

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 23, 2025

Paul Henchan  
Fremont Environmental  
PO Box 1289  
Wellington, CO 80549

RE: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Work Order #2502385

Enclosed are the results of analyses for samples received by Summit Scientific on 02/21/25 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Natalie Tessier For Paul Shrewsbury  
President



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Ewall01 7Ft	2502385-01	Soil	02/21/25 13:05	02/21/25 16:30
Nwall01 7Ft	2502385-02	Soil	02/21/25 13:15	02/21/25 16:30
Nwall02 7Ft	2502385-03	Soil	02/21/25 13:20	02/21/25 16:30
Wwall01 7Ft	2502385-04	Soil	02/21/25 13:30	02/21/25 16:30
GWS01	2502385-05	Water	02/21/25 13:30	02/21/25 16:30

### Case Narrative

Method 300.0 was analyzed outside of the allotted holding time.

# SUMMIT SCIENTIFIC

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

Lab ID	Page 1 of 1
2502385	

Client: Fremont Environmental Address: 8305 6th St. City/State/Zip: Wellington, CO Phone: 864-423-2068 Sampler Name: Jordan Suttles	Send Data To: Project Manager: Paul Henahan E-Mail: Chevron Dist. List, PDC Dist List, Civitas Dist List, Fremont Dist List, paulH, mikeG, nickL, ethanB, jeffG, christL, stanG, aaronO, joshB, jordanS, jammyA (@fremontenv.com) Project Name: Coleman Volkens Lang T4N-R64W-S22 L01 Project Number: C024-121	Send Invoice To: Company: Chevron (Noble) Project Name/Location: AFE#: UWRWF-A4021-ENV PO/Billing Codes: Contact: Dan Peterson
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Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions	
				HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Full Table 915-1 (Soil)	Full Table 915-1 (GW)				
Ewall01 7F+	2/21/25	13:05	2			X				X				X			
Nwall01 7F+		13:15	1			X				X				X			
Nwall02 7F+		13:20				X				X				X			
Wwall01 7F+		13:25				X				X				X			
GWS01	2/21/25	13:30	4	X		X		X						X			

Acquired by: <i>Jordan Suttles</i>	Date/Time: 2/21/25 16:30	Received by: SA N Office	Date/Time: 2/21/25 16:30	TAT Business Days	Field DO	Notes: Dist. Report to parties circled in the email line(s) only.
Acquired by: <i>S2</i>	Date/Time: 2/21/25 16:30	Received by: <i>[Signature]</i>	Date/Time: 2/21/25 16:30	Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Temperature Upon Receipt: 0.9	Corrected Temperature: E	IR gun #:		Standard	Field Turb.	
						HNO3 lot #:

# S<sub>2</sub>

S2 Work Order# 2502385

### Sample Receipt Checklist

LOI

Client: FremontClient Project ID: Coleman Volkens Lang T4N-R4W-522Received Via: H.D./P.U./FedEx/UPS/USPS/Other  Airbill #: \_\_\_\_\_Matrix (Circle all that apply) Air/Soil/Water/Other  Temp (°C) 0.9 Thermometer # 1Bottle ware (Circle all that apply) Glass/Jar/Vial/Amber/Poly/Other 

	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.	-			on 20E
If custody seals are present, are they intact? <sup>(1)</sup>	-			
Are samples due within 48 hours?	-			Same day
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, Total Residual Chlorine (TRC)		-		
Is a chain-of-custody (COC) form present and filled out Completely? <sup>(1)</sup>	-			
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	-			
Were all samples received intact? <sup>(1)</sup>	✓			
Was adequate sample volume provided? <sup>(1)</sup>	✓			
Were samples provided in appropriate bottle ware?	✓			
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	✓			
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>		✓		no times
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		✓	AS	
Are any samples/bottles preserved (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.	✓		AS	HCl
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	
Are there requested analysis that cannot be performed by S2? Note analysis in the comments column		✓		
Additional Comments (if any):				

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

Control Form #: SRC-001

AS  
Custodian Printed Name2/21/25  
Date/Time



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

**Ewall01 7Ft**  
**2502385-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **02/21/25 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIB1254	02/21/25	02/23/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>0.25</b>	0.050	"	10	"	"	02/22/25	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	1	"	"	02/23/25	"	
<b>Naphthalene</b>	<b>0.30</b>	0.0038	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>95</b>	5.0	"	10	"	"	02/22/25	"	

Date Sampled: **02/21/25 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0408	102 %	50-150		"	"	02/23/25	"	
Surrogate: Toluene-d8	0.0413	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0542	135 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/21/25 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>90</b>	50	mg/kg	1	BIB1258	02/21/25	02/22/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/21/25 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	6.33	50.6 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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**Reported:**  
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**Ewall01 7Ft**  
**2502385-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/21/25 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC0264	03/05/25	03/15/25	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>0.0411</b>	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.221</b>	0.00500	"	"	"	"	"	"	E
<b>2-Methylnaphthalene</b>	<b>0.540</b>	0.00500	"	"	"	"	"	"	E

