

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 31, 2025

Ty Smith

Lesair Environmental

11786 Shaffer Place Suite 210

Littleton, CO 80127

RE: RU 5-4 Form 27

Work Order #2507065

Enclosed are the results of analyses for samples received by Summit Scientific on 07/30/25 12:40. 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 Jacob Wood

Client Manager



Lesair Environmental  
11786 Shaffer Place Suite 210  
Littleton CO, 80127

Project: RU 5-4 Form 27

Project Number: [none]  
Project Manager: Ty Smith

**Reported:**  
07/31/25 14:54

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RU54 L1	2507065-01	Soil	07/29/25 14:00	07/30/25 12:40

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.*



Contact Information	
Name:	Lesair Environmental
Address:	11786 Shaffer Place, Unit 210
City/State/Zip:	Littleton, CO 80127
Phone Number:	303-904-2525
Fax Number:	
Project Manager:	Ty Smith
Email:	TySmith@Lesair.com

Billing Information 2507065	
Company:	Williford Energy Company
Address:	6100 S Yale Ave #2000
City/State/Zip:	Tulsa, OK 74136
Phone Number:	918-495-2710
Fax Number:	
Contact:	Doug Storts
Contact Email:	pds@willifordenergy.com

Client:	Williford Energy	Sampled By:	Ty Smith
Project Name:	RU 5-4 Form-ZT	Project Number:	
Sample Location:	RHODRS UNIT 5-4	Date:	07-29-2025

ID	Sample Information					Preservative				Analysis Requested							Special Instructions	
	Sample Name	Date Sampled	Time Sampled	No. of Containers	Type of Sample	MATRIX*	HNO <sub>3</sub>	HCl	None	Other (Specify)	915 GRO/DTX	915 PRO/GRO	915 ORGANICS	915 PH	915 BORON	915 SAR/EC		915 METALS
1	RU54 LI	7/29	14:00	2	G	S			X		X	X	X	X	X	X	X	STANDARD TAT
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Relinquished By:	<i>Ty Smith</i>	Date:	7/30	Time:	12:40
Received By:	<i>Walter Bessin</i>	Date:	7/30/25	Time:	12:40
Temperature Upon Receipt	2.7°C			Notes:	

\*Choose from: SL- Sludge, DW-Drinking Water, GW- Groundwater, S- Soil/Solids, WW- Wastewater, Specify Other

S<sub>2</sub>

S2 Work Order# 2507065

Sample Receipt Checklist

Client: Lesair Client Project ID: AS Rhodes Unit 54 RU 5-4  
Shipped Via: (H.D./P.U./FedEx/UPS/USPS/Other) Airbill #: Form-27

Matrix (Circle all that apply) Air/Soil/Water/Other  Temp (°C) 2.7 Thermometer # 2

Bottle ware (Circle all that apply) Glass Jar/Voa/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.	X			
If custody seals are present, are they intact? <sup>(1)</sup>			X	
Are samples due within 48 hours present?		X		
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)			X	
Is a chain-of-custody (COC) form present and filled out Completely? <sup>(1)</sup>	X			
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	X			
Were all samples received intact? <sup>(1)</sup>	X			
Was adequate sample volume provided? <sup>(1)</sup>	X			
Were samples provided in appropriate bottleware?	X			
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	X			
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	X			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			X	
Are any samples/bottles preserved ( <b>excluding cooling</b> )? <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.			X	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> Record the pH in Comments.			X	
If dissolved metals are requested, were samples field filtered?			X	
Will any samples be performed outside of Summit Scientific? Note analysis in comments column		X		

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

J. H. Wald  
Custodian Printed Name

7/30/25 12:40  
Date/Time



Lesair Environmental  
11786 Shaffer Place Suite 210  
Littleton CO, 80127

Project: RU 5-4 Form 27

Project Number: [none]  
Project Manager: Ty Smith

**Reported:**  
07/31/25 14:54

**RU54 L1**  
**2507065-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/29/25 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0025	mg/kg dry	1	BIG0293	07/30/25	07/30/25	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: **07/29/25 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0394	99.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0398	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0401	102 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/29/25 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg dry	1	BIG0294	07/30/25	07/30/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/29/25 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	29.2	114 %	50-140		"	"	"	"	

