manager: Paul Henchan

Reported:
12/28/23 10:34

AST13@0.5'
2312270-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.62	0.200	mg/kg dry	1	BGL0613	12/15/23	12/21/23	EPA 6020B	
Barium	53.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.93	0.400	"	"	"	"	"	"	
Lead	5.09	0.200	"	"	"	"	"	"	
Nickel	2.03	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	8.94	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 12/14/23 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGL0716	12/19/23	12/20/23	EPA 7196A	

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

Date Sampled: 12/14/23 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	34.4	0.0500	mg/L dry	1	BGL0606	12/15/23	12/21/23	EPA 6020B	
Magnesium	5.49	0.0500	"	"	"	"	"	"	
Sodium	3.03	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 12/14/23 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.127	0.00100	units	1	BGL0830	12/21/23	12/21/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
 Project Manager: Paul Henchan

Reported:
 12/28/23 10:34

AST13@0.5'
2312270-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/14/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.2		%	1	BGL0660	12/18/23	12/19/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/14/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.153	0.0100	mmhos/cm	1	BGL0632	12/18/23	12/19/23	EPA 120.1	

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

Date Sampled: **12/14/23 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.42		pH Units	1	BGL0631	12/18/23	12/19/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
Project Number: UWRWE-A3323-ABN CO23-253
Project Manager: Paul Henchan

Reported:
12/28/23 10:34

AST14@0.5'
2312270-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/14/23 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGL0572	12/14/23	12/14/23	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: **12/14/23 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0577	144 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0438	110 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0434	109 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/14/23 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGL0577	12/14/23	12/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **12/14/23 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.94	71.6 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
Project Number: UWRWE-A3323-ABN CO23-253
Project Manager: Paul Henchan

Reported:
12/28/23 10:34

AST14@0.5'
2312270-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/14/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGL0591	12/15/23	12/16/23	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: **12/14/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0144	43.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0186	55.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/14/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGL0592	12/15/23	12/20/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/14/23 12:30**

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 - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
Project Manager: Paul Henchan

Reported:
12/28/23 10:34

AST14@0.5'
2312270-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.57	0.200	mg/kg dry	1	BGL0613	12/15/23	12/21/23	EPA 6020B	
Barium	70.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.97	0.400	"	"	"	"	"	"	
Lead	2.82	0.200	"	"	"	"	"	"	
Nickel	2.25	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	9.15	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 12/14/23 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGL0716	12/19/23	12/20/23	EPA 7196A	

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

Date Sampled: 12/14/23 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	24.7	0.0500	mg/L dry	1	BGL0606	12/15/23	12/21/23	EPA 6020B	
Magnesium	5.41	0.0500	"	"	"	"	"	"	
Sodium	5.49	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 12/14/23 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.261	0.00100	units	1	BGL0830	12/21/23	12/21/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Fremont Environmental
 PO Box 1289
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Project: Noble - Bethyl GW 30-16 Tank
 Project Number: UWRWE-A3323-ABN CO23-253
 Project Manager: Paul Henchan

Reported:
 12/28/23 10:34

AST14@0.5'
2312270-08 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/14/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.3		%	1	BGL0660	12/18/23	12/19/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/14/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.174	0.0100	mmhos/cm	1	BGL0632	12/18/23	12/19/23	EPA 120.1	

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

Date Sampled: **12/14/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.74		pH Units	1	BGL0631	12/18/23	12/19/23	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
Project Number: UWRWE-A3323-ABN CO23-253
Project Manager: Paul Henchan

Reported:
12/28/23 10:34

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 BGL0572 - EPA 5030 Soil MS

Blank (BGL0572-BLK1)

Prepared: 12/14/23 Analyzed: 12/15/23

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0562</i>		<i>"</i>	<i>0.0400</i>		<i>140</i>	<i>50-150</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0423</i>		<i>"</i>	<i>0.0400</i>		<i>106</i>	<i>50-150</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0441</i>		<i>"</i>	<i>0.0400</i>		<i>110</i>	<i>50-150</i>				