Date Sampled: **02/21/25 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0184	55.3 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0194	58.3 %	40-140		"	"	"	"	

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

Date Sampled: **02/21/25 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIB1282	02/24/25	02/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/21/25 13:05**

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

Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

**Ewall01 7Ft**  
**2502385-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.67	0.200	mg/kg dry	1	BIB1268	02/22/25	02/24/25	EPA 6020B	
Barium	78.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.60	0.400	"	"	"	"	"	"	
Lead	6.87	0.200	"	"	"	"	"	"	
Nickel	4.29	0.400	"	"	"	"	"	"	
Silver	0.0330	0.0200	"	"	"	"	"	"	
Zinc	18.1	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **02/21/25 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB1271	02/23/25	02/23/25	EPA 7196A	

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

Date Sampled: **02/21/25 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	105	0.0500	mg/L dry	1	BIB1158	02/21/25	02/25/25	EPA 6020B	
Magnesium	25.4	0.0500	"	"	"	"	"	"	
Sodium	46.4	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/21/25 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.05	0.00100	units	1	BIB1414	02/25/25	02/25/25	Calculation	

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

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**Reported:**  
 04/23/25 08:11

**Ewall01 7Ft**  
**2502385-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **02/21/25 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.2		%	1	BIB1276	02/23/25	02/23/25	Calculation	

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

Date Sampled: **02/21/25 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.242	0.0100	mmhos/cm	1	BIB1160	02/21/25	02/24/25	EPA 120.1	

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

Date Sampled: **02/21/25 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.62		pH Units	1	BIB1159	02/21/25	02/24/25	EPA 9045D	

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Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

**Nwall01 7Ft**  
**2502385-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **02/21/25 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIB1254	02/21/25	02/23/25	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	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>210</b>	<b>50</b>	"	100	"	"	02/22/25	"	

Date Sampled: **02/21/25 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0397	99.3 %	50-150		"	"	02/23/25	"	
Surrogate: Toluene-d8	0.0409	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0446	111 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/21/25 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>110</b>	<b>50</b>	mg/kg	1	BIB1258	02/21/25	02/22/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/21/25 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	5.96	47.7 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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04/23/25 08:11

**Nwall01 7Ft**  
**2502385-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/21/25 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC0264	03/05/25	03/15/25	EPA 8270D SIM	
<b>Anthracene</b>	<b>0.0274</b>	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>0.0145</b>	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.0421</b>	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.0844</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **02/21/25 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0184	55.3 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0168	50.5 %	40-140		"	"	"	"	

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

Date Sampled: **02/21/25 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIB1282	02/24/25	02/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/21/25 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: UWRWE-A4021-ENV  
Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

**Nwall01 7Ft**  
**2502385-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	3.22	0.200	mg/kg dry	1	BIB1268	02/22/25	02/24/25	EPA 6020B
Barium	130	0.400	"	"	"	"	"	"
Cadmium	0.303	0.200	"	"	"	"	"	"
Copper	6.27	0.400	"	"	"	"	"	"
Lead	9.38	0.200	"	"	"	"	"	"
Nickel	5.28	0.400	"	"	"	"	"	"
Silver	0.0452	0.0200	"	"	"	"	"	"
Zinc	21.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **02/21/25 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB1271	02/23/25	02/23/25	EPA 7196A	

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

Date Sampled: **02/21/25 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	40.9	0.0500	mg/L dry	1	BIB1158	02/21/25	02/25/25	EPA 6020B	
Magnesium	6.27	0.0500	"	"	"	"	"	"	
Sodium	49.8	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/21/25 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.92	0.00100	units	1	BIB1414	02/25/25	02/25/25	Calculation	

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

Date Sampled: **02/21/25 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Project Manager: Paul Henchan

**Reported:**  
 04/23/25 08:11

**Nwall01 7Ft**  
**2502385-02 (Soil)**

**Summit Scientific**

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

% Solids	79.1	%	1	BIB1276	02/23/25	02/23/25	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **02/21/25 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.281</b>	0.0100	mmhos/cm	1	BIB1160	02/21/25	02/24/25	EPA 120.1	

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

Date Sampled: **02/21/25 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>pH</b>	<b>8.61</b>		pH Units	1	BIB1159	02/21/25	02/24/25	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

**Nwall02 7Ft**  
**2502385-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **02/21/25 13:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIB1254	02/21/25	02/22/25	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: **02/21/25 13:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0465	116 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	102 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0409	102 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/21/25 13:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BIB1258	02/21/25	02/22/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **02/21/25 13:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.16	57.3 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