**PAH by EPA Method 8270E SIM**

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11786 Shaffer Place Suite 210  
Littleton CO, 80127

Project: RU 5-4 Form 27

Project Number: [none]  
Project Manager: Ty Smith

**Reported:**  
07/31/25 14:54

**RU54 L1**  
**2507065-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270E SIM**

Date Sampled: **07/29/25 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg dry	1	BIG0295	07/30/25	07/31/25	EPA 8270E SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.0166</b>	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.0223</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **07/29/25 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0287	84.6 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0296	87.3 %	40-140		"	"	"	"	

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

Date Sampled: **07/29/25 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BIG0301	07/30/25	07/31/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **07/29/25 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Lesair Environmental  
11786 Shaffer Place Suite 210  
Littleton CO, 80127

Project: RU 5-4 Form 27

Project Number: [none]  
Project Manager: Ty Smith

**Reported:**  
07/31/25 14:54

**RU54 L1**  
**2507065-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	2.08	0.200	mg/kg dry	1	BIG0300	07/30/25	07/31/25	EPA 6020B
Barium	58.8	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	5.61	0.400	"	"	"	"	"	"
Lead	4.76	0.200	"	"	"	"	"	"
Nickel	4.95	0.400	"	"	"	"	"	"
Silver	0.0252	0.0200	"	"	"	"	"	"
Zinc	18.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by HACH M8023**

Date Sampled: **07/29/25 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIG0299	07/30/25	07/31/25	HACH M10218	

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

Date Sampled: **07/29/25 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	289	0.0500	mg/L dry	1	BIG0298	07/30/25	07/31/25	EPA 6020B	
Magnesium	44.0	0.0500	"	"	"	"	"	"	
Sodium	62.8	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **07/29/25 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.909	0.00100	units	1	BIG0307	07/31/25	07/31/25	Calculation	

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

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Project: RU 5-4 Form 27

Project Number: [none]  
 Project Manager: Ty Smith

**Reported:**  
 07/31/25 14:54

**RU54 L1**  
**2507065-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/29/25 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	99.2		%	1	BIG0297	07/30/25	07/31/25	Calculation	

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

Date Sampled: **07/29/25 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.86	0.0100	mmhos/cm	1	BIG0303	07/30/25	07/31/25	EPA 120.1	

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

Date Sampled: **07/29/25 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.59		pH Units	1	BIG0302	07/30/25	07/31/25	EPA 9045D	

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Project: RU 5-4 Form 27

Project Number: [none]  
Project Manager: Ty Smith

**Reported:**  
07/31/25 14:54

### 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 BIG0293 - EPA 5030 Soil MS

##### Blank (BIG0293-BLK1)

Prepared & Analyzed: 07/30/25

Benzene	ND	0.0025	mg/kg wet							
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	0.0410		"	0.0412		99.7	50-150			
Surrogate: Toluene-d8	0.0418		"	0.0412		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0422		"	0.0412		102	50-150			

##### LCS (BIG0293-BS1)

Prepared & Analyzed: 07/30/25

Benzene	0.106	0.0025	mg/kg wet	0.102		104	70-130			
Toluene	0.109	0.0050	"	0.102		107	70-130			
Ethylbenzene	0.100	0.0050	"	0.102		98.5	70-130			
m,p-Xylene	0.203	0.010	"	0.204		99.5	70-130			
o-Xylene	0.104	0.0050	"	0.102		102	70-130			
1,2,4-Trimethylbenzene	0.100	0.0050	"	0.102		98.3	70-130			
1,3,5-Trimethylbenzene	0.101	0.0050	"	0.102		99.2	70-130			
Naphthalene	0.0995	0.0038	"	0.102		97.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0403		"	0.0408		98.7	50-150			
Surrogate: Toluene-d8	0.0409		"	0.0408		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0408		97.1	50-150			