LCS (BGL0572-BS1)

Prepared: 12/14/23 Analyzed: 12/15/23

Benzene	0.0976	0.0020	mg/kg	0.100		97.6	70-130				
Toluene	0.110	0.0050	"	0.100		110	70-130				
Ethylbenzene	0.100	0.0050	"	0.100		100	70-130				
m,p-Xylene	0.200	0.010	"	0.200		100	70-130				
o-Xylene	0.104	0.0050	"	0.100		104	70-130				
1,2,4-Trimethylbenzene	0.0953	0.0050	"	0.100		95.3	70-130				
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.100		102	70-130				
Naphthalene	0.0969	0.0038	"	0.100		96.9	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0540</i>		<i>"</i>	<i>0.0400</i>		<i>135</i>	<i>50-150</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0436</i>		<i>"</i>	<i>0.0400</i>		<i>109</i>	<i>50-150</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0426</i>		<i>"</i>	<i>0.0400</i>		<i>106</i>	<i>50-150</i>				

Matrix Spike (BGL0572-MS1)

Source: 2312270-07

Prepared: 12/14/23 Analyzed: 12/15/23

Benzene	0.0732	0.0020	mg/kg	0.100	ND	73.2	70-130				
Toluene	0.0962	0.0050	"	0.100	ND	96.2	70-130				
Ethylbenzene	0.0965	0.0050	"	0.100	ND	96.5	70-130				
m,p-Xylene	0.180	0.010	"	0.200	ND	90.2	70-130				
o-Xylene	0.0706	0.0050	"	0.100	ND	70.6	70-130				
1,2,4-Trimethylbenzene	0.104	0.0050	"	0.100	ND	104	70-130				
1,3,5-Trimethylbenzene	0.118	0.0050	"	0.100	ND	118	70-130				
Naphthalene	0.109	0.0038	"	0.100	ND	109	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0558</i>		<i>"</i>	<i>0.0400</i>		<i>140</i>	<i>50-150</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0434</i>		<i>"</i>	<i>0.0400</i>		<i>108</i>	<i>50-150</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0442</i>		<i>"</i>	<i>0.0400</i>		<i>111</i>	<i>50-150</i>				

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
 Project Manager: Paul Henchan

Reported:
 12/28/23 10:34

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 BGL0572 - EPA 5030 Soil MS

Matrix Spike Dup (BGL0572-MSD1)	Source: 2312270-07			Prepared: 12/14/23 Analyzed: 12/15/23						
Benzene	0.0747	0.0020	mg/kg	0.100	ND	74.7	70-130	2.07	30	
Toluene	0.0983	0.0050	"	0.100	ND	98.3	70-130	2.22	30	
Ethylbenzene	0.0962	0.0050	"	0.100	ND	96.2	70-130	0.311	30	
m,p-Xylene	0.199	0.010	"	0.200	ND	99.7	70-130	10.1	30	
o-Xylene	0.0708	0.0050	"	0.100	ND	70.8	70-130	0.297	30	
1,2,4-Trimethylbenzene	0.0910	0.0050	"	0.100	ND	91.0	70-130	13.6	30	
1,3,5-Trimethylbenzene	0.0923	0.0050	"	0.100	ND	92.3	70-130	24.1	30	
Naphthalene	0.103	0.0038	"	0.100	ND	103	70-130	5.59	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0583</i>		<i>"</i>	<i>0.0400</i>		<i>146</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0439</i>		<i>"</i>	<i>0.0400</i>		<i>110</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0442</i>		<i>"</i>	<i>0.0400</i>		<i>111</i>	<i>50-150</i>			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
 Project Number: UWRWE-A3323-ABN CO23-253
 Project Manager: Paul Henchan

Reported:
 12/28/23 10:34

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGL0577 - EPA 3550A

Blank (BGL0577-BLK1)

Prepared: 12/14/23 Analyzed: 12/15/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	11.0		"	12.5		87.9	30-150			