**Nwall02 7Ft**  
**2502385-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/21/25 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC0264	03/05/25	03/15/25	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: **02/21/25 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0204	61.2 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0161	48.2 %	40-140		"	"	"	"	

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

Date Sampled: **02/21/25 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIB1282	02/24/25	02/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/21/25 13:20**

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

Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

**Nwall02 7Ft**  
**2502385-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	2.33	0.200	mg/kg dry	1	BIB1268	02/22/25	02/24/25	EPA 6020B
Barium	45.4	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.82	0.400	"	"	"	"	"	"
Lead	6.30	0.200	"	"	"	"	"	"
Nickel	4.17	0.400	"	"	"	"	"	"
Silver	0.0297	0.0200	"	"	"	"	"	"
Zinc	16.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **02/21/25 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB1271	02/23/25	02/23/25	EPA 7196A	

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

Date Sampled: **02/21/25 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	24.1	0.0500	mg/L dry	1	BIB1158	02/21/25	02/25/25	EPA 6020B	
Magnesium	5.23	0.0500	"	"	"	"	"	"	
Sodium	46.0	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/21/25 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.21	0.00100	units	1	BIB1414	02/25/25	02/25/25	Calculation	

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

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 Wellington CO, 80549

Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
 Project Manager: Paul Henchan

**Reported:**  
 04/23/25 08:11

**Nwall02 7Ft**  
**2502385-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **02/21/25 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.8		%	1	BIB1276	02/23/25	02/23/25	Calculation	

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

Date Sampled: **02/21/25 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.395	0.0100	mmhos/cm	1	BIB1160	02/21/25	02/24/25	EPA 120.1	

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

Date Sampled: **02/21/25 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.34		pH Units	1	BIB1159	02/21/25	02/24/25	EPA 9045D	

Summit Scientific

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Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

**Wwall01 7Ft**  
**2502385-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **02/21/25 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIB1254	02/21/25	02/22/25	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: **02/21/25 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0426	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0389	97.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	100 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **02/21/25 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIB1258	02/21/25	02/22/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **02/21/25 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	5.38	43.0 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

**Wwall01 7Ft**  
**2502385-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **02/21/25 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC0264	03/05/25	03/15/25	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: **02/21/25 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0165	49.6 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0138	41.3 %	40-140		"	"	"	"	

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

Date Sampled: **02/21/25 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIB1282	02/24/25	02/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **02/21/25 13:30**

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

Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

**Wwall01 7Ft**  
**2502385-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.43	0.200	mg/kg dry	1	BIB1268	02/22/25	02/24/25	EPA 6020B	
Barium	70.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.76	0.400	"	"	"	"	"	"	
Lead	5.38	0.200	"	"	"	"	"	"	
Nickel	3.84	0.400	"	"	"	"	"	"	
Silver	0.0271	0.0200	"	"	"	"	"	"	
Zinc	14.9	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **02/21/25 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB1271	02/23/25	02/23/25	EPA 7196A	

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

Date Sampled: **02/21/25 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	22.6	0.0500	mg/L dry	1	BIB1158	02/21/25	02/25/25	EPA 6020B	
Magnesium	5.77	0.0500	"	"	"	"	"	"	
Sodium	60.4	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **02/21/25 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.93	0.00100	units	1	BIB1414	02/25/25	02/25/25	Calculation	

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

Summit Scientific

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 Wellington CO, 80549

Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01  
 Project Number: UWRWE-A4021-ENV  
 Project Manager: Paul Henchan

**Reported:**  
 04/23/25 08:11

**Wwall01 7Ft**  
**2502385-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **02/21/25 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.7		%	1	BIB1276	02/23/25	02/23/25	Calculation	

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

Date Sampled: **02/21/25 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.328	0.0100	mmhos/cm	1	BIB1160	02/21/25	02/24/25	EPA 120.1	

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

Date Sampled: **02/21/25 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.17		pH Units	1	BIB1159	02/21/25	02/24/25	EPA 9045D	

Summit Scientific

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Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

**GWS01**  
**2502385-05 (Water)**

**Summit Scientific**

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

Date Sampled: **02/21/25 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	BIB1252	02/21/25	02/21/25	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>110</b>	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>150</b>	1.0	"	"	"	"	"	"	E
<b>1,2,4-Trimethylbenzene</b>	<b>1500</b>	100	"	100	"	"	02/21/25	"	
<b>1,3,5-Trimethylbenzene</b>	<b>150</b>	1.0	"	1	"	"	02/21/25	"	E

Date Sampled: **02/21/25 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	12.2	91.7 %	23-173		"	"	02/21/25	"	
Surrogate: Toluene-d8	12.8	96.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	14.8	111 %	21-167		"	"	"	"	

