						
						<b>Equipment ID:</b>		<b>Equipment Type:</b>	
						<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
						<b>Notes/Conditions:</b> Pww01-b@4'			
<b>Equipment ID:</b>		<b>Equipment Type:</b>		<b>Equipment ID:</b>		<b>Equipment Type:</b>			
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>		<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>			
<b>Notes/Conditions:</b> Pww01-b@4'				<b>Notes/Conditions:</b> Pwv01-S @3					





<b>Equipment ID:</b>		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> <small>PWV01-E@3</small>			

<b>Equipment ID:</b>		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> <small>GW01</small>			



<b>Equipment ID:</b>		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> Removed dumplines			

<b>Equipment ID:</b> MH01 @0-6"		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b>			



<b>Equipment ID:</b>		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> SEP01-FL @3			

<b>Equipment ID:</b>		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> SEP01-DL @3			



<b>Equipment ID:</b> GW02@4		<b>Equipment Type:</b>		<b>Equipment ID:</b>		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>		<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b>				<b>Notes/Conditions:</b> Removed lines			



<b>Equipment ID:</b>		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> FLARE01@0-6			

<b>Equipment ID:</b>		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> BKG01			

**TABLE 1**  
**FIELD DATA SUMMARY TABLE**  
**NOBLE - 100322**  
**ERICKSON A4-17, WELD COUNTY, COLORADO**  
**REM # 33823**

Sample ID	Sample Date	Depth (ft. bgs)	GPS Data Latitude/Longitude		PDOP Value	VOC Concentration (ppm)
AST01@0-6"	6/20/2024	0.5	40.515032	-104.564183	1.3	0.0
FLARE01@0-6"	6/20/2024	0.5	40.514666	-104.564284	0.9	0.0
MH01@0-6"	6/20/2024	0.5	40.514783	-104.564252	0.9	0.0
PWV01-B@4'	6/20/2024	4	40.514974	-104.564215	0.8	4.0
PWV01-N@3'	6/20/2024	3	40.514988	-104.564213	0.9	0.0
PWV01-E@3'	6/20/2024	3	40.514975	-104.564194	0.9	0.0
PWV01-S@3'	6/20/2024	3	40.514956	-104.564195	0.9	0.5
PWV01-W@3'	6/20/2024	3	40.514974	-104.564220	0.9	0.0
SEP01-DL@3'	6/20/2024	3	40.514724	-104.564222	0.9	0.0
SEP01-FL@3'	6/20/2024	3	40.514702	-104.564222	0.9	0.4
GW01	6/20/2024	4	40.514972	-104.564209	0.9	NA
GW02	6/20/2024	4	40.514719	-104.564192	0.9	NA
BKG01@0-6"	6/20/2024	0.5	40.514870	-104.563971	1.2	0.0
BKG01@3'	6/20/2024	3	40.514870	-104.563971	1.2	0.0
BKG01@4'	6/20/2024	4	40.514870	-104.563971	1.2	0.0

**Notes:**

1. Global Positioning System (GPS) data is provided in decimal degrees using North American Datum (NAD) 83 UTMZone 13 North.
2. Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).

PDOP = Position Dilution of Precision

ppm = Parts per million

ft. = Feet

bgs = Below ground surface

NA = Not Applicable

TABLE 2  
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA  
NOBLE - 100322  
ERICKSON A4-17, WELD COUNTY, COLORADO  
REM # 33823

Sample ID	Sample Date	Depth (ft. bgs)	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 (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	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	500**		
AST01@0-6"	6/20/2024	0.5	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWV01-B@4'	6/20/2024	4	<0.0020	0.0085	0.0068	0.030	<b>0.011</b>	0.0086	<b>0.0098</b>	81.7	0.73	81	<50
PWV01-S@3'	6/20/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SEP01-DL@3'	6/20/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SEP01-FL@3'	6/20/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50

**Notes:**

1. **Bold** values exceed the ECMC Table 915-1 limit(s)
2. Pink & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)
3. \* Indicates laboratory minimum detection limit in excess of SSL
4. \*\* Summation of GRO+DRO+ORO must be less than 500 mg/kg

ECMC = Energy & Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

TPH-DRO = Total petroleum hydrocarbons - diesel range organics

TPH-ORO = Total petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram

ft. = Feet

bgs = Below ground surface

TABLE 3  
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA  
NOBLE - 100322  
ERICKSON A4-17, WELD COUNTY, COLORADO  
REM # 33823

Sample ID	Sample Date	Depth (ft. bgs)	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	1,800	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@0-6"	6/20/2024	0.5	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
PWV01-B@4'	6/20/2024	4	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00848	<0.00500	<0.00500	<b>0.00854</b>	0.0132
PWV01-S@3'	6/20/2024	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'	6/20/2024	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-FL@3'	6/20/2024	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

**Notes:**

1. **Bold** values exceed the ECMC Table 915-1 limit(s)
2. Pink & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)
3. \* Indicates laboratory minimum detection limit in excess of SSL

ECMC = Colorado Energy & Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

ft. = Feet

bgs = Below ground surface

mg/kg = Milligrams per kilogram

**TABLE 4**  
**SUMMARY OF SOIL SUITABILITY FOR RECLAMATION**  
**NOBLE - 100322**  
**ERICKSON A4-17, WELD COUNTY, COLORADO**  
**REM # 33823**

Sample ID	Sample Date	Depth (ft. bgs)	pH (Standard Units)	EC (mmhos/cm)	SAR (Standard Units)	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
AST01@0-6"	6/20/2024	0.5	<b>8.55</b>	0.251	0.570	<2.00
PWV01-B@4'	6/20/2024	4	<b>9.83</b>	0.586	0.986	<2.00
PWV01-S@3'	6/20/2024	3	<b>9.04</b>	0.353	0.940	<2.00
SEP01-DL@3'	6/20/2024	3	<b>8.41</b>	0.415	1.04	<2.00
SEP01-FL@3'	6/20/2024	3	8.15	0.792	1.43	<2.00
BKG01@0-6"	6/20/2024	0.5	8.36	3.53	9.22	<2.00
BKG01@3'	6/20/2024	3	8.28	0.888	0.852	<2.00
BKG01@4'	6/20/2024	4	8.41	0.672	2.34	<2.00
Maximum Root Background Concentration (0 - 3 ft)			8.36	-	-	-
Mean Root Background Concentration (0 - 3 ft)			8.32	-	-	-
Maximum Background Concentration			8.41	-	-	-
Mean Background Concentration			8.35	-	-	-

**Notes:**

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within background concentrations.
2. **Bold** faced values exceed the ECMC Table 915-1 limit(s) above native background concentrations.
3. Brown highlighted soil analytical values indicate a regulatory exceedance.

ECMC = Colorado Energy & Carbon Management Commission

EC = Electrical conductivity

SAR = Sodium adsorption ratio

mmhos/cm = millimhos per centimeter

mg/L = milligram per liter

(<) = Analytical result is less than the indicated laboratory reporting limit.

ft. = Feet

bgs = Below ground surface

**TABLE 5**  
**SUMMARY OF METALS IN SOIL CHEMISTRY DATA**  
**NOBLE - 100322**  
**ERICKSON A4-17, WELD COUNTY, COLORADO**  
**REM # 33823**

Sample ID	Sample Date	Depth (ft. bgs)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) <sup>[4]</sup> (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	15,000	71	0.3	3,100	400	1,500	390	390	23,000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
AST01@0-6"	6/20/2024	0.5	<b>4.90</b>	<b>96.6</b>	0.248	<0.30*	7.36	8.07	6.28	<b>0.275</b>	0.0317	18.9
PWV01-B@4'	6/20/2024	4	<b>5.57</b>	54.7	0.235	<0.30*	8.83	8.90	6.69	<0.260	0.0340	27.7
PWV01-S@3'	6/20/2024	3	<b>7.57</b>	<b>149</b>	0.271	<0.30*	11.2	12.2	7.44	<b>0.379</b>	0.0446	19.9
SEP01-DL@3'	6/20/2024	3	<b>17.4</b>	<b>292</b>	<b>0.925</b>	<0.30*	17.7	<b>22.1</b>	17.7	<b>1.01</b>	0.124	16.6
SEP01-FL@3'	6/20/2024	3	<b>3.57</b>	<b>85.1</b>	0.207	<0.30*	5.92	7.00	6.00	0.252	0.0226	23.7
BKG01@0-6"	6/20/2024	0.5	2.70	31.5	0.347	<0.30*	13.7	10.5	12.8	<0.260	0.0431	35.9
BKG01@3'	6/20/2024	3	5.65	104	0.343	<0.30*	7.56	7.41	9.48	0.410	0.0267	21.7
BKG01@4'	6/20/2024	4	4.36	84.3	0.266	<0.30*	6.08	6.91	8.16	<0.260	0.0248	23.0
Maximum Background Concentration			4.36	104	0.347	-	-	10.5	-	0.410	-	-
Maximum Background Concentration X 1.25			5.45	130	0.434	-	-	13.1	-	0.513	-	-
Mean Background Concentration			4.24	73.3	0.319	-	-	8.27	-	0.335	-	-
Mean Background Concentration X 1.25			5.30	91.6	0.398	-	-	10.3	-	0.419	-	-

**Notes:**

- Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within 1.25x background concentrations.
- Bold** faced values exceed the ECMC Table 915-1 limit(s) above native background concentrations.
- Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)
- Compound falls within ECMC Table 915-1 Footnote 9.
- Non-detect background results accounted for in the highest background concentration by using the reporting limit.