LCS (BGL0577-BS1)

Prepared: 12/14/23 Analyzed: 12/15/23

C10-C28 (DRO)	430	50	mg/kg	500		86.0	70-130			
Surrogate: <i>o</i> -Terphenyl	10.0		"	12.5		80.2	30-150			

Matrix Spike (BGL0577-MS1)

Source: 2312270-07

Prepared: 12/14/23 Analyzed: 12/15/23

C10-C28 (DRO)	517	50	mg/kg	500	16.9	100	70-130			
Surrogate: <i>o</i> -Terphenyl	10.7		"	12.5		85.4	30-150			

Matrix Spike Dup (BGL0577-MSD1)

Source: 2312270-07

Prepared: 12/14/23 Analyzed: 12/15/23

C10-C28 (DRO)	507	50	mg/kg	500	16.9	98.1	70-130	1.87	20	
Surrogate: <i>o</i> -Terphenyl	9.04		"	12.5		72.3	30-150			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
Project Manager: Paul Henchan

Reported:
12/28/23 10:34

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 BGL0591 - EPA 5030 Soil MS

Blank (BGL0591-BLK1)

Prepared: 12/15/23 Analyzed: 12/16/23

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>0.0225</i>		"	<i>0.0333</i>		<i>67.5</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0297</i>		"	<i>0.0333</i>		<i>89.0</i>	<i>40-150</i>			

LCS (BGL0591-BS1)

Prepared: 12/15/23 Analyzed: 12/16/23

Acenaphthene	0.0301	0.00500	mg/kg	0.0333	90.4	31-137
Anthracene	0.0310	0.00500	"	0.0333	93.1	30-120
Benzo (a) anthracene	0.0244	0.00500	"	0.0333	73.3	30-120
Benzo (a) pyrene	0.0270	0.00500	"	0.0333	81.0	30-120
Benzo (b) fluoranthene	0.0276	0.00500	"	0.0333	82.8	30-120
Benzo (k) fluoranthene	0.0286	0.00500	"	0.0333	85.8	30-120
Chrysene	0.0320	0.00500	"	0.0333	95.9	30-120
Dibenz (a,h) anthracene	0.0397	0.00500	"	0.0333	119	30-120
Fluoranthene	0.0313	0.00500	"	0.0333	93.9	30-120
Fluorene	0.0315	0.00500	"	0.0333	94.4	30-120
Indeno (1,2,3-cd) pyrene	0.0368	0.00500	"	0.0333	110	30-120
Pyrene	0.0346	0.00500	"	0.0333	104	35-142
1-Methylnaphthalene	0.0312	0.00500	"	0.0333	93.7	35-142
2-Methylnaphthalene	0.0289	0.00500	"	0.0333	86.7	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0313</i>		"	<i>0.0333</i>	<i>94.0</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0313</i>		"	<i>0.0333</i>	<i>93.8</i>	<i>40-150</i>

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Fremont Environmental
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Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
Project Number: UWRWE-A3323-ABN CO23-253
Project Manager: Paul Henchan