**Anions by EPA Method 300.0**

Date Sampled: **02/21/25 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Chloride</b>	<b>335</b>	0.0600	mg/L	50	BIC0257	03/05/25	03/22/25	EPA 300.0	I-02
<b>Sulfate</b>	<b>280</b>	0.300	"	"	"	"	"	"	I-02

**Total Dissolved Solids by SM2540C**

Date Sampled: **02/21/25 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Total Dissolved Solids</b>	<b>970</b>	10.0	mg/L	1	BIB1309	02/24/25	02/27/25	SM2540C	

Summit Scientific

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Project Number: UWRWE-A4021-ENV  
Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

### 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 BIB1252 - EPA 5030 Water MS

##### Blank (BIB1252-BLK1)

Prepared & Analyzed: 02/21/25

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	14.0		"	13.3		105	23-173			
<i>Surrogate: Toluene-d8</i>	13.2		"	13.3		98.9	20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	13.1		"	13.3		98.5	21-167			

##### LCS (BIB1252-BS1)

Prepared & Analyzed: 02/21/25

Benzene	32.2	1.0	ug/l	33.3		96.7	51-132			
Toluene	33.3	1.0	"	33.3		100	51-138			
Ethylbenzene	33.4	1.0	"	33.3		100	58-146			
m,p-Xylene	67.4	2.0	"	66.7		101	57-144			
o-Xylene	33.8	1.0	"	33.3		102	53-146			
Naphthalene	36.2	1.0	"	33.3		109	70-130			
1,2,4-Trimethylbenzene	33.0	1.0	"	33.3		98.9	70-130			
1,3,5-Trimethylbenzene	32.6	1.0	"	33.3		97.8	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	14.4		"	13.3		108	23-173			
<i>Surrogate: Toluene-d8</i>	13.4		"	13.3		101	20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	13.8		"	13.3		103	21-167			

##### LCS Dup (BIB1252-BSD1)

Prepared & Analyzed: 02/21/25

Benzene	33.2	1.0	ug/l	33.3		99.7	51-132	3.05	20	
Toluene	33.8	1.0	"	33.3		101	51-138	1.46	20	
Ethylbenzene	33.0	1.0	"	33.3		99.0	58-146	1.15	20	
m,p-Xylene	67.0	2.0	"	66.7		100	57-144	0.729	20	
o-Xylene	33.7	1.0	"	33.3		101	53-146	0.504	20	
Naphthalene	37.7	1.0	"	33.3		113	70-130	4.06	20	
1,2,4-Trimethylbenzene	33.2	1.0	"	33.3		99.6	70-130	0.726	20	
1,3,5-Trimethylbenzene	32.7	1.0	"	33.3		98.0	70-130	0.215	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	14.2		"	13.3		107	23-173			
<i>Surrogate: Toluene-d8</i>	13.3		"	13.3		99.8	20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	13.6		"	13.3		102	21-167			

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

**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 BIB1254 - EPA 5030 Soil MS**

**Blank (BIB1254-BLK1)**

Prepared: 02/21/25 Analyzed: 02/22/25

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0404</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0393</i>		<i>"</i>	<i>0.0400</i>		<i>98.3</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0391</i>		<i>"</i>	<i>0.0400</i>		<i>97.8</i>	<i>50-150</i>			

**LCS (BIB1254-BS1)**

Prepared: 02/21/25 Analyzed: 02/22/25

Benzene	0.100	0.0020	mg/kg	0.100		100	70-130			
Toluene	0.0972	0.0050	"	0.100		97.2	70-130			
Ethylbenzene	0.0938	0.0050	"	0.100		93.8	70-130			
m,p-Xylene	0.190	0.010	"	0.200		95.1	70-130			
o-Xylene	0.0950	0.0050	"	0.100		95.0	70-130			
1,2,4-Trimethylbenzene	0.0923	0.0050	"	0.100		92.3	70-130			
1,3,5-Trimethylbenzene	0.0910	0.0050	"	0.100		91.0	70-130			
Naphthalene	0.0939	0.0038	"	0.100		93.9	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0447</i>		<i>"</i>	<i>0.0400</i>		<i>112</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0403</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0408</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>50-150</i>			

**Matrix Spike (BIB1254-MS1)**

Source: 2502385-03

Prepared: 02/21/25 Analyzed: 02/22/25

Benzene	0.0941	0.0020	mg/kg	0.100	ND	94.1	70-130			
Toluene	0.0912	0.0050	"	0.100	ND	91.2	70-130			
Ethylbenzene	0.0889	0.0050	"	0.100	ND	88.9	70-130			
m,p-Xylene	0.184	0.010	"	0.200	ND	92.1	70-130			
o-Xylene	0.0923	0.0050	"	0.100	ND	92.3	70-130			
1,2,4-Trimethylbenzene	0.0866	0.0050	"	0.100	ND	86.6	70-130			
1,3,5-Trimethylbenzene	0.0868	0.0050	"	0.100	ND	86.8	70-130			
Naphthalene	0.0906	0.0038	"	0.100	ND	90.6	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0413</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>98.0</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0400</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>50-150</i>			