ECMC = Energy & Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

mg/kg = Milligrams per kilogram

ft. = Feet

bgs = Below ground surface

\* Indicates laboratory minimum detection limit in excess of SSL

**TABLE 6**  
**SUMMARY OF GROUNDWATER ELEVATION DATA AND ORGANIC CHEMISTRY DATA**  
**NOBLE - 100322**  
**ERICKSON A4-17, WELD COUNTY, COLORADO**  
**REM # 33823**

Sample ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4-Trimethyl-Benzene (µg/L)	1,3,5-Trimethyl-Benzene (µg/L)	Depth to Groundwater Below Ground Surface (ft)
ECMC Table 915-1 Limits		5.0	560	700	1400	140	67	67	
GW01	06/20/24	3.5	18	3.6	31	3.3	12	3.5	4
GW02	06/20/24	<1.0	1.8	<1.0	<2.0	8.0	<1.0	<1.0	4

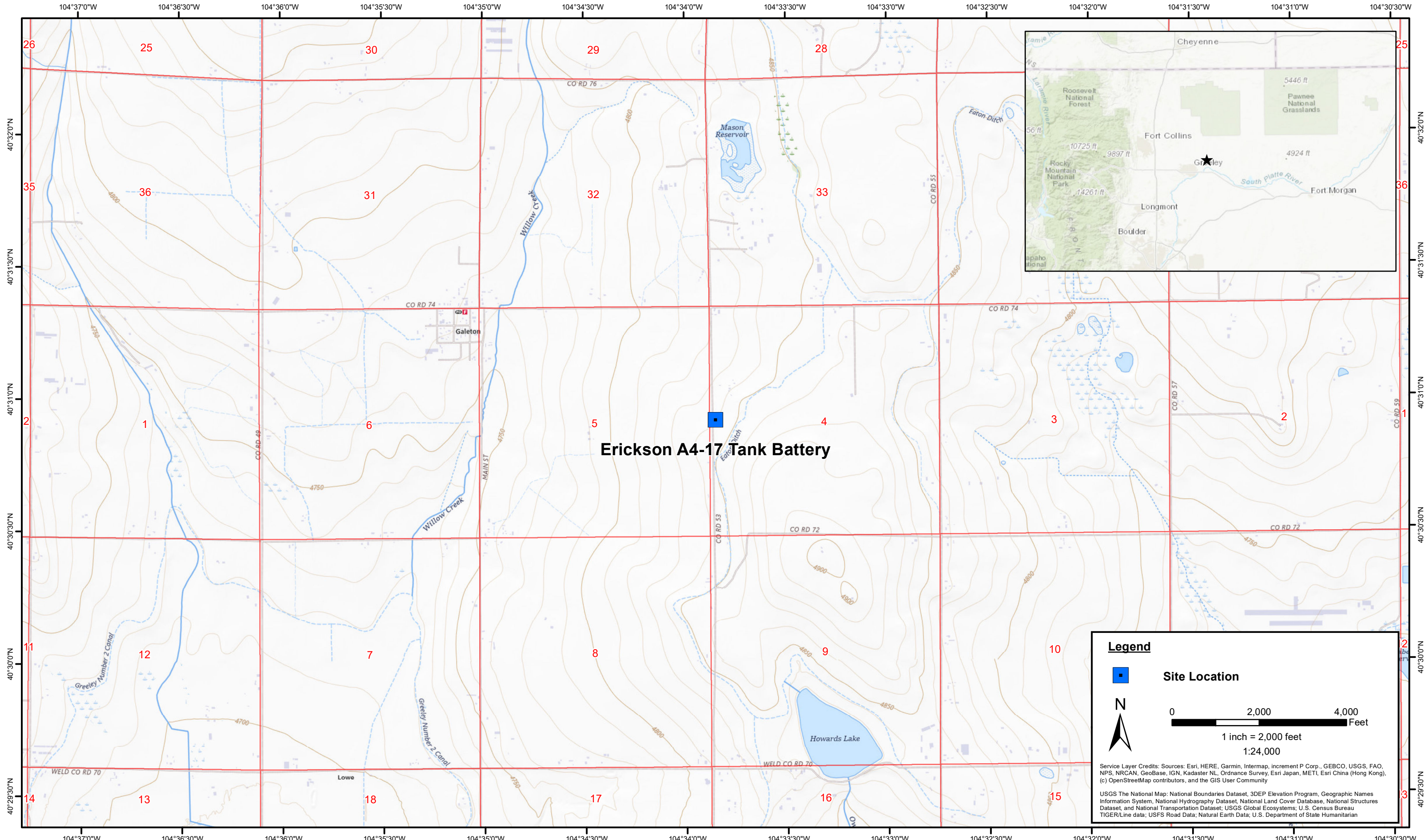
**Notes:**

1. Bold values exceed the ECMC limit(s)
2. Red highlighted groundwater analytical values indicate a regulatory exceedance

**TABLE 7**  
**SUMMARY OF INORGANIC GROUNDWATER CHEMISTRY DATA**  
**NOBLE - 100322**  
**ERICKSON A4-17, WELD COUNTY, COLORADO**  
**REM # 33823**

Sample ID	Sample Date	Total Dissolved Solids (mg/L)	Chloride Ion (mg/L)	Sulfate Ion (mg/L)
ECMC Table 915-1 Limits		<1.25 x local background	250 or <1.25 x local background	250 or <1.25 x local background
GW01	6/20/24	1860	49.2	<b>1640</b>
GW02	6/20/24	922	32.3	<b>699</b>

1. Bold values exceed the ECMC limit(s)
2. Blue highlighted groundwater analytical values indicate a regulatory exceedance



DATE:	June 2024
DESIGNED BY:	B. Nelson
DRAWN BY:	J. Clonts


**Tasman, Inc.**  
 6855 W. 119th Ave  
 Broomfield, CO 80020

**Noble Energy, Inc. – DJ Basin**  
**Erickson A4-17 Tank Battery**  
 NWSW, Section 4, Township 6 North, Range 64 West  
 Weld County, Colorado

Site Location Map

**Figure**  
**1**



DATE:	07/08/2024
DESIGNED BY:	JW
DRAWN BY:	EH

**TASMAN**  
GEOSCIENCES

Tasman Geosciences, Inc.  
 6855 W 119<sup>th</sup> Avenue  
 Broomfield, CO 80020

**Noble Energy, Inc. – 100322 – DJ Basin**  
**Erickson A4-17**  
 NWSW, Section 4, Township 6 North, Range 64 West  
 Weld County, Colorado

Tank Battery Closure & Soil  
 Analytical Results Map  
 (06/20/2024)

FIGURE  
2

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 08, 2024

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Erickson A4-17 Tank Battery

Work Order #2406300

Enclosed are the results of analyses for samples received by Summit Scientific on 06/20/24 17:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is written in a cursive, flowing style.