Reported:
12/28/23 10:34

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 BGL0591 - EPA 5030 Soil MS

Matrix Spike (BGL0591-MS1)	Source: 2312101-06			Prepared: 12/15/23 Analyzed: 12/16/23					
Acenaphthene	0.0171	0.00500	mg/kg	0.0333	ND	51.3	31-137		
Anthracene	0.0182	0.00500	"	0.0333	ND	54.7	30-120		
Benzo (a) anthracene	0.0151	0.00500	"	0.0333	ND	45.2	30-120		
Benzo (a) pyrene	0.0170	0.00500	"	0.0333	ND	51.1	30-120		
Benzo (b) fluoranthene	0.0150	0.00500	"	0.0333	ND	45.1	30-120		
Benzo (k) fluoranthene	0.0188	0.00500	"	0.0333	ND	56.4	30-120		
Chrysene	0.0164	0.00500	"	0.0333	ND	49.2	30-120		
Dibenz (a,h) anthracene	0.0184	0.00500	"	0.0333	ND	55.4	30-120		
Fluoranthene	0.0174	0.00500	"	0.0333	ND	52.3	30-120		
Fluorene	0.0179	0.00500	"	0.0333	ND	53.6	30-120		
Indeno (1,2,3-cd) pyrene	0.0162	0.00500	"	0.0333	ND	48.7	30-120		
Pyrene	0.0191	0.00500	"	0.0333	ND	57.2	35-142		
1-Methylnaphthalene	0.0184	0.00500	"	0.0333	ND	55.2	15-130		
2-Methylnaphthalene	0.0152	0.00500	"	0.0333	ND	45.5	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0170		"	0.0333		51.0	40-150		
Surrogate: Fluoranthene-d10	0.0175		"	0.0333		52.5	40-150		

Matrix Spike Dup (BGL0591-MSD1)	Source: 2312101-06			Prepared: 12/15/23 Analyzed: 12/16/23					
Acenaphthene	0.0154	0.00500	mg/kg	0.0333	ND	46.2	31-137	10.4	30
Anthracene	0.0161	0.00500	"	0.0333	ND	48.4	30-120	12.2	30
Benzo (a) anthracene	0.0148	0.00500	"	0.0333	ND	44.4	30-120	1.93	30
Benzo (a) pyrene	0.0152	0.00500	"	0.0333	ND	45.5	30-120	11.8	30
Benzo (b) fluoranthene	0.0138	0.00500	"	0.0333	ND	41.3	30-120	8.81	30
Benzo (k) fluoranthene	0.0169	0.00500	"	0.0333	ND	50.8	30-120	10.4	30
Chrysene	0.0185	0.00500	"	0.0333	ND	55.6	30-120	12.2	30
Dibenz (a,h) anthracene	0.0133	0.00500	"	0.0333	ND	40.0	30-120	32.1	30
Fluoranthene	0.0218	0.00500	"	0.0333	ND	65.4	30-120	22.3	30
Fluorene	0.0155	0.00500	"	0.0333	ND	46.5	30-120	14.3	30
Indeno (1,2,3-cd) pyrene	0.0156	0.00500	"	0.0333	ND	46.8	30-120	3.90	30
Pyrene	0.0150	0.00500	"	0.0333	ND	45.0	35-142	23.9	30
1-Methylnaphthalene	0.0138	0.00500	"	0.0333	ND	41.3	15-130	28.8	50
2-Methylnaphthalene	0.0305	0.00500	"	0.0333	ND	91.5	15-130	67.1	50
Surrogate: 2-Methylnaphthalene-d10	0.0166		"	0.0333		49.7	40-150		
Surrogate: Fluoranthene-d10	0.0152		"	0.0333		45.5	40-150		

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
 Project Manager: Paul Henchan

Reported:
 12/28/23 10:34

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 BGL0592 - EPA 3050B

Blank (BGL0592-BLK1)

Prepared: 12/15/23 Analyzed: 12/20/23

Boron ND 2.00 mg/L

LCS (BGL0592-BS1)

Prepared: 12/15/23 Analyzed: 12/20/23

Boron 5.38 2.00 mg/L 5.00 108 80-120

Duplicate (BGL0592-DUP1)

Source: 2312159-01

Prepared: 12/15/23 Analyzed: 12/20/23

Boron 1.24 2.00 mg/L 1.16 6.73 20

Matrix Spike (BGL0592-MS1)

Source: 2312159-01

Prepared: 12/15/23 Analyzed: 12/20/23

Boron 6.48 2.00 mg/L 5.00 1.16 106 75-125

Matrix Spike Dup (BGL0592-MSD1)

Source: 2312159-01

Prepared: 12/15/23 Analyzed: 12/20/23

Boron 6.24 2.00 mg/L 5.00 1.16 102 75-125 3.76 25

Summit Scientific

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 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
 Project Manager: Paul Henchan