##### Matrix Spike (BIG0293-MS1)

Source: 2507063-01

Prepared & Analyzed: 07/30/25

Benzene	0.113	0.0025	mg/kg dry	0.113	ND	99.9	70-130			
Toluene	0.104	0.0050	"	0.113	ND	91.8	70-130			
Ethylbenzene	0.0891	0.0050	"	0.113	ND	78.8	70-130			
m,p-Xylene	0.181	0.010	"	0.226	ND	80.1	70-130			
o-Xylene	0.0891	0.0050	"	0.113	ND	78.8	70-130			
1,2,4-Trimethylbenzene	0.0716	0.0050	"	0.113	ND	63.3	70-130			QM-05
1,3,5-Trimethylbenzene	0.0724	0.0050	"	0.113	ND	64.0	70-130			QM-05
Naphthalene	0.0638	0.0038	"	0.113	ND	56.3	70-130			QM-05
Surrogate: 1,2-Dichloroethane-d4	0.0420		"	0.0453		92.8	50-150			
Surrogate: Toluene-d8	0.0453		"	0.0453		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0438		"	0.0453		96.8	50-150			

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11786 Shaffer Place Suite 210  
Littleton CO, 80127

Project: RU 5-4 Form 27

Project Number: [none]  
Project Manager: Ty Smith

**Reported:**  
07/31/25 14:54

**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 BIG0293 - EPA 5030 Soil MS**

Matrix Spike Dup (BIG0293-MSD1)	Source: 2507063-01			Prepared & Analyzed: 07/30/25						
Benzene	0.110	0.0025	mg/kg dry	0.114	ND	96.0	70-130	3.01	30	
Toluene	0.0966	0.0050	"	0.114	ND	84.5	70-130	7.30	30	
Ethylbenzene	0.0794	0.0050	"	0.114	ND	69.4	70-130	11.6	30	QM-05
m,p-Xylene	0.166	0.010	"	0.229	ND	72.5	70-130	8.96	30	
o-Xylene	0.0823	0.0050	"	0.114	ND	72.0	70-130	7.99	30	
1,2,4-Trimethylbenzene	0.0631	0.0050	"	0.114	ND	55.2	70-130	12.6	30	QM-05
1,3,5-Trimethylbenzene	0.0637	0.0050	"	0.114	ND	55.8	70-130	12.7	30	QM-05
Naphthalene	0.0605	0.0038	"	0.114	ND	52.9	70-130	5.26	30	QM-05
Surrogate: 1,2-Dichloroethane-d4	0.0442		"	0.0457		96.7	50-150			
Surrogate: Toluene-d8	0.0446		"	0.0457		97.6	50-150			
Surrogate: 4-Bromofluorobenzene	0.0450		"	0.0457		98.4	50-150			

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Lesair Environmental  
11786 Shaffer Place Suite 210  
Littleton CO, 80127

Project: RU 5-4 Form 27

Project Number: [none]  
Project Manager: Ty Smith

**Reported:**  
07/31/25 14:54

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch BIG0294 - EPA 3550A**

**Blank (BIG0294-BLK1)**

Prepared & Analyzed: 07/30/25

C10-C28 (DRO)	ND	50	mg/kg wet							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	29.0		"	24.9		117	50-140			

**LCS (BIG0294-BS1)**

Prepared & Analyzed: 07/30/25

C10-C28 (DRO)	470	50	mg/kg wet	506		92.9	50-140			
Surrogate: <i>o</i> -Terphenyl	28.0		"	25.3		111	50-140			

**Matrix Spike (BIG0294-MS1)**

Source: 2507063-01

Prepared & Analyzed: 07/30/25

C10-C28 (DRO)	966	50	mg/kg dry	570	439	92.4	50-140			
Surrogate: <i>o</i> -Terphenyl	34.1		"	28.5		120	50-140			

**Matrix Spike Dup (BIG0294-MSD1)**

Source: 2507063-01

Prepared & Analyzed: 07/30/25

C10-C28 (DRO)	1040	50	mg/kg dry	573	439	105	50-140	7.53	20	
Surrogate: <i>o</i> -Terphenyl	34.0		"	28.6		119	50-140			