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
 Project Manager: Paul Henchan

**Reported:**  
 04/23/25 08:11

**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 BIB1254 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (BIB1254-MSD1)</b>	<b>Source: 2502385-03</b>			<b>Prepared: 02/21/25 Analyzed: 02/22/25</b>						
Benzene	0.0899	0.0020	mg/kg	0.100	ND	89.9	70-130	4.60	30	
Toluene	0.0871	0.0050	"	0.100	ND	87.1	70-130	4.64	30	
Ethylbenzene	0.0847	0.0050	"	0.100	ND	84.7	70-130	4.84	30	
m,p-Xylene	0.177	0.010	"	0.200	ND	88.4	70-130	4.07	30	
o-Xylene	0.0893	0.0050	"	0.100	ND	89.3	70-130	3.30	30	
1,2,4-Trimethylbenzene	0.0863	0.0050	"	0.100	ND	86.3	70-130	0.382	30	
1,3,5-Trimethylbenzene	0.0848	0.0050	"	0.100	ND	84.8	70-130	2.38	30	
Naphthalene	0.0886	0.0038	"	0.100	ND	88.6	70-130	2.28	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0453</i>		<i>"</i>	<i>0.0400</i>		<i>113</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.4</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0396</i>		<i>"</i>	<i>0.0400</i>		<i>99.0</i>	<i>50-150</i>			

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Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
 Project Manager: Paul Henchan

**Reported:**  
 04/23/25 08:11

**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 BIB1258 - EPA 3550A**

**Blank (BIB1258-BLK1)**

Prepared: 02/21/25 Analyzed: 02/22/25

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	7.72		"	12.5	61.7	30-150					

**LCS (BIB1258-BS1)**

Prepared: 02/21/25 Analyzed: 02/22/25

C10-C28 (DRO)	362	50	mg/kg	500	72.3	70-130					
Surrogate: <i>o</i> -Terphenyl	6.29		"	12.5	50.3	30-150					

**Matrix Spike (BIB1258-MS1)**

Source: 2502385-01

Prepared: 02/21/25 Analyzed: 02/22/25

C10-C28 (DRO)	439	50	mg/kg	500	89.6	69.9	70-130				QM-05
Surrogate: <i>o</i> -Terphenyl	6.64		"	12.5	53.2	30-150					

**Matrix Spike Dup (BIB1258-MSD1)**

Source: 2502385-01

Prepared: 02/21/25 Analyzed: 02/22/25

C10-C28 (DRO)	454	50	mg/kg	500	89.6	72.8	70-130	3.30	20		
Surrogate: <i>o</i> -Terphenyl	6.68		"	12.5	53.5	30-150					

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Wellington CO, 80549

Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

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

**Summit Scientific**

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

**Batch BIC0264 - EPA 5030 Soil MS**

**Blank (BIC0264-BLK1)**

Prepared: 03/05/25 Analyzed: 03/15/25

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0152</i>		<i>"</i>	<i>0.0333</i>		<i>45.7</i>	<i>40-140</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0196</i>		<i>"</i>	<i>0.0333</i>		<i>58.8</i>	<i>40-140</i>			

**LCS (BIC0264-BS1)**

Prepared: 03/05/25 Analyzed: 03/15/25

Acenaphthene	0.0170	0.00500	mg/kg	0.0333		50.9	40-140			
Anthracene	0.0179	0.00500	"	0.0333		53.7	40-140			
Benzo (a) anthracene	0.0190	0.00500	"	0.0333		57.1	40-140			
Benzo (a) pyrene	0.0181	0.00500	"	0.0333		54.2	40-140			
Benzo (b) fluoranthene	0.0182	0.00500	"	0.0333		54.5	40-140			
Benzo (k) fluoranthene	0.0171	0.00500	"	0.0333		51.2	40-140			
Chrysene	0.0174	0.00500	"	0.0333		52.1	40-140			
Dibenz (a,h) anthracene	0.0178	0.00500	"	0.0333		53.3	40-140			
Fluoranthene	0.0178	0.00500	"	0.0333		53.5	40-140			
Fluorene	0.0178	0.00500	"	0.0333		53.3	40-140			
Indeno (1,2,3-cd) pyrene	0.0193	0.00500	"	0.0333		57.8	40-140			
Pyrene	0.0175	0.00500	"	0.0333		52.4	40-140			
1-Methylnaphthalene	0.0192	0.00500	"	0.0333		57.5	40-140			
2-Methylnaphthalene	0.0212	0.00500	"	0.0333		63.5	40-140			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0185</i>		<i>"</i>	<i>0.0333</i>		<i>55.4</i>	<i>40-140</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0176</i>		<i>"</i>	<i>0.0333</i>		<i>52.9</i>	<i>40-140</i>			