Reported:
 12/28/23 10:34

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 BGL0613 - EPA 3050B

Blank (BGL0613-BLK1)

Prepared: 12/15/23 Analyzed: 12/21/23

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	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							
Selenium	ND	0.260	"							

LCS (BGL0613-BS1)

Prepared: 12/15/23 Analyzed: 12/21/23

Arsenic	34.4	0.200	mg/kg wet	40.0	86.0	80-120
Barium	34.2	0.400	"	40.0	85.5	80-120
Cadmium	1.75	0.200	"	2.00	87.5	80-120
Copper	36.6	0.400	"	40.0	91.5	80-120
Lead	17.2	0.200	"	20.0	85.9	80-120
Nickel	35.8	0.400	"	40.0	89.6	80-120
Silver	1.60	0.0200	"	2.00	80.0	80-120
Zinc	33.8	0.400	"	40.0	84.5	80-120
Selenium	3.58	0.260	"	4.00	89.5	80-120

Duplicate (BGL0613-DUP1)

Source: 2312196-01

Prepared: 12/15/23 Analyzed: 12/21/23

Arsenic	1.65	0.200	mg/kg dry	1.73	4.99	20
Barium	37.6	0.400	"	44.4	16.6	20
Cadmium	0.128	0.200	"	0.141	10.0	20
Copper	3.14	0.400	"	2.90	7.88	20
Lead	5.19	0.200	"	6.35	20.0	20
Nickel	3.20	0.400	"	2.97	7.34	20
Silver	0.0182	0.0200	"	0.0203	11.0	20
Zinc	12.8	0.400	"	12.0	6.02	20
Selenium	ND	0.260	"	ND		20

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
 Project Manager: Paul Henchan

Reported:
 12/28/23 10:34

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 BGL0613 - EPA 3050B

Matrix Spike (BGL0613-MS1)	Source: 2312196-01			Prepared: 12/15/23		Analyzed: 12/21/23					
Arsenic	24.1	0.200	mg/kg dry	42.2	1.73	53.0	75-125				QM-07
Barium	85.0	0.400	"	42.2	44.4	96.3	75-125				
Cadmium	1.67	0.200	"	2.11	0.141	72.2	75-125				QM-07
Copper	27.6	0.400	"	42.2	2.90	58.4	75-125				QM-07
Lead	21.2	0.200	"	21.1	6.35	70.4	75-125				QM-07
Nickel	26.3	0.400	"	42.2	2.97	55.3	75-125				QM-07
Silver	1.42	0.0200	"	2.11	0.0203	66.2	75-125				QM-07
Zinc	36.4	0.400	"	42.2	12.0	57.6	75-125				QM-07
Selenium	2.90	0.260	"	4.22	ND	68.7	75-125				QM-07

Matrix Spike Dup (BGL0613-MSD1)	Source: 2312196-01			Prepared: 12/15/23		Analyzed: 12/21/23					
Arsenic	24.1	0.200	mg/kg dry	42.2	1.73	53.0	75-125	0.0245	25		QM-07
Barium	89.3	0.400	"	42.2	44.4	107	75-125	4.97	25		
Cadmium	1.73	0.200	"	2.11	0.141	75.0	75-125	3.54	25		
Copper	26.4	0.400	"	42.2	2.90	55.7	75-125	4.17	25		QM-07
Lead	22.4	0.200	"	21.1	6.35	76.1	75-125	5.45	25		
Nickel	25.5	0.400	"	42.2	2.97	53.4	75-125	3.01	25		QM-07
Silver	1.45	0.0200	"	2.11	0.0203	67.9	75-125	2.50	25		QM-07
Zinc	36.2	0.400	"	42.2	12.0	57.1	75-125	0.536	25		QM-07
Selenium	2.99	0.260	"	4.22	ND	70.7	75-125	2.84	25		QM-07

Summit Scientific

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 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
 Project Manager: Paul Henchan