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11786 Shaffer Place Suite 210  
Littleton CO, 80127

Project: RU 5-4 Form 27

Project Number: [none]  
Project Manager: Ty Smith

**Reported:**  
07/31/25 14:54

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

**Summit Scientific**

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

**Batch BIG0295 - EPA 3550A**

**Blank (BIG0295-BLK1)**

Prepared & Analyzed: 07/30/25

Acenaphthene	ND	0.00500	mg/kg wet							
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>0.0293</i>		"	<i>0.0330</i>		<i>88.9</i>	<i>40-140</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0359</i>		"	<i>0.0330</i>		<i>109</i>	<i>40-140</i>			

**LCS (BIG0295-BS1)**

Prepared & Analyzed: 07/30/25

Acenaphthene	0.0284	0.00500	mg/kg wet	0.0331		85.9	40-140			
Anthracene	0.0306	0.00500	"	0.0331		92.3	40-140			
Benzo (a) anthracene	0.0335	0.00500	"	0.0331		101	40-140			
Benzo (a) pyrene	0.0314	0.00500	"	0.0331		95.0	40-140			
Benzo (b) fluoranthene	0.0315	0.00500	"	0.0331		95.0	40-140			
Benzo (k) fluoranthene	0.0302	0.00500	"	0.0331		91.3	40-140			
Chrysene	0.0300	0.00500	"	0.0331		90.7	40-140			
Dibenz (a,h) anthracene	0.0295	0.00500	"	0.0331		89.2	40-140			
Fluoranthene	0.0303	0.00500	"	0.0331		91.5	40-140			
Fluorene	0.0295	0.00500	"	0.0331		89.0	40-140			
Indeno (1,2,3-cd) pyrene	0.0299	0.00500	"	0.0331		90.4	40-140			
Pyrene	0.0303	0.00500	"	0.0331		91.6	40-140			
1-Methylnaphthalene	0.0274	0.00500	"	0.0331		82.7	40-140			
2-Methylnaphthalene	0.0253	0.00500	"	0.0331		76.5	40-140			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0276</i>		"	<i>0.0331</i>		<i>83.3</i>	<i>40-140</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0315</i>		"	<i>0.0331</i>		<i>95.1</i>	<i>40-140</i>			

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Lesair Environmental  
11786 Shaffer Place Suite 210  
Littleton CO, 80127

Project: RU 5-4 Form 27

Project Number: [none]  
Project Manager: Ty Smith

**Reported:**  
07/31/25 14:54

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

**Summit Scientific**

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

**Batch BIG0295 - EPA 3550A**

**Matrix Spike (BIG0295-MS1)**

Source: 2507063-02

Prepared & Analyzed: 07/30/25

Acenaphthene	0.0257	0.00500	mg/kg dry	0.0358	ND	71.7	40-140			
Anthracene	0.0260	0.00500	"	0.0358	ND	72.6	40-140			
Benzo (a) anthracene	0.0291	0.00500	"	0.0358	ND	81.3	40-140			
Benzo (a) pyrene	0.0273	0.00500	"	0.0358	ND	76.2	40-140			
Benzo (b) fluoranthene	0.0261	0.00500	"	0.0358	ND	72.8	40-140			
Benzo (k) fluoranthene	0.0253	0.00500	"	0.0358	ND	70.6	40-140			
Chrysene	0.0260	0.00500	"	0.0358	ND	72.7	40-140			
Dibenz (a,h) anthracene	0.0254	0.00500	"	0.0358	ND	71.0	40-140			
Fluoranthene	0.0263	0.00500	"	0.0358	ND	73.5	40-140			
Fluorene	0.0267	0.00500	"	0.0358	ND	74.5	40-140			
Indeno (1,2,3-cd) pyrene	0.0277	0.00500	"	0.0358	ND	77.5	40-140			
Pyrene	0.0262	0.00500	"	0.0358	ND	73.1	40-140			
1-Methylnaphthalene	0.0248	0.00500	"	0.0358	ND	69.3	40-140			
2-Methylnaphthalene	0.0247	0.00500	"	0.0358	ND	69.0	40-140			
Surrogate: 2-Methylnaphthalene-d10	0.0254		"	0.0358		71.0	40-140			
Surrogate: Fluoranthene-d10	0.0268		"	0.0358		74.9	40-140			