Natalie Tessier For Paul Shrewsbury

President



Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 10:09

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW01@4'	2406300-01	Water	06/20/24 10:36	06/20/24 17:55
GW02@4'	2406300-02	Water	06/20/24 10:54	06/20/24 17:55



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

Lab ID	Page 1 of 1
2406300	

Client: Noble/Tasman	Project Manager: Jake Whritenour	Send Invoice To: Chevron
Address: 6855 W 119th Ave	E-Mail: Jwhritenour@tasman-geo.com	Project Name/Location: <i>Erickson A4-17 TB</i>
City/State/Zip: Broomfield / CO / 80020	Project Name: <i>Erickson A4-17 Tank Battery</i>	AFE#: <i>UWRWS-A4034-ABN</i>
Phone: 970-214-7901	Project Number:	PO/Billing Codes:
Sampler Name: Lillian Buck		Contact: <i>Dan Peterson</i> <sup>UB</sup> <i>Mike Montoya</i>

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 - 8260B	1,2,4 & 1,3,5 TMB	
1	<i>GW01 24'</i>	<i>6/20/24</i>	<i>1036</i>	<i>4</i>	<i>3</i>		<i>1</i>		<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>	pH, EC, SAR by saturated paste
2	<i>GW02 24'</i>	<i>↓</i>	<i>1054</i>	<i>↓</i>	<i>↓</i>		<i>↓</i>					<i>↓</i>	<i>↓</i>	<i>↓</i>	
3															
4															
5															
6															
7															
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10															
11															
12															
13															
14															
15															

Relinquished by: <i>Z-Z</i>	Date/Time: <i>6/20/24 1450</i>	Received by: <i>Tasman Lockbox</i>	Date/Time: <i>6/20/24 1450</i>	TAT Business Days	Field DO	Notes:
				Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by: <i>Tasman Lockbox</i>	Date/Time: <i>6/20/24 1755</i>	Received by: <i>[Signature]</i>	Date/Time: <i>6/20/24 1755</i>	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: <i>9.6</i>	Corrected Temperature: <i>8</i>	IR gun #:	HNO3 lot #:			

S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 2406300

Client: Noble Gasman Client Project ID: Erickson A4-17 Tank Battery

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

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

Temp (°C) 9.6 Thermometer # 1

Table with 5 columns: Yes, No, N/A, Comments (if any). Rows include: If samples require cooling, is the temperature < 6°C? (1), If custody seals are present, are they intact? (1), Are samples due within 48 hours present?, Are water samples with short hold times present?, Is a chain-of-custody (COC) form present and filled out Completely? (1), Is the COC properly relinquished by the client w/ date and time recorded? (1), Were all samples received intact? (1), Was adequate sample volume provided? (1), Does the COC agree with the number and type of sample bottles received? (1), Do the sample IDs on the bottle labels match the COC?(1), For volatiles in water - is there headspace present? If yes, contact client and note in narrative., Are samples preserved that require preservation (excluding cooling)? (1) Note the type of preservative in the comments column - HCl, H2SO4, NaOH, HNO3, etc., If samples are acid preserved for metals, is the pH <= 2? (1) Record the pH in Comments., If dissolved metals are requested, were samples field filtered?

Additional Comments (if any):

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

AS Custodian Printed Name 6/20/24 Date/Time



Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 10:09

**GW01@4'**  
**2406300-01 (Water)**

**Summit Scientific**

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

Date Sampled: **06/20/24 10:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>3.5</b>	1.0	ug/l	1	BHF0646	06/20/24	06/20/24	EPA 8260B	
<b>Toluene</b>	<b>18</b>	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>3.6</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>31</b>	2.0	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>3.3</b>	1.0	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>12</b>	1.0	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>3.5</b>	1.0	"	"	"	"	"	"	

Date Sampled: **06/20/24 10:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>	12.6	94.9 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>	13.5	101 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	13.2	98.9 %	21-167		"	"	"	"	

**Anions by EPA Method 300.0**

Date Sampled: **06/20/24 10:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Chloride</b>	<b>49.2</b>	12.0	mg/L	200	BHF0991	06/29/24	07/02/24	EPA 300.0	
<b>Sulfate</b>	<b>1640</b>	60.0	"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

Date Sampled: **06/20/24 10:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Total Dissolved Solids</b>	<b>1860</b>	10.0	mg/L	1	BHF0712	06/24/24	06/24/24	SM2540C	JAN

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.*



Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 10:09

**GW02@4'**  
**2406300-02 (Water)**

**Summit Scientific**

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

Date Sampled: **06/20/24 10:54**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BHF0646	06/20/24	06/20/24	EPA 8260B	
<b>Toluene</b>	<b>1.8</b>	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
<b>Naphthalene</b>	<b>8.0</b>	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **06/20/24 10:54**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	13.2	98.6 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	13.4	100 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.0	97.1 %		21-167		"	"	"	"	

**Anions by EPA Method 300.0**

Date Sampled: **06/20/24 10:54**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Chloride</b>	<b>32.3</b>	12.0		mg/L	200	BHF0991	06/29/24	07/02/24	EPA 300.0	
<b>Sulfate</b>	<b>699</b>	60.0		"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

Date Sampled: **06/20/24 10:54**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Total Dissolved Solids</b>	<b>922</b>	10.0		mg/L	1	BHF0713	06/24/24	06/24/24	SM2540C	

Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 10:09

### Volatile Organic Compounds by EPA Method 8260B - Quality Control

#### Summit Scientific

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

#### Batch BHF0646 - EPA 5030 Water MS

##### Blank (BHF0646-BLK1)

Prepared & Analyzed: 06/20/24

Benzene	ND	1.0	ug/l								
Toluene	ND	1.0	"								
Ethylbenzene	ND	1.0	"								
Xylenes (total)	ND	2.0	"								
Naphthalene	ND	1.0	"								
1,2,4-Trimethylbenzene	ND	1.0	"								
1,3,5-Trimethylbenzene	ND	1.0	"								
Surrogate: 1,2-Dichloroethane-d4	12.7		"	13.3		95.5		23-173			
Surrogate: Toluene-d8	13.6		"	13.3		102		20-170			
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3		94.2		21-167			

##### LCS (BHF0646-BS1)

Prepared & Analyzed: 06/20/24

Benzene	36.6	1.0	ug/l	33.3		110		51-132			
Toluene	37.0	1.0	"	33.3		111		51-138			
Ethylbenzene	38.8	1.0	"	33.3		116		58-146			
m,p-Xylene	78.7	2.0	"	66.7		118		57-144			
o-Xylene	36.5	1.0	"	33.3		110		53-146			
Naphthalene	30.2	1.0	"	33.3		90.7		70-130			
1,2,4-Trimethylbenzene	36.5	1.0	"	33.3		110		70-130			
1,3,5-Trimethylbenzene	36.3	1.0	"	33.3		109		70-130			
Surrogate: 1,2-Dichloroethane-d4	12.6		"	13.3		94.2		23-173			
Surrogate: Toluene-d8	13.2		"	13.3		99.3		20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.5		21-167			

##### Matrix Spike (BHF0646-MS1)

Source: 2406295-05

Prepared & Analyzed: 06/20/24

Benzene	37.9	1.0	ug/l	33.3	ND	114		34-141			
Toluene	37.5	1.0	"	33.3	ND	113		27-151			
Ethylbenzene	44.8	1.0	"	33.3	6.59	115		29-160			
m,p-Xylene	91.4	2.0	"	66.7	13.8	116		20-166			
o-Xylene	36.2	1.0	"	33.3	ND	109		33-159			
Naphthalene	35.4	1.0	"	33.3	3.37	95.9		70-130			
1,2,4-Trimethylbenzene	70.8	1.0	"	33.3	32.3	116		70-130			
1,3,5-Trimethylbenzene	38.0	1.0	"	33.3	ND	114		70-130			
Surrogate: 1,2-Dichloroethane-d4	12.9		"	13.3		96.5		23-173			
Surrogate: Toluene-d8	14.0		"	13.3		105		20-170			
Surrogate: 4-Bromofluorobenzene	14.1		"	13.3		106		21-167			

Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 10:09

**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 BHF0646 - EPA 5030 Water MS**

Matrix Spike Dup (BHF0646-MSD1)	Source: 2406295-05			Prepared & Analyzed: 06/20/24						
Benzene	38.5	1.0	ug/l	33.3	ND	115	34-141	1.41	30	
Toluene	38.0	1.0	"	33.3	ND	114	27-151	1.35	30	
Ethylbenzene	45.3	1.0	"	33.3	6.59	116	29-160	1.09	30	
m,p-Xylene	90.4	2.0	"	66.7	13.8	115	20-166	1.06	30	
o-Xylene	37.1	1.0	"	33.3	ND	111	33-159	2.40	30	
Naphthalene	36.3	1.0	"	33.3	3.37	98.9	70-130	2.76	30	
1,2,4-Trimethylbenzene	66.5	1.0	"	33.3	32.3	103	70-130	6.33	30	
1,3,5-Trimethylbenzene	38.7	1.0	"	33.3	ND	116	70-130	1.83	30	
Surrogate: 1,2-Dichloroethane-d4	12.4		"	13.3		92.9	23-173			
Surrogate: Toluene-d8	13.8		"	13.3		103	20-170			
Surrogate: 4-Bromofluorobenzene	14.0		"	13.3		105	21-167			

Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 10:09

**Anions by EPA Method 300.0 - Quality Control**  
**Summit Scientific**

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

**Batch BHF0991 - General Preparation**

**Blank (BHF0991-BLK1)**

Prepared: 06/29/24 Analyzed: 07/01/24

Chloride	ND	0.0600	mg/L						
Sulfate	ND	0.300	"						

**LCS (BHF0991-BS1)**

Prepared: 06/29/24 Analyzed: 07/01/24

Chloride	0.306	0.0600	mg/L	3.00	10.2	90-110			QM-01
Sulfate	1.41	0.300	"	15.0	9.37	90-110			QM-01

**Duplicate (BHF0991-DUP1)**

Source: 2406215-01

Prepared: 06/29/24 Analyzed: 07/01/24

Chloride	30.8	12.0	mg/L		30.7		0.325	20	
Sulfate	353	60.0	"		344		2.49	20	

**Matrix Spike (BHF0991-MS1)**

Source: 2406215-01

Prepared: 06/29/24 Analyzed: 07/01/24

Chloride	663	12.0	mg/L	600	30.7	105	80-120		
Sulfate	3430	60.0	"	3000	344	103	80-120		

Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 10:09

**Total Dissolved Solids by SM2540C - Quality Control**  
**Summit Scientific**

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

**Batch BHF0712 - General Preparation**

<b>Blank (BHF0712-BLK1)</b>		Prepared & Analyzed: 06/24/24								
Total Dissolved Solids	ND	10.0	mg/L							
<b>Duplicate (BHF0712-DUP1)</b>		<b>Source: 2406297-01</b>		Prepared & Analyzed: 06/24/24						
Total Dissolved Solids	2380	10.0	mg/L		2480		4.24		20	

**Batch BHF0713 - General Preparation**

<b>Blank (BHF0713-BLK1)</b>		Prepared & Analyzed: 06/24/24								
Total Dissolved Solids	ND	10.0	mg/L							
<b>Duplicate (BHF0713-DUP1)</b>		<b>Source: 2406300-02</b>		Prepared & Analyzed: 06/24/24						
Total Dissolved Solids	957	10.0	mg/L		922		3.64		20	

Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN

Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 10:09

### Notes and Definitions

- QM-01 The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
- JAN The reported TDS concentration is a qualitative estimate based on Total Anion Value + 10%. This has been adjusted to account for the sum of major anions as measured by ion chromatography.
- 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

July 08, 2024

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Erickson A4-17 Tank Battery

Work Order #2406303

Enclosed are the results of analyses for samples received by Summit Scientific on 06/20/24 17:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Natalie Tessier For Paul Shrewsbury

President



Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PWV01-B@4'	2406303-01	Soil	06/20/24 12:32	06/20/24 17:55
PWV01-S@3'	2406303-03	Soil	06/20/24 12:49	06/20/24 17:55
SEP01-FL@3'	2406303-06	Soil	06/20/24 12:53	06/20/24 17:55
SEP01-DL@3'	2406303-07	Soil	06/20/24 12:26	06/20/24 17:55
AST01@0-6"	2406303-08	Soil	06/20/24 12:44	06/20/24 17:55
BKG01@0-6"	2406303-09	Soil	06/20/24 12:55	06/20/24 17:55
BKG01@3'	2406303-10	Soil	06/20/24 12:57	06/20/24 17:55
BKG01@4'	2406303-11	Soil	06/20/24 12:59	06/20/24 17:55

Summit Scientific

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

Lab ID	Page 1 of 1
2406303	

Client: Noble/Tasman		Send Data To: Project Manager: Jake Whritenour		Send Invoice To: Company: Chevron	
Address: 6855 W 119th Ave		E-Mail: Jwhritenour@tasman-geo.com		Project Name/Location: Enchson A4-17 TB	
City/State/Zip: Broomfield / CO / 80020				AFE#: UWRW2-A4034-ABN	
Phone: 970-214-7901		Project Name: Enchson A4-17 Tank Battery		PO/Billing Codes:	
Sampler Name: Lillian Buck		Project Number:		Contact: Dan Peterson Mine 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	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	Metals - 915		HOLD
1	PWV01-B e 4'	6/20/24	1232	3			X			X			X	X	X	X	X	X		
2	PWV01-N e 3'		1247	1			X											X		
3	PWV01-S e 3'		1249	1			X						X	X	X	X	X			
4	PWV01-E e 3'		1236	1			X												X	
5	PWV01-W e 3'		1251	1			X													X
6	SEPO1-FL e 3'		1253	1			X						X	X	X	X	X	X		
7	SEPO1-PL e 3'		1226	1			X						X	X	X	X	X	X		
8	ASTO1 e 0-6"		1244	1			X						X	X	X	X	X	X		
9	BKG01 e 0-6"		1255	2			X						X	X	X	X	X	X		
10	BKG01 e 3'		1257	1			X						X	X	X	X	X	X		
11	BKG01 e 4'		1259	1			X						X	X	X	X	X	X		
12																				
13																				
14																				
15																				

Relinquished by: <i>Zi-Z</i>	Date/Time: 6/20/24 1450	Received by: Tasman Lechbox	Date/Time: 6/20/24 1450	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lechbox	Date/Time: 6/20/24 1755	Received by: <i>[Signature]</i>	Date/Time: 6/20/24 1755	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: 9.6	Corrected Temperature: 9	IR gun #: 1	HNO3 lot #:			

S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 2406303

Client: Nodeltasman Client Project ID: Erickson A4-17 Tank Battery

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

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

Temp (°C) 9.6 Thermometer # 1

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

Additional Comments (if any):

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

AS  
Custodian Printed Name

6/20/24  
Date/Time



Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**PWV01-B@4'**  
**2406303-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/20/24 12:32**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHF0701	06/23/24	06/23/24	EPA 8260B	
<b>Toluene</b>	<b>0.0085</b>	0.0050		"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.0068</b>	0.0050		"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.030</b>	0.010		"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>0.011</b>	0.0050		"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>0.0086</b>	0.0050		"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.0098</b>	0.0038		"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>0.73</b>	0.50		"	"	"	"	"	"	

Date Sampled: **06/20/24 12:32**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0585	146 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0402	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0443	111 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/20/24 12:32**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>C10-C28 (DRO)</b>	<b>81</b>	50		mg/kg	1	BHF0708	06/23/24	06/24/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **06/20/24 12:32**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.64	69.1 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**PWV01-B@4'**  
**2406303-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **06/20/24 12:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0652	06/21/24	06/22/24	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	"	"	"	"	"	"	
<b>Fluorene</b>	<b>0.00848</b>	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.00854</b>	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.0132</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **06/20/24 12:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0198	59.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0239	71.6 %	40-150		"	"	"	"	

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

Date Sampled: **06/20/24 12:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0740	06/24/24	06/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **06/20/24 12:32**

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

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**PWV01-B@4'**  
**2406303-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	5.57	0.200	mg/kg dry	1	BHF0672	06/21/24	06/27/24	EPA 6020B
Barium	54.7	0.400	"	"	"	"	"	"
Cadmium	0.235	0.200	"	"	"	"	"	"
Copper	8.83	0.400	"	"	"	"	"	"
Lead	8.90	0.200	"	"	"	"	"	"
Nickel	6.69	0.400	"	"	"	"	"	"
Silver	0.0340	0.0200	"	"	"	"	"	"
Zinc	27.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **06/20/24 12:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0730	06/24/24	06/25/24	EPA 7196A	