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

**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 BIC0264 - EPA 5030 Soil MS**

<b>Matrix Spike (BIC0264-MS1)</b>	<b>Source: 2502385-01</b>			<b>Prepared: 03/05/25 Analyzed: 03/15/25</b>							
Acenaphthene	0.0369	0.00500	mg/kg	0.0333	ND	111	40-140				
Anthracene	0.0203	0.00500	"	0.0333	ND	60.9	40-140				
Benzo (a) anthracene	0.0220	0.00500	"	0.0333	ND	66.1	40-140				
Benzo (a) pyrene	0.0189	0.00500	"	0.0333	ND	56.6	40-140				
Benzo (b) fluoranthene	0.0184	0.00500	"	0.0333	ND	55.3	40-140				
Benzo (k) fluoranthene	0.0168	0.00500	"	0.0333	ND	50.5	40-140				
Chrysene	0.0222	0.00500	"	0.0333	ND	66.7	40-140				
Dibenz (a,h) anthracene	0.0189	0.00500	"	0.0333	ND	56.6	40-140				
Fluoranthene	0.0223	0.00500	"	0.0333	ND	66.9	40-140				
Fluorene	0.0487	0.00500	"	0.0333	0.0411	22.8	40-140				QM-05
Indeno (1,2,3-cd) pyrene	0.0148	0.00500	"	0.0333	ND	44.3	40-140				
Pyrene	0.0210	0.00500	"	0.0333	ND	62.9	40-140				
1-Methylnaphthalene	0.159	0.00500	"	0.0333	0.221	NR	40-140				QM-05
2-Methylnaphthalene	0.366	0.00500	"	0.0333	0.540	NR	40-140				QM-05
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0199</i>		<i>"</i>	<i>0.0333</i>		<i>59.7</i>	<i>40-140</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0200</i>		<i>"</i>	<i>0.0333</i>		<i>59.9</i>	<i>40-140</i>				

<b>Matrix Spike Dup (BIC0264-MSD1)</b>	<b>Source: 2502385-01</b>			<b>Prepared: 03/05/25 Analyzed: 03/15/25</b>							
Acenaphthene	0.0392	0.00500	mg/kg	0.0333	ND	118	40-140	6.15	30		
Anthracene	0.0229	0.00500	"	0.0333	ND	68.6	40-140	12.0	30		
Benzo (a) anthracene	0.0245	0.00500	"	0.0333	ND	73.6	40-140	10.8	30		
Benzo (a) pyrene	0.0210	0.00500	"	0.0333	ND	63.1	40-140	10.9	30		
Benzo (b) fluoranthene	0.0207	0.00500	"	0.0333	ND	62.0	40-140	11.3	30		
Benzo (k) fluoranthene	0.0187	0.00500	"	0.0333	ND	56.2	40-140	10.7	30		
Chrysene	0.0251	0.00500	"	0.0333	ND	75.2	40-140	12.1	30		
Dibenz (a,h) anthracene	0.0225	0.00500	"	0.0333	ND	67.4	40-140	17.4	30		
Fluoranthene	0.0254	0.00500	"	0.0333	ND	76.3	40-140	13.1	30		
Fluorene	0.0544	0.00500	"	0.0333	0.0411	39.9	40-140	11.1	30		QM-05
Indeno (1,2,3-cd) pyrene	0.0170	0.00500	"	0.0333	ND	50.9	40-140	13.8	30		
Pyrene	0.0230	0.00500	"	0.0333	ND	69.0	40-140	9.23	30		
1-Methylnaphthalene	0.199	0.00500	"	0.0333	0.221	NR	40-140	22.2	30		QM-05
2-Methylnaphthalene	0.455	0.00500	"	0.0333	0.540	NR	40-140	21.7	30		QM-05
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0218</i>		<i>"</i>	<i>0.0333</i>		<i>65.4</i>	<i>40-140</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0230</i>		<i>"</i>	<i>0.0333</i>		<i>69.0</i>	<i>40-140</i>				

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
 Project Manager: Paul Henchan

**Reported:**  
 04/23/25 08:11

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

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

**Batch BIB1282 - EPA 3050B**

**Blank (BIB1282-BLK1)**

Prepared: 02/24/25 Analyzed: 02/25/25

Boron ND 2.00 mg/L

**LCS (BIB1282-BS1)**

Prepared: 02/24/25 Analyzed: 02/25/25

Boron 4.59 2.00 mg/L 5.00 91.7 80-120

**Duplicate (BIB1282-DUP1)**

Source: 2502384-01

Prepared: 02/24/25 Analyzed: 02/25/25

Boron 0.131 2.00 mg/L 0.171 26.3 20 QR-01

**Matrix Spike (BIB1282-MS1)**

Source: 2502384-01

Prepared: 02/24/25 Analyzed: 02/25/25

Boron 4.38 2.00 mg/L 5.02 0.171 83.8 75-125

**Matrix Spike Dup (BIB1282-MSD1)**

Source: 2502384-01

Prepared: 02/24/25 Analyzed: 02/25/25

Boron 4.69 2.00 mg/L 5.02 0.171 90.0 75-125 6.84 25

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Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