**Matrix Spike Dup (BIG0295-MSD1)**

Source: 2507063-02

Prepared & Analyzed: 07/30/25

Acenaphthene	0.0262	0.00500	mg/kg dry	0.0357	ND	73.5	40-140	2.10	30
Anthracene	0.0277	0.00500	"	0.0357	ND	77.5	40-140	6.24	30
Benzo (a) anthracene	0.0290	0.00500	"	0.0357	ND	81.4	40-140	0.256	30
Benzo (a) pyrene	0.0277	0.00500	"	0.0357	ND	77.7	40-140	1.62	30
Benzo (b) fluoranthene	0.0266	0.00500	"	0.0357	ND	74.7	40-140	2.19	30
Benzo (k) fluoranthene	0.0255	0.00500	"	0.0357	ND	71.5	40-140	0.784	30
Chrysene	0.0258	0.00500	"	0.0357	ND	72.3	40-140	0.965	30
Dibenz (a,h) anthracene	0.0253	0.00500	"	0.0357	ND	70.9	40-140	0.531	30
Fluoranthene	0.0272	0.00500	"	0.0357	ND	76.3	40-140	3.27	30
Fluorene	0.0270	0.00500	"	0.0357	ND	75.6	40-140	1.15	30
Indeno (1,2,3-cd) pyrene	0.0283	0.00500	"	0.0357	ND	79.5	40-140	2.17	30
Pyrene	0.0265	0.00500	"	0.0357	ND	74.2	40-140	1.12	30
1-Methylnaphthalene	0.0252	0.00500	"	0.0357	ND	70.7	40-140	1.64	30
2-Methylnaphthalene	0.0254	0.00500	"	0.0357	ND	71.3	40-140	2.82	30
Surrogate: 2-Methylnaphthalene-d10	0.0251		"	0.0357		70.5	40-140		
Surrogate: Fluoranthene-d10	0.0281		"	0.0357		78.8	40-140		

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Lesair Environmental  
 11786 Shaffer Place Suite 210  
 Littleton CO, 80127

Project: RU 5-4 Form 27

Project Number: [none]  
 Project Manager: Ty Smith

**Reported:**  
 07/31/25 14:54

**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 BIG0301 - EPA 3050B**

<b>Blank (BIG0301-BLK1)</b>		Prepared: 07/30/25 Analyzed: 07/31/25								
Boron	ND	2.00	mg/L wet							
<b>LCS (BIG0301-BS1)</b>		Prepared: 07/30/25 Analyzed: 07/31/25								
Boron	5.47	2.00	mg/L wet	5.01	109	80-120				
<b>Duplicate (BIG0301-DUP1)</b>		<b>Source: 2507064-01</b>		Prepared: 07/30/25 Analyzed: 07/31/25						
Boron	1.43	2.00	mg/L dry		1.49			3.97	20	
<b>Matrix Spike (BIG0301-MS1)</b>		<b>Source: 2507064-01</b>		Prepared: 07/30/25 Analyzed: 07/31/25						
Boron	6.29	2.00	mg/L dry	5.07	1.49	94.6	75-125			
<b>Matrix Spike Dup (BIG0301-MSD1)</b>		<b>Source: 2507064-01</b>		Prepared: 07/30/25 Analyzed: 07/31/25						
Boron	6.41	2.00	mg/L dry	5.09	1.49	96.6	75-125	1.94	25	

Summit Scientific

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Lesair Environmental  
11786 Shaffer Place Suite 210  
Littleton CO, 80127