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

Date Sampled: **06/20/24 12:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	80.7	0.0500	mg/L dry	1	BHF0801	06/25/24	06/27/24	EPA 6020B	
Magnesium	12.7	0.0500	"	"	"	"	"	"	
Sodium	36.1	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/20/24 12:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.986	0.00100	units	1	BHF0946	06/28/24	06/28/24	Calculation	

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

Date Sampled: **06/20/24 12:32**

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

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**PWV01-B@4'**  
**2406303-01 (Soil)**

**Summit Scientific**

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

% Solids	79.1	%	1	BHF0669	06/21/24	06/21/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **06/20/24 12:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.586</b>	0.0100	mmhos/cm	1	BHF0811	06/25/24	06/26/24	EPA 120.1	

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

Date Sampled: **06/20/24 12:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>9.83</b>		pH Units	1	BHF0810	06/25/24	06/26/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**PWV01-S@3'**  
**2406303-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/20/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHF0701	06/23/24	06/23/24	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: **06/20/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0570	142 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0382	95.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0428	107 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/20/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0708	06/23/24	06/23/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/20/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	5.58	44.6 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**PWV01-S@3'**  
**2406303-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **06/20/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0652	06/21/24	06/22/24	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: **06/20/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0177	53.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0177	53.2 %	40-150		"	"	"	"	

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

Date Sampled: **06/20/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0740	06/24/24	06/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **06/20/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**PWV01-S@3'**  
**2406303-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	7.57	0.200	mg/kg dry	1	BHF0672	06/21/24	06/27/24	EPA 6020B	
Barium	149	0.400	"	"	"	"	"	"	
Cadmium	0.271	0.200	"	"	"	"	"	"	
Copper	11.2	0.400	"	"	"	"	"	"	
Lead	12.2	0.200	"	"	"	"	"	"	
Nickel	7.44	0.400	"	"	"	"	"	"	
Silver	0.0446	0.0200	"	"	"	"	"	"	
Zinc	19.9	0.400	"	"	"	"	"	"	
Selenium	0.379	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **06/20/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0730	06/24/24	06/25/24	EPA 7196A	

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

Date Sampled: **06/20/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	29.7	0.0500	mg/L dry	1	BHF0801	06/25/24	06/27/24	EPA 6020B	
Magnesium	15.3	0.0500	"	"	"	"	"	"	
Sodium	25.3	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/20/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.940	0.00100	units	1	BHF0946	06/28/24	06/28/24	Calculation	

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

Date Sampled: **06/20/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**PWV01-S@3'**  
**2406303-03 (Soil)**

**Summit Scientific**

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

% Solids	78.3	%	1	BHF0669	06/21/24	06/21/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **06/20/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.353	0.0100	mmhos/cm	1	BHF0811	06/25/24	06/26/24	EPA 120.1	

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

Date Sampled: **06/20/24 12:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.04		pH Units	1	BHF0810	06/25/24	06/26/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**SEP01-FL@3'**  
**2406303-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/20/24 12:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHF0701	06/23/24	06/23/24	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: **06/20/24 12:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0526	132 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0367	91.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0435	109 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/20/24 12:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0708	06/23/24	06/23/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/20/24 12:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.47	67.8 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**SEP01-FL@3'**  
**2406303-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **06/20/24 12:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0652	06/21/24	06/22/24	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: **06/20/24 12:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0231	69.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0231	69.4 %	40-150		"	"	"	"	

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

Date Sampled: **06/20/24 12:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0740	06/24/24	06/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **06/20/24 12:53**

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

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**SEP01-FL@3'**  
**2406303-06 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.57	0.180	mg/kg dry	1	BHF0672	06/21/24	06/27/24	EPA 6020B	
Barium	85.1	0.360	"	"	"	"	"	"	
Cadmium	0.207	0.180	"	"	"	"	"	"	
Copper	5.92	0.360	"	"	"	"	"	"	
Lead	7.00	0.180	"	"	"	"	"	"	
Nickel	6.00	0.360	"	"	"	"	"	"	
Silver	0.0226	0.0180	"	"	"	"	"	"	
Zinc	23.7	0.360	"	"	"	"	"	"	
Selenium	0.252	0.234	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **06/20/24 12:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0730	06/24/24	06/25/24	EPA 7196A	

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

Date Sampled: **06/20/24 12:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	63.3	0.0500	mg/L dry	1	BHF0801	06/25/24	06/27/24	EPA 6020B	
Magnesium	46.0	0.0500	"	"	"	"	"	"	
Sodium	61.4	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/20/24 12:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.43	0.00100	units	1	BHF0946	06/28/24	06/28/24	Calculation	

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

Date Sampled: **06/20/24 12:53**

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

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**SEP01-FL@3'**  
**2406303-06 (Soil)**

**Summit Scientific**

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

% Solids	77.8	%	1	BHF0669	06/21/24	06/21/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **06/20/24 12:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.792</b>	0.0100	mmhos/cm	1	BHF0811	06/25/24	06/26/24	EPA 120.1	

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

Date Sampled: **06/20/24 12:53**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.15</b>		pH Units	1	BHF0810	06/25/24	06/26/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**SEP01-DL@3'**  
**2406303-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/20/24 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHF0701	06/23/24	06/23/24	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: **06/20/24 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0585	146 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0370	92.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0426	107 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/20/24 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0708	06/23/24	06/23/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/20/24 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.13	57.0 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**SEP01-DL@3'**  
**2406303-07 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **06/20/24 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0652	06/21/24	06/22/24	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: **06/20/24 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0220	66.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0200	60.0 %	40-150		"	"	"	"	

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

Date Sampled: **06/20/24 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0740	06/24/24	06/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **06/20/24 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**SEP01-DL@3'**  
**2406303-07 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	17.4	0.200	mg/kg dry	1	BHF0672	06/21/24	06/27/24	EPA 6020B	
Barium	292	0.400	"	"	"	"	"	"	
Cadmium	0.925	0.200	"	"	"	"	"	"	
Copper	17.7	0.400	"	"	"	"	"	"	
Lead	22.1	0.200	"	"	"	"	"	"	
Nickel	17.7	0.400	"	"	"	"	"	"	
Silver	0.124	0.0200	"	"	"	"	"	"	
Zinc	16.6	0.400	"	"	"	"	"	"	
Selenium	1.01	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **06/20/24 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0730	06/24/24	06/25/24	EPA 7196A	

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

Date Sampled: **06/20/24 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	36.5	0.0500	mg/L dry	1	BHF0801	06/25/24	06/27/24	EPA 6020B	
Magnesium	22.1	0.0500	"	"	"	"	"	"	
Sodium	32.3	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/20/24 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.04	0.00100	units	1	BHF0946	06/28/24	06/28/24	Calculation	

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

Date Sampled: **06/20/24 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**SEP01-DL@3'**  
**2406303-07 (Soil)**

**Summit Scientific**

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

% Solids	72.9	%	1	BHF0669	06/21/24	06/21/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **06/20/24 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.415	0.0100	mmhos/cm	1	BHF0811	06/25/24	06/26/24	EPA 120.1	

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

Date Sampled: **06/20/24 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.41		pH Units	1	BHF0810	06/25/24	06/26/24	EPA 9045D	

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**AST01@0-6"**  
**2406303-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/20/24 12:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHF0701	06/23/24	06/23/24	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: **06/20/24 12:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0555	139 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0378	94.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0430	107 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/20/24 12:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0708	06/23/24	06/23/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/20/24 12:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.02	56.1 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Tasman Geosciences  
6855 W. 119th Ave.  
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Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**AST01@0-6"**  
**2406303-08 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **06/20/24 12:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0652	06/21/24	06/22/24	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: **06/20/24 12:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0229	68.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0213	63.8 %	40-150		"	"	"	"	

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

Date Sampled: **06/20/24 12:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0740	06/24/24	06/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **06/20/24 12:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**AST01@0-6"**  
**2406303-08 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.90	0.200	mg/kg dry	1	BHF0672	06/21/24	06/27/24	EPA 6020B	
Barium	96.6	0.400	"	"	"	"	"	"	
Cadmium	0.248	0.200	"	"	"	"	"	"	
Copper	7.36	0.400	"	"	"	"	"	"	
Lead	8.07	0.200	"	"	"	"	"	"	
Nickel	6.28	0.400	"	"	"	"	"	"	
Silver	0.0317	0.0200	"	"	"	"	"	"	
Zinc	18.9	0.400	"	"	"	"	"	"	
Selenium	0.275	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **06/20/24 12:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0730	06/24/24	06/25/24	EPA 7196A	