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

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

**Batch BIB1268 - EPA 3050B**

**Blank (BIB1268-BLK1)**

Prepared: 02/22/25 Analyzed: 02/24/25

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 (BIB1268-BS1)**

Prepared: 02/22/25 Analyzed: 02/24/25

Arsenic	45.9	0.200	mg/kg wet	40.7	113	80-120
Barium	47.0	0.400	"	40.7	116	80-120
Cadmium	2.19	0.200	"	2.03	108	80-120
Copper	46.5	0.400	"	40.7	114	80-120
Lead	22.2	0.200	"	20.3	109	80-120
Nickel	46.3	0.400	"	40.7	114	80-120
Silver	2.23	0.0200	"	2.03	110	80-120
Zinc	45.0	0.400	"	40.7	111	80-120
Selenium	4.17	0.260	"	4.07	102	80-120

**Duplicate (BIB1268-DUP1)**

Source: 2501059-01

Prepared: 02/22/25 Analyzed: 02/24/25

Arsenic	2.14	0.200	mg/kg dry	2.25	5.03	20
Barium	39.9	0.400	"	41.7	4.45	20
Cadmium	0.0129	0.200	"	0.0106	19.0	20
Copper	0.159	0.400	"	0.165	3.78	20
Lead	3.56	0.200	"	3.63	1.87	20
Nickel	0.422	0.400	"	0.424	0.478	20
Silver	0.00900	0.0200	"	0.0221	84.1	20
Zinc	2.40	0.400	"	2.42	1.10	20
Selenium	ND	0.260	"	ND		20

QR-01

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 Wellington CO, 80549

Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
 Project Manager: Paul Henchan

**Reported:**  
 04/23/25 08:11

**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 BIB1268 - EPA 3050B**

<b>Matrix Spike (BIB1268-MS1)</b>	<b>Source: 2501059-01</b>			<b>Prepared: 02/22/25 Analyzed: 02/24/25</b>							
Arsenic	47.0	0.200	mg/kg dry	42.5	2.25	105	75-125				
Barium	89.4	0.400	"	42.5	41.7	112	75-125				
Cadmium	2.34	0.200	"	2.13	0.0106	110	75-125				
Copper	41.8	0.400	"	42.5	0.165	97.8	75-125				
Lead	26.5	0.200	"	21.3	3.63	108	75-125				
Nickel	41.8	0.400	"	42.5	0.424	97.3	75-125				
Silver	2.27	0.0200	"	2.13	0.0221	106	75-125				
Zinc	43.0	0.400	"	42.5	2.42	95.5	75-125				
Selenium	4.02	0.260	"	4.25	ND	94.4	75-125				

<b>Matrix Spike Dup (BIB1268-MSD1)</b>	<b>Source: 2501059-01</b>			<b>Prepared: 02/22/25 Analyzed: 02/24/25</b>							
Arsenic	45.0	0.200	mg/kg dry	41.5	2.25	103	75-125	4.52	25		
Barium	82.3	0.400	"	41.5	41.7	97.9	75-125	8.20	25		
Cadmium	2.15	0.200	"	2.08	0.0106	103	75-125	8.37	25		
Copper	39.8	0.400	"	41.5	0.165	95.4	75-125	4.86	25		
Lead	24.7	0.200	"	20.8	3.63	101	75-125	7.09	25		
Nickel	39.7	0.400	"	41.5	0.424	94.6	75-125	5.14	25		
Silver	2.10	0.0200	"	2.08	0.0221	100	75-125	7.89	25		
Zinc	41.4	0.400	"	41.5	2.42	93.9	75-125	3.86	25		
Selenium	3.82	0.260	"	4.15	ND	92.0	75-125	5.05	25		

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
 Project Manager: Paul Henchan

**Reported:**  
 04/23/25 08:11

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

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

**Batch BIB1271 - 3060A Mod**

**Blank (BIB1271-BLK1)**

Prepared & Analyzed: 02/23/25

Chromium, Hexavalent      ND      0.30 mg/kg wet

**LCS (BIB1271-BS1)**

Prepared & Analyzed: 02/23/25

Chromium, Hexavalent      27.0      0.30 mg/kg wet      25.5      106      80-120