Project: RU 5-4 Form 27

Project Number: [none]  
Project Manager: Ty Smith

**Reported:**  
07/31/25 14:54

**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 BIG0300 - EPA 3050B**

**Blank (BIG0300-BLK1)**

Prepared: 07/30/25 Analyzed: 07/31/25

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 (BIG0300-BS1)**

Prepared: 07/30/25 Analyzed: 07/31/25

Arsenic	45.2	0.200	mg/kg wet	38.8	117	80-120
Barium	44.7	0.400	"	38.8	115	80-120
Cadmium	2.16	0.200	"	1.94	111	80-120
Copper	44.8	0.400	"	38.8	115	80-120
Lead	21.5	0.200	"	19.4	111	80-120
Nickel	45.4	0.400	"	38.8	117	80-120
Silver	2.17	0.0200	"	1.94	112	80-120
Zinc	44.9	0.400	"	38.8	116	80-120
Selenium	4.65	0.260	"	3.88	120	80-120

**Duplicate (BIG0300-DUP1)**

Source: 2507061-01

Prepared: 07/30/25 Analyzed: 07/31/25

Arsenic	5.42	0.200	mg/kg dry	5.46	0.665	20
Barium	274	0.400	"	286	4.36	20
Cadmium	0.313	0.200	"	0.331	5.46	20
Copper	11.9	0.400	"	12.3	3.36	20
Lead	10.9	0.200	"	11.3	2.81	20
Nickel	13.0	0.400	"	13.0	0.107	20
Silver	0.0632	0.0200	"	0.0676	6.79	20
Zinc	40.7	0.400	"	41.4	1.66	20
Selenium	0.325	0.260	"	0.350	7.38	20

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Lesair Environmental  
 11786 Shaffer Place Suite 210  
 Littleton CO, 80127

Project: RU 5-4 Form 27

Project Number: [none]  
 Project Manager: Ty Smith

**Reported:**  
 07/31/25 14:54

**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 BIG0300 - EPA 3050B**

<b>Matrix Spike (BIG0300-MS1)</b>	<b>Source: 2507061-01</b>			Prepared: 07/30/25		Analyzed: 07/31/25					
Arsenic	41.2	0.200	mg/kg dry	43.2	5.46	82.6	75-125				
Barium	240	0.400	"	43.2	286	NR	75-125				QM-05
Cadmium	2.44	0.200	"	2.16	0.331	97.6	75-125				
Copper	49.1	0.400	"	43.2	12.3	85.3	75-125				
Lead	31.9	0.200	"	21.6	11.3	95.5	75-125				
Nickel	51.1	0.400	"	43.2	13.0	88.2	75-125				
Silver	2.05	0.0200	"	2.16	0.0676	91.8	75-125				
Zinc	81.7	0.400	"	43.2	41.4	93.3	75-125				
Selenium	3.65	0.260	"	4.32	0.350	76.3	75-125				

<b>Matrix Spike Dup (BIG0300-MSD1)</b>	<b>Source: 2507061-01</b>			Prepared: 07/30/25		Analyzed: 07/31/25					
Arsenic	40.1	0.200	mg/kg dry	43.2	5.46	80.2	75-125	2.64	25		
Barium	328	0.400	"	43.2	286	96.5	75-125	30.8	25		QM-05
Cadmium	2.36	0.200	"	2.16	0.331	93.9	75-125	3.37	25		
Copper	48.6	0.400	"	43.2	12.3	84.1	75-125	1.12	25		
Lead	31.4	0.200	"	21.6	11.3	93.1	75-125	1.67	25		
Nickel	50.3	0.400	"	43.2	13.0	86.3	75-125	1.61	25		
Silver	2.07	0.0200	"	2.16	0.0676	92.7	75-125	0.943	25		
Zinc	78.9	0.400	"	43.2	41.4	86.9	75-125	3.44	25		
Selenium	3.41	0.260	"	4.32	0.350	70.8	75-125	6.76	25		QM-05

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Lesair Environmental  
 11786 Shaffer Place Suite 210  
 Littleton CO, 80127

Project: RU 5-4 Form 27

Project Number: [none]  
 Project Manager: Ty Smith

**Reported:**  
 07/31/25 14:54

**Hexavalent Chromium by HACH M8023 - Quality Control**  
**Summit Scientific**

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

**Batch BIG0299 - 3060A Mod**

<b>Blank (BIG0299-BLK1)</b>		Prepared: 07/30/25 Analyzed: 07/31/25								
Chromium, Hexavalent	ND	0.30	mg/kg wet							
<b>LCS (BIG0299-BS1)</b>		Prepared: 07/30/25 Analyzed: 07/31/25								
Chromium, Hexavalent	27.3	0.30	mg/kg wet	26.3		104	80-120			
<b>Duplicate (BIG0299-DUP1)</b>		<b>Source: 2507064-01</b>		Prepared: 07/30/25 Analyzed: 07/31/25						
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND				20	
<b>Matrix Spike (BIG0299-MS1)</b>		<b>Source: 2507064-01</b>		Prepared: 07/30/25 Analyzed: 07/31/25						
Chromium, Hexavalent	24.8	0.30	mg/kg dry	25.0	ND	99.2	75-125			
<b>Matrix Spike Dup (BIG0299-MSD1)</b>		<b>Source: 2507064-01</b>		Prepared: 07/30/25 Analyzed: 07/31/25						
Chromium, Hexavalent	26.1	0.30	mg/kg dry	26.0	ND	100	75-125	5.20	20	

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Lesair Environmental  
 11786 Shaffer Place Suite 210  
 Littleton CO, 80127

Project: RU 5-4 Form 27

Project Number: [none]  
 Project Manager: Ty Smith

**Reported:**  
 07/31/25 14:54

**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 BIG0298 - General Preparation**

**Blank (BIG0298-BLK1)**

Prepared: 07/30/25 Analyzed: 07/31/25

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

**LCS (BIG0298-BS1)**

Prepared: 07/30/25 Analyzed: 07/31/25

Calcium	5.01	0.0500	mg/L wet	5.00	100	70-130				
Magnesium	4.95	0.0500	"	5.00	99.0	70-130				
Sodium	4.61	0.0500	"	5.00	92.3	70-130				

Summit Scientific

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Lesair Environmental  
 11786 Shaffer Place Suite 210  
 Littleton CO, 80127

Project: RU 5-4 Form 27

Project Number: [none]  
 Project Manager: Ty Smith

**Reported:**  
 07/31/25 14:54

**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 BIG0297 - General Preparation**

Duplicate (BIG0297-DUP1)	Source: 2507061-01			Prepared: 07/30/25 Analyzed: 07/31/25	
% Solids	95.4	%		94.1	1.35 20

Summit Scientific

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Lesair Environmental  
 11786 Shaffer Place Suite 210  
 Littleton CO, 80127

Project: RU 5-4 Form 27

Project Number: [none]  
 Project Manager: Ty Smith

**Reported:**  
 07/31/25 14:54

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

**Summit Scientific**

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

**Batch BIG0303 - General Preparation**

**Blank (BIG0303-BLK1)**

Prepared: 07/30/25 Analyzed: 07/31/25

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BIG0303-BS1)**

Prepared: 07/30/25 Analyzed: 07/31/25

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 103 95-105

**Duplicate (BIG0303-DUP1)**

Source: 2507064-01

Prepared: 07/30/25 Analyzed: 07/31/25

Specific Conductance (EC) 14.0 0.0100 mmhos/cm 14.1 0.568 20

Summit Scientific

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Lesair Environmental  
 11786 Shaffer Place Suite 210  
 Littleton CO, 80127

Project: RU 5-4 Form 27

Project Number: [none]  
 Project Manager: Ty Smith

**Reported:**  
 07/31/25 14:54

**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 BIG0302 - General Preparation**

**LCS (BIG0302-BS1)**

Prepared: 07/30/25 Analyzed: 07/31/25

pH 9.20 pH Units 9.18 100 95-105

**Duplicate (BIG0302-DUP1)**

Source: 2507064-01

Prepared: 07/30/25 Analyzed: 07/31/25

pH 7.87 pH Units 7.87 0.0127 20

Summit Scientific

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Lesair Environmental  
11786 Shaffer Place Suite 210  
Littleton CO, 80127

Project: RU 5-4 Form 27

Project Number: [none]  
Project Manager: Ty Smith

**Reported:**  
07/31/25 14:54

### Notes and Definitions

- 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.
- 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