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

Date Sampled: **06/20/24 12:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	33.5	0.0500	mg/L dry	1	BHF0801	06/25/24	06/27/24	EPA 6020B	
Magnesium	8.27	0.0500	"	"	"	"	"	"	
Sodium	14.2	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/20/24 12:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.570	0.00100	units	1	BHF0946	06/28/24	06/28/24	Calculation	

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

Date Sampled: **06/20/24 12:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**AST01@0-6"**  
**2406303-08 (Soil)**

**Summit Scientific**

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

% Solids	85.1	%	1	BHF0669	06/21/24	06/21/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **06/20/24 12:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.251	0.0100	mmhos/cm	1	BHF0811	06/25/24	06/26/24	EPA 120.1	

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

Date Sampled: **06/20/24 12:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.55		pH Units	1	BHF0810	06/25/24	06/26/24	EPA 9045D	

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**BKG01@0-6"**  
**2406303-09 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/20/24 12:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHF0740	06/24/24	06/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **06/20/24 12:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	<b>2.70</b>	0.200	mg/kg dry	1	BHF0672	06/21/24	06/27/24	EPA 6020B	
Barium	<b>31.5</b>	0.400	"	"	"	"	"	"	
Cadmium	<b>0.347</b>	0.200	"	"	"	"	"	"	
Copper	<b>13.7</b>	0.400	"	"	"	"	"	"	
Lead	<b>10.5</b>	0.200	"	"	"	"	"	"	
Nickel	<b>12.8</b>	0.400	"	"	"	"	"	"	
Silver	<b>0.0431</b>	0.0200	"	"	"	"	"	"	
Zinc	<b>35.9</b>	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **06/20/24 12:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0730	06/24/24	06/25/24	EPA 7196A	

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

Date Sampled: **06/20/24 12:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	<b>147</b>	0.0500	mg/L dry	1	BHF0801	06/25/24	06/27/24	EPA 6020B	
Magnesium	<b>122</b>	0.0500	"	"	"	"	"	"	
Sodium	<b>625</b>	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**BKG01@0-6''**  
**2406303-09 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **06/20/24 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	9.22	0.00100	units	1	BHF0946	06/28/24	06/28/24	Calculation	

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

Date Sampled: **06/20/24 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	77.8		%	1	BHF0669	06/21/24	06/21/24	Calculation	

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

Date Sampled: **06/20/24 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.53	0.0100	mmhos/cm	1	BHF0811	06/25/24	06/26/24	EPA 120.1	

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

Date Sampled: **06/20/24 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.36		pH Units	1	BHF0810	06/25/24	06/26/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**BKG01@3'**  
**2406303-10 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/20/24 12:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHF0740	06/24/24	06/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **06/20/24 12:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.65	0.200	mg/kg dry	1	BHF0672	06/21/24	06/27/24	EPA 6020B	
Barium	104	0.400	"	"	"	"	"	"	
Cadmium	0.343	0.200	"	"	"	"	"	"	
Copper	7.56	0.400	"	"	"	"	"	"	
Lead	7.41	0.200	"	"	"	"	"	"	
Nickel	9.48	0.400	"	"	"	"	"	"	
Silver	0.0267	0.0200	"	"	"	"	"	"	
Zinc	21.7	0.400	"	"	"	"	"	"	
Selenium	0.410	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **06/20/24 12:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0730	06/24/24	06/25/24	EPA 7196A	

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

Date Sampled: **06/20/24 12:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	123	0.0500	mg/L dry	1	BHF0801	06/25/24	06/27/24	EPA 6020B	
Magnesium	29.4	0.0500	"	"	"	"	"	"	
Sodium	40.5	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

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Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**BKG01@3'**  
**2406303-10 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **06/20/24 12:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.852</b>	0.00100	units	1	BHF0946	06/28/24	06/28/24	Calculation	

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

Date Sampled: **06/20/24 12:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>81.5</b>		%	1	BHF0669	06/21/24	06/21/24	Calculation	

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

Date Sampled: **06/20/24 12:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.888</b>	0.0100	mmhos/cm	1	BHF0811	06/25/24	06/26/24	EPA 120.1	

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

Date Sampled: **06/20/24 12:57**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.28</b>		pH Units	1	BHF0810	06/25/24	06/26/24	EPA 9045D	

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Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**BKG01@4'**  
**2406303-11 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/20/24 12:59**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHF0740	06/24/24	06/26/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **06/20/24 12:59**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.36	0.200	mg/kg dry	1	BHF0672	06/21/24	06/27/24	EPA 6020B	
Barium	84.3	0.400	"	"	"	"	"	"	
Cadmium	0.266	0.200	"	"	"	"	"	"	
Copper	6.08	0.400	"	"	"	"	"	"	
Lead	6.91	0.200	"	"	"	"	"	"	
Nickel	8.16	0.400	"	"	"	"	"	"	
Silver	0.0248	0.0200	"	"	"	"	"	"	
Zinc	23.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **06/20/24 12:59**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0730	06/24/24	06/25/24	EPA 7196A	

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

Date Sampled: **06/20/24 12:59**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	46.1	0.0500	mg/L dry	1	BHF0801	06/25/24	06/27/24	EPA 6020B	
Magnesium	22.4	0.0500	"	"	"	"	"	"	
Sodium	77.5	0.0500	"	"	"	"	"	"	

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Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**BKG01@4'**  
**2406303-11 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **06/20/24 12:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.34	0.00100	units	1	BHF0946	06/28/24	06/28/24	Calculation	

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

Date Sampled: **06/20/24 12:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.7		%	1	BHF0669	06/21/24	06/21/24	Calculation	

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

Date Sampled: **06/20/24 12:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.672	0.0100	mmhos/cm	1	BHF0811	06/25/24	06/26/24	EPA 120.1	

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

Date Sampled: **06/20/24 12:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.41		pH Units	1	BHF0810	06/25/24	06/26/24	EPA 9045D	

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Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

### 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 BHF0701 - EPA 5030 Soil MS

##### Blank (BHF0701-BLK1)

Prepared & Analyzed: 06/23/24

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
Surrogate: 1,2-Dichloroethane-d4	0.0550		"	0.0400		138	50-150				
Surrogate: Toluene-d8	0.0390		"	0.0400		97.5	50-150				
Surrogate: 4-Bromofluorobenzene	0.0412		"	0.0400		103	50-150				

##### LCS (BHF0701-BS1)

Prepared & Analyzed: 06/23/24

Benzene	0.111	0.0020	mg/kg	0.100		111	70-130				
Toluene	0.115	0.0050	"	0.100		115	70-130				
Ethylbenzene	0.117	0.0050	"	0.100		117	70-130				
m,p-Xylene	0.225	0.010	"	0.200		112	70-130				
o-Xylene	0.109	0.0050	"	0.100		109	70-130				
1,2,4-Trimethylbenzene	0.110	0.0050	"	0.100		110	70-130				
1,3,5-Trimethylbenzene	0.111	0.0050	"	0.100		111	70-130				
Naphthalene	0.107	0.0038	"	0.100		107	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0537		"	0.0400		134	50-150				
Surrogate: Toluene-d8	0.0400		"	0.0400		100	50-150				
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400		102	50-150				

##### Matrix Spike (BHF0701-MS1)

Source: 2406303-01

Prepared & Analyzed: 06/23/24

Benzene	0.114	0.0020	mg/kg	0.100	ND	114	70-130				
Toluene	0.183	0.0050	"	0.100	0.00849	175	70-130				QM-02
Ethylbenzene	0.112	0.0050	"	0.100	0.00675	105	70-130				
m,p-Xylene	0.260	0.010	"	0.200	0.0151	122	70-130				
o-Xylene	0.128	0.0050	"	0.100	0.0146	114	70-130				
1,2,4-Trimethylbenzene	0.115	0.0050	"	0.100	0.0105	105	70-130				
1,3,5-Trimethylbenzene	0.0880	0.0050	"	0.100	0.00861	79.4	70-130				
Naphthalene	0.0990	0.0038	"	0.100	0.00975	89.3	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0521		"	0.0400		130	50-150				
Surrogate: Toluene-d8	0.0398		"	0.0400		99.6	50-150				
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150				

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Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**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 BHF0701 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (BHF0701-MSD1)</b>	<b>Source: 2406303-01</b>			<b>Prepared &amp; Analyzed: 06/23/24</b>						
Benzene	0.0960	0.0020	mg/kg	0.100	ND	96.0	70-130	16.9	30	
Toluene	0.103	0.0050	"	0.100	0.00849	94.0	70-130	56.4	30	QR-02
Ethylbenzene	0.103	0.0050	"	0.100	0.00675	96.5	70-130	8.30	30	
m,p-Xylene	0.192	0.010	"	0.200	0.0151	88.2	70-130	30.3	30	QR-02
o-Xylene	0.104	0.0050	"	0.100	0.0146	89.0	70-130	21.3	30	
1,2,4-Trimethylbenzene	0.0904	0.0050	"	0.100	0.0105	79.8	70-130	24.1	30	
1,3,5-Trimethylbenzene	0.0945	0.0050	"	0.100	0.00861	85.9	70-130	7.03	30	
Naphthalene	0.101	0.0038	"	0.100	0.00975	91.6	70-130	2.36	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0570</i>		<i>"</i>	<i>0.0400</i>		<i>142</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0409</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0459</i>		<i>"</i>	<i>0.0400</i>		<i>115</i>	<i>50-150</i>			

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Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**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 BHF0708 - EPA 3550A**

**Blank (BHF0708-BLK1)**

Prepared & Analyzed: 06/23/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	8.03		"	12.5	64.2	30-150					

**LCS (BHF0708-BS1)**

Prepared & Analyzed: 06/23/24

C10-C28 (DRO)	484	50	mg/kg	500	96.8	70-130					
Surrogate: <i>o</i> -Terphenyl	7.70		"	12.5	61.6	30-150					

**Matrix Spike (BHF0708-MS1)**

Source: 2406303-01

Prepared & Analyzed: 06/23/24

C10-C28 (DRO)	513	50	mg/kg	500	80.6	86.4	70-130				
Surrogate: <i>o</i> -Terphenyl	6.34		"	12.5	50.7	30-150					

**Matrix Spike Dup (BHF0708-MSD1)**

Source: 2406303-01

Prepared & Analyzed: 06/23/24

C10-C28 (DRO)	689	50	mg/kg	500	80.6	122	70-130	29.3	20		QR-03
Surrogate: <i>o</i> -Terphenyl	7.58		"	12.5	60.7	30-150					

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**Reported:**  
07/08/24 07:57

**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 BHF0652 - EPA 5030 Soil MS**

**Blank (BHF0652-BLK1)**

Prepared & Analyzed: 06/21/24

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	0.0201		"	0.0333	60.3	40-150				
Surrogate: Fluoranthene-d10	0.0196		"	0.0333	58.7	40-150				

**LCS (BHF0652-BS1)**

Prepared & Analyzed: 06/21/24

Acenaphthene	0.0233	0.00500	mg/kg	0.0333	70.0	31-137				
Anthracene	0.0232	0.00500	"	0.0333	69.5	30-120				
Benzo (a) anthracene	0.0237	0.00500	"	0.0333	71.2	30-120				
Benzo (a) pyrene	0.0239	0.00500	"	0.0333	71.6	30-120				
Benzo (b) fluoranthene	0.0257	0.00500	"	0.0333	77.2	30-120				
Benzo (k) fluoranthene	0.0259	0.00500	"	0.0333	77.6	30-120				
Chrysene	0.0243	0.00500	"	0.0333	72.9	30-120				
Dibenz (a,h) anthracene	0.0202	0.00500	"	0.0333	60.6	30-120				
Fluoranthene	0.0252	0.00500	"	0.0333	75.7	30-120				
Fluorene	0.0229	0.00500	"	0.0333	68.6	30-120				
Indeno (1,2,3-cd) pyrene	0.0196	0.00500	"	0.0333	58.8	30-120				
Pyrene	0.0201	0.00500	"	0.0333	60.2	35-142				
1-Methylnaphthalene	0.0207	0.00500	"	0.0333	62.1	35-142				
2-Methylnaphthalene	0.0206	0.00500	"	0.0333	61.7	35-142				
Surrogate: 2-Methylnaphthalene-d10	0.0207		"	0.0333	62.1	40-150				
Surrogate: Fluoranthene-d10	0.0256		"	0.0333	76.9	40-150				

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Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**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 BHF0652 - EPA 5030 Soil MS**

<b>Matrix Spike (BHF0652-MS1)</b>	<b>Source: 2406288-01</b>			<b>Prepared &amp; Analyzed: 06/21/24</b>							
Acenaphthene	0.0231	0.00500	mg/kg	0.0333	ND	69.4	31-137				
Anthracene	0.0226	0.00500	"	0.0333	ND	67.7	30-120				
Benzo (a) anthracene	0.0310	0.00500	"	0.0333	0.00682	72.7	30-120				
Benzo (a) pyrene	0.0301	0.00500	"	0.0333	0.0103	59.4	30-120				
Benzo (b) fluoranthene	0.0303	0.00500	"	0.0333	0.0140	48.9	30-120				
Benzo (k) fluoranthene	0.0261	0.00500	"	0.0333	0.00808	54.1	30-120				
Chrysene	0.0342	0.00500	"	0.0333	0.00945	74.2	30-120				
Dibenz (a,h) anthracene	0.0190	0.00500	"	0.0333	ND	57.0	30-120				
Fluoranthene	0.0355	0.00500	"	0.0333	0.00905	79.4	30-120				
Fluorene	0.0226	0.00500	"	0.0333	ND	67.7	30-120				
Indeno (1,2,3-cd) pyrene	0.0264	0.00500	"	0.0333	ND	79.1	30-120				
Pyrene	0.0437	0.00500	"	0.0333	0.0111	98.0	35-142				
1-Methylnaphthalene	0.0223	0.00500	"	0.0333	ND	66.8	15-130				
2-Methylnaphthalene	0.0220	0.00500	"	0.0333	ND	66.1	15-130				
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0225</i>		<i>"</i>	<i>0.0333</i>		<i>67.4</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0211</i>		<i>"</i>	<i>0.0333</i>		<i>63.3</i>	<i>40-150</i>				

<b>Matrix Spike Dup (BHF0652-MSD1)</b>	<b>Source: 2406288-01</b>			<b>Prepared &amp; Analyzed: 06/21/24</b>							
Acenaphthene	0.0233	0.00500	mg/kg	0.0333	ND	69.9	31-137	0.642	30		
Anthracene	0.0216	0.00500	"	0.0333	ND	64.7	30-120	4.43	30		
Benzo (a) anthracene	0.0307	0.00500	"	0.0333	0.00682	71.6	30-120	1.22	30		
Benzo (a) pyrene	0.0321	0.00500	"	0.0333	0.0103	65.3	30-120	6.36	30		
Benzo (b) fluoranthene	0.0327	0.00500	"	0.0333	0.0140	56.0	30-120	7.56	30		
Benzo (k) fluoranthene	0.0284	0.00500	"	0.0333	0.00808	60.9	30-120	8.30	30		
Chrysene	0.0341	0.00500	"	0.0333	0.00945	73.9	30-120	0.269	30		
Dibenz (a,h) anthracene	0.0202	0.00500	"	0.0333	ND	60.5	30-120	5.94	30		
Fluoranthene	0.0327	0.00500	"	0.0333	0.00905	71.0	30-120	8.17	30		
Fluorene	0.0221	0.00500	"	0.0333	ND	66.4	30-120	2.04	30		
Indeno (1,2,3-cd) pyrene	0.0257	0.00500	"	0.0333	ND	77.2	30-120	2.40	30		
Pyrene	0.0396	0.00500	"	0.0333	0.0111	85.6	35-142	9.89	30		
1-Methylnaphthalene	0.0223	0.00500	"	0.0333	ND	66.9	15-130	0.200	50		
2-Methylnaphthalene	0.0221	0.00500	"	0.0333	ND	66.4	15-130	0.430	50		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0226</i>		<i>"</i>	<i>0.0333</i>		<i>67.9</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0219</i>		<i>"</i>	<i>0.0333</i>		<i>65.8</i>	<i>40-150</i>				

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**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 BHF0740 - EPA 3050B**

<b>Blank (BHF0740-BLK1)</b>				Prepared: 06/24/24 Analyzed: 06/26/24						
Boron	ND	2.00	mg/L							
<b>LCS (BHF0740-BS1)</b>				Prepared: 06/24/24 Analyzed: 06/26/24						
Boron	4.79	2.00	mg/L	5.00	95.8	80-120				
<b>Duplicate (BHF0740-DUP1)</b>				Source: 2406303-01 Prepared: 06/24/24 Analyzed: 06/26/24						
Boron	0.458	2.00	mg/L	0.234			64.8	20	QR-02	
<b>Matrix Spike (BHF0740-MS1)</b>				Source: 2406303-01 Prepared: 06/24/24 Analyzed: 06/26/24						
Boron	4.99	2.00	mg/L	4.99	0.234	95.4	75-125			
<b>Matrix Spike Dup (BHF0740-MSD1)</b>				Source: 2406303-01 Prepared: 06/24/24 Analyzed: 06/26/24						
Boron	5.63	2.00	mg/L	4.99	0.234	108	75-125	12.1	25	

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Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**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 BHF0672 - EPA 3050B**

**Blank (BHF0672-BLK1)**

Prepared: 06/21/24 Analyzed: 06/27/24

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 (BHF0672-BS1)**

Prepared: 06/21/24 Analyzed: 06/27/24

Arsenic	37.6	0.200	mg/kg wet	40.0	93.9	80-120
Barium	39.2	0.400	"	40.0	98.0	80-120
Cadmium	1.95	0.200	"	2.00	97.3	80-120
Copper	38.6	0.400	"	40.0	96.4	80-120
Lead	19.7	0.200	"	20.0	98.7	80-120
Nickel	38.2	0.400	"	40.0	95.4	80-120
Silver	1.97	0.0200	"	2.00	98.7	80-120
Zinc	42.1	0.400	"	40.0	105	80-120
Selenium	4.35	0.260	"	4.00	109	80-120

**Duplicate (BHF0672-DUP1)**

Source: 2406303-01

Prepared: 06/21/24 Analyzed: 06/27/24

Arsenic	6.12	0.200	mg/kg dry	5.57	9.41	20	
Barium	62.3	0.400	"	54.7	13.1	20	
Cadmium	0.219	0.200	"	0.235	6.68	20	
Copper	8.79	0.400	"	8.83	0.374	20	
Lead	8.31	0.200	"	8.90	6.88	20	
Nickel	7.04	0.400	"	6.69	5.11	20	
Silver	0.0341	0.0200	"	0.0340	0.213	20	
Zinc	19.7	0.400	"	27.7	33.8	20	QR-04
Selenium	0.294	0.260	"	0.228	25.0	20	QR-04

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Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**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 BHF0672 - EPA 3050B**

<b>Matrix Spike (BHF0672-MS1)</b>	<b>Source: 2406303-01</b>			<b>Prepared: 06/21/24 Analyzed: 06/27/24</b>							
Arsenic	48.6	0.181	mg/kg dry	45.8	5.57	93.9	75-125				
Barium	110	0.362	"	45.8	54.7	122	75-125				
Cadmium	2.51	0.181	"	2.29	0.235	99.1	75-125				
Copper	51.5	0.362	"	45.8	8.83	93.2	75-125				
Lead	31.1	0.181	"	22.9	8.90	96.8	75-125				
Nickel	51.8	0.362	"	45.8	6.69	98.4	75-125				
Silver	2.26	0.0181	"	2.29	0.0340	97.1	75-125				
Zinc	46.4	0.362	"	45.8	27.7	40.8	75-125				QM-05
Selenium	5.21	0.236	"	4.58	0.228	109	75-125				

<b>Matrix Spike Dup (BHF0672-MSD1)</b>	<b>Source: 2406303-01</b>			<b>Prepared: 06/21/24 Analyzed: 06/27/24</b>							
Arsenic	48.3	0.200	mg/kg dry	46.2	5.57	92.6	75-125	0.617	25		
Barium	101	0.400	"	46.2	54.7	101	75-125	8.56	25		
Cadmium	2.54	0.200	"	2.31	0.235	100	75-125	1.44	25		
Copper	51.6	0.400	"	46.2	8.83	92.6	75-125	0.0725	25		
Lead	33.4	0.200	"	23.1	8.90	106	75-125	7.11	25		
Nickel	50.7	0.400	"	46.2	6.69	95.4	75-125	2.09	25		
Silver	2.27	0.0200	"	2.31	0.0340	97.1	75-125	0.727	25		
Zinc	51.6	0.400	"	46.2	27.7	51.9	75-125	10.8	25		QM-05
Selenium	5.11	0.260	"	4.62	0.228	106	75-125	2.04	25		

<b>Post Spike (BHF0672-PS1)</b>	<b>Source: 2406303-01</b>			<b>Prepared: 06/21/24 Analyzed: 06/27/24</b>							
Arsenic	114		ug/l	100	11.0	103	75-125				
Barium	214		"	100	108	105	75-125				
Cadmium	5.78		"	5.00	0.464	106	75-125				
Copper	120		"	100	17.4	102	75-125				
Lead	70.7		"	50.0	17.6	106	75-125				
Nickel	115		"	100	13.2	102	75-125				
Silver	5.37		"	5.00	0.0672	106	75-125				
Zinc	124		"	100	54.7	69.8	75-125				QM-01
Selenium	12.6		"	10.0	0.451	121	75-125				

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Project: Noble - Erickson A4-17 Tank Battery  
Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**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 BHF0730 - 3060A Mod**

**Blank (BHF0730-BLK1)**

Prepared: 06/24/24 Analyzed: 06/25/24

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BHF0730-BS1)**

Prepared: 06/24/24 Analyzed: 06/25/24

Chromium, Hexavalent 25.2 0.30 mg/kg wet 25.0 101 80-120

**Duplicate (BHF0730-DUP1)**

**Source: 2406285-01**

Prepared: 06/24/24 Analyzed: 06/25/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BHF0730-MS1)**

**Source: 2406285-01**

Prepared: 06/24/24 Analyzed: 06/25/24

Chromium, Hexavalent 28.7 0.30 mg/kg dry 29.2 ND 98.4 75-125

**Matrix Spike Dup (BHF0730-MSD1)**

**Source: 2406285-01**

Prepared: 06/24/24 Analyzed: 06/25/24

Chromium, Hexavalent 28.8 0.30 mg/kg dry 29.2 ND 98.6 75-125 0.203 20

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Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**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 BHF0801 - General Preparation**

**Blank (BHF0801-BLK1)**

Prepared: 06/25/24 Analyzed: 06/27/24

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

**LCS (BHF0801-BS1)**

Prepared: 06/25/24 Analyzed: 06/27/24

Calcium	5.57	0.0500	mg/L wet	5.00	111	70-130
Magnesium	4.89	0.0500	"	5.00	97.8	70-130
Sodium	4.43	0.0500	"	5.00	88.6	70-130

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Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
 Project Manager: Jacob Whritenour

**Reported:**  
 07/08/24 07:57

**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 BHF0669 - General Preparation**

**Duplicate (BHF0669-DUP2)**

**Source: 2406283-33**

Prepared & Analyzed: 06/21/24

% Solids	82.7		%		82.4			0.397	20	
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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**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 BHF0811 - General Preparation**

**Blank (BHF0811-BLK1)**

Prepared: 06/25/24 Analyzed: 06/26/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BHF0811-BS1)**

Prepared: 06/25/24 Analyzed: 06/26/24

Specific Conductance (EC) 0.150 0.0100 mmhos/cm 0.150 100 95-105

**Duplicate (BHF0811-DUP1)**

Source: 2406301-01

Prepared: 06/25/24 Analyzed: 06/26/24

Specific Conductance (EC) 0.0520 0.0100 mmhos/cm 0.0519 0.154 20

Summit Scientific

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

**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 BHF0810 - General Preparation**

**LCS (BHF0810-BS1)**

Prepared: 06/25/24 Analyzed: 06/26/24

pH	9.15	pH Units	9.18	99.7	95-105
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**Duplicate (BHF0810-DUP1)**

Source: 2406301-01

Prepared: 06/25/24 Analyzed: 06/26/24

pH	7.04	pH Units	7.14	1.41	20
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Broomfield CO, 80020

Project: Noble - Erickson A4-17 Tank Battery

Project Number: UWRWE-A4034-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
07/08/24 07:57

### Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- 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-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
- QM-02 The RPD and/or percent recovery for this QC sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
- QM-01 The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
- 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