**Duplicate (BIB1271-DUP1)**

**Source: 2502365-01**

Prepared & Analyzed: 02/23/25

Chromium, Hexavalent      ND      0.30 mg/kg dry      ND      20

**Matrix Spike (BIB1271-MS1)**

**Source: 2502365-01**

Prepared & Analyzed: 02/23/25

Chromium, Hexavalent      30.2      0.30 mg/kg dry      28.4      ND      106      75-125

**Matrix Spike Dup (BIB1271-MSD1)**

**Source: 2502365-01**

Prepared & Analyzed: 02/23/25

Chromium, Hexavalent      31.0      0.30 mg/kg dry      28.9      ND      107      75-125      2.73      20

Summit Scientific

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 Project Manager: Paul Henchan

**Reported:**  
 04/23/25 08:11

**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 BIB1158 - General Preparation**

**Blank (BIB1158-BLK1)**

Prepared: 02/20/25 Analyzed: 02/25/25

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

**LCS (BIB1158-BS1)**

Prepared: 02/20/25 Analyzed: 02/25/25

Calcium	4.29	0.0500	mg/L wet	5.00	85.8	70-130
Magnesium	4.75	0.0500	"	5.00	94.9	70-130
Sodium	4.75	0.0500	"	5.00	95.0	70-130

Summit Scientific

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Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

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

**Summit Scientific**

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

**Batch BIC0257 - General Preparation**

**Blank (BIC0257-BLK1)**

Prepared: 03/05/25 Analyzed: 03/21/25

Chloride	ND	0.0600	mg/L						
Sulfate	ND	0.300	"						

**LCS (BIC0257-BS1)**

Prepared: 03/05/25 Analyzed: 03/21/25

Chloride	2.96	0.0600	mg/L	3.00	98.6	90-110		
Sulfate	14.9	0.300	"	15.0	99.6	90-110		

**Duplicate (BIC0257-DUP1)**

Source: 2502248-01

Prepared: 03/05/25 Analyzed: 03/21/25

Chloride	118	0.0600	mg/L		118		0.805	20
Sulfate	322	0.300	"		309		4.18	20

**Matrix Spike (BIC0257-MS1)**

Source: 2502248-01

Prepared: 03/05/25 Analyzed: 03/21/25

Chloride	252	0.0600	mg/L	150	118	89.5	80-120	
Sulfate	995	0.300	"	750	309	91.6	80-120	

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Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
 Project Manager: Paul Henchan

**Reported:**  
 04/23/25 08:11

**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 BIB1276 - General Preparation**

Duplicate (BIB1276-DUP1)	Source: 2502384-01			Prepared & Analyzed: 02/23/25							
% Solids	87.6		%		88.8				1.35	20	

Summit Scientific

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Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
 Project Manager: Paul Henchan

**Reported:**  
 04/23/25 08:11

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

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

**Batch BIB1309 - General Preparation**

**Blank (BIB1309-BLK1)**

Prepared: 02/24/25 Analyzed: 02/27/25

Total Dissolved Solids ND 10.0 mg/L

**Duplicate (BIB1309-DUP1)**

Source: 2502369-01

Prepared: 02/24/25 Analyzed: 02/27/25

Total Dissolved Solids 4160 10.0 mg/L 4540 8.74 20

Summit Scientific

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Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
 Project Manager: Paul Henchan

**Reported:**  
 04/23/25 08:11

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control**

**Summit Scientific**

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

**Batch BIB1160 - General Preparation**

**Blank (BIB1160-BLK1)**

Prepared: 02/20/25 Analyzed: 02/24/25

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BIB1160-BS1)**

Prepared: 02/20/25 Analyzed: 02/24/25

Specific Conductance (EC) 1.46 0.0100 mmhos/cm 1.41 103 95-105

**Duplicate (BIB1160-DUP1)**

Source: 2501468-01

Prepared: 02/20/25 Analyzed: 02/24/25

Specific Conductance (EC) 0.792 0.0100 mmhos/cm 0.795 0.387 20

Summit Scientific

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Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
 Project Manager: Paul Henchan

**Reported:**  
 04/23/25 08:11

**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 BIB1159 - General Preparation**

**LCS (BIB1159-BS1)**

Prepared: 02/20/25 Analyzed: 02/24/25

pH	9.23	pH Units	9.18	101	95-105
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**Duplicate (BIB1159-DUP1)**

Source: 2501468-01

Prepared: 02/20/25 Analyzed: 02/24/25

pH	8.21	pH Units	8.29	0.870	20
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Summit Scientific

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PO Box 1289  
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Project: Noble - Coleman Volkens Lang T4N-R64W-S22 L01

Project Number: UWRWE-A4021-ENV  
Project Manager: Paul Henchan

**Reported:**  
04/23/25 08:11

### Notes and Definitions

- QR-01      Analyses are not controlled on RPD values from sample concentrations below the reporting limit. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- QM-05      The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- I-02        Sample was prepared and/or analyzed outside of holding time.
- E            The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
- 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