Reported:
 12/28/23 10:34

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BGL0716 - 3060A Mod

Blank (BGL0716-BLK1)

Prepared: 12/19/23 Analyzed: 12/20/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGL0716-BS1)

Prepared: 12/19/23 Analyzed: 12/20/23

Chromium, Hexavalent 24.0 0.30 mg/kg wet 25.0 96.0 80-120

Duplicate (BGL0716-DUP1)

Source: 2312267-01

Prepared: 12/19/23 Analyzed: 12/20/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGL0716-MS1)

Source: 2312267-01

Prepared: 12/19/23 Analyzed: 12/20/23

Chromium, Hexavalent 29.2 0.30 mg/kg dry 29.6 ND 98.6 75-125

Matrix Spike Dup (BGL0716-MSD1)

Source: 2312267-01

Prepared: 12/19/23 Analyzed: 12/20/23

Chromium, Hexavalent 29.1 0.30 mg/kg dry 29.6 ND 98.2 75-125 0.406 20

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Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
 Project Manager: Paul Henchan

Reported:
 12/28/23 10:34

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 BGL0606 - General Preparation

Blank (BGL0606-BLK1)

Prepared: 12/15/23 Analyzed: 12/21/23

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

LCS (BGL0606-BS1)

Prepared: 12/15/23 Analyzed: 12/21/23

Calcium	5.91	0.0500	mg/L wet	5.00	118	70-130				
Magnesium	5.20	0.0500	"	5.00	104	70-130				
Sodium	5.17	0.0500	"	5.00	103	70-130				

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Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
 Project Manager: Paul Henchan

Reported:
 12/28/23 10:34

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 BGL0660 - General Preparation

Duplicate (BGL0660-DUP1)	Source: 2312165-01		Prepared: 12/18/23 Analyzed: 12/19/23	
% Solids	84.5	%	84.5	0.0657 20

Summit Scientific



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Project: Noble - Bethyl GW 30-16 Tank

Project Number: UWRWE-A3323-ABN CO23-253
 Project Manager: Paul Henchan

Reported:
 12/28/23 10:34

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 BGL0632 - General Preparation

Blank (BGL0632-BLK1)

Prepared: 12/18/23 Analyzed: 12/19/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGL0632-BS1)

Prepared: 12/18/23 Analyzed: 12/19/23

Specific Conductance (EC) 0.150 0.0100 mmhos/cm 0.150 99.8 95-105

Duplicate (BGL0632-DUP1)

Source: 2311625-01

Prepared: 12/18/23 Analyzed: 12/19/23

Specific Conductance (EC) 0.356 0.0100 mmhos/cm 0.356 0.0561 20

Summit Scientific

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 Wellington CO, 80549

Project: Noble - Bethyl GW 30-16 Tank
 Project Number: UWRWE-A3323-ABN CO23-253
 Project Manager: Paul Henchan

Reported:
 12/28/23 10:34

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

Summit Scientific

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

Batch BGL0631 - General Preparation

LCS (BGL0631-BS1)										
					Prepared: 12/18/23 Analyzed: 12/19/23					
pH	9.12		pH Units	9.18	99.3	95-105				
Duplicate (BGL0631-DUP1)										
					Source: 2311625-01 Prepared: 12/18/23 Analyzed: 12/19/23					
pH	7.27		pH Units	7.28	0.137	20				

Batch BGL0657 - General Preparation

LCS (BGL0657-BS1)										
					Prepared & Analyzed: 12/18/23					
pH	9.16		pH Units	9.18	99.8	95-105				
Duplicate (BGL0657-DUP1)										
					Source: 2311397-02 Prepared & Analyzed: 12/18/23					
pH	7.95		pH Units	7.94	0.126	20				

Summit Scientific

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Project: Noble - Bethyl GW 30-16 Tank
Project Number: UWRWE-A3323-ABN CO23-253
Project Manager: Paul Henchan

Reported:
12/28/23 10:34

Notes and Definitions

- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference