

Summit Scientific

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June 15, 2021

Ty Smith

Lesair Environmental

11786 Shaffer Place Suite 210

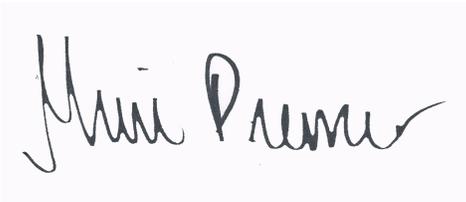
Littleton, CO 80127

RE: PADCO M-R Prework

Work Order #2106125

Enclosed are the results of analyses for samples received by Summit Scientific on 06/07/21 09:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Muri Premer". The signature is written in a cursive style with a large initial "M" and a long, sweeping underline.

Muri Premer For Paul Shrewsbury
President



Lesair Environmental
11786 Shaffer Place Suite 210
Littleton CO, 80127

Project: PADCO M-R Prework
Project Number: Miller-Rediess #1-A Pit
Project Manager: Ty Smith

Reported:
06/15/21 17:28

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
4B-96	2106125-02	Soil	06/05/21 10:50	06/07/21 09:00

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2106125

Sample Receipt Checklist

S2 Work Order _____

Client: Lesqik Client Project ID: PADCO M-R Prework

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

Matrix (check all that apply): Air Soil/Solid Water Other: _____
(Describe)

Temp (°C)	5.5
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Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	/			
Were all samples received intact ⁽¹⁾ ?	/			
Was adequate sample volume provided ⁽¹⁾ ?	/			
If custody seals are present, are they intact ⁽¹⁾ ?			/	
Are samples with holding times due within 48 hours sample due within 48 hours present?		/		
Is a chain-of-custody (COC) form present and filled out completely ⁽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⁾ ?	/			
Is the COC properly relinquished by the client w/ date and time recorded ⁽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, ect			/	
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.

Custodian Printed Name or Initials

Signature of Custodian

Date/Time



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4B-96
2106125-02 (Soil)

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Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/05/21 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	1.29	0.0100		mg/L	1	BEF0262	06/11/21	06/13/21	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/05/21 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	0.631	0.248		mg/kg dry	1	BEF0217	06/09/21	06/11/21	EPA 6020B	
Barium	68.4	0.497		"	"	"	"	"	"	
Cadmium	ND	0.248		"	"	"	"	"	"	
Copper	3.13	0.497		"	"	"	"	"	"	
Lead	4.79	0.248		"	"	"	"	"	"	
Nickel	3.96	0.497		"	"	"	"	"	"	
Selenium	0.394	0.323		"	"	"	"	"	"	
Silver	ND	0.0248		"	"	"	"	"	"	
Zinc	16.0	0.497		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/05/21 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BEF0223	06/09/21	06/10/21	EPA 7196A	

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

Date Sampled: **06/05/21 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	12.6	0.0621		mg/L dry	1	BEF0245	06/10/21	06/14/21	EPA 6020B	
Magnesium	4.71	0.0621		"	"	"	"	"	"	
Sodium	1600	0.0621		"	"	"	"	"	"	

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4B-96
2106125-02 (Soil)

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Calculated Analysis

Date Sampled: **06/05/21 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	97.7	0.00100	units	1	BEF0325	06/15/21	06/15/21	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/05/21 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.5		%	1	BEF0164	06/08/21	06/09/21	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/05/21 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	5.59	0.0100	mmhos/cm	1	BEF0270	06/11/21	06/11/21	EPA 120.1	

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

Date Sampled: **06/05/21 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.06		pH Units	1	BEF0269	06/11/21	06/11/21	EPA 9045D	

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

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

Batch BEF0262 - EPA 3050B

Blank (BEF0262-BLK1)

Prepared: 06/11/21 Analyzed: 06/13/21

Boron ND 0.0100 mg/L

LCS (BEF0262-BS1)

Prepared: 06/11/21 Analyzed: 06/13/21

Boron 5.26 0.0100 mg/L 5.00 105 80-120

Duplicate (BEF0262-DUP1)

Source: 2106116-02

Prepared: 06/11/21 Analyzed: 06/13/21

Boron 0.173 0.0100 mg/L 0.204 16.2 20

Matrix Spike (BEF0262-MS1)

Source: 2106116-02

Prepared: 06/11/21 Analyzed: 06/13/21

Boron 5.19 0.0100 mg/L 5.00 0.204 99.7 75-125

Matrix Spike Dup (BEF0262-MSD1)

Source: 2106116-02

Prepared: 06/11/21 Analyzed: 06/13/21

Boron 5.27 0.0100 mg/L 5.00 0.204 101 75-125 1.64 25

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Total Metals by EPA 6020B - Quality Control
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Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD		

Batch BEF0217 - EPA 3050B

Blank (BEF0217-BLK1)

Prepared: 06/09/21 Analyzed: 06/11/21

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

LCS (BEF0217-BS1)

Prepared: 06/09/21 Analyzed: 06/11/21

Arsenic	41.7	0.200	mg/kg wet	40.0		104	80-120
Barium	39.6	0.400	"	40.0		99.1	80-120
Cadmium	1.98	0.200	"	2.00		98.8	80-120
Copper	38.7	0.400	"	40.0		96.8	80-120
Lead	20.4	0.200	"	20.0		102	80-120
Nickel	37.6	0.400	"	40.0		94.1	80-120
Selenium	3.91	0.260	"	4.00		97.7	80-120
Silver	1.92	0.0200	"	2.00		96.2	80-120
Zinc	41.1	0.400	"	40.0		103	80-120

Duplicate (BEF0217-DUP1)

Source: 2105198-09

Prepared: 06/09/21 Analyzed: 06/11/21

Arsenic	2.75	0.221	mg/kg dry	2.94		6.60	20
Barium	64.9	0.443	"	68.3		5.17	20
Cadmium	0.132	0.221	"	0.137		3.80	20
Copper	9.49	0.443	"	9.62		1.41	20
Lead	7.48	0.221	"	9.08		19.3	20
Nickel	9.62	0.443	"	9.43		1.98	20
Selenium	3.20	0.288	"	3.15		1.32	20
Silver	0.0651	0.0221	"	0.0644		1.05	20
Zinc	36.4	0.443	"	36.9		1.34	20

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Total Metals by EPA 6020B - Quality Control
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Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch BEF0217 - EPA 3050B

Matrix Spike (BEF0217-MS1)

Source: 2105198-09

Prepared: 06/09/21 Analyzed: 06/11/21

Arsenic	46.9	0.221	mg/kg dry	44.3	2.94	99.3	75-125		
Barium	121	0.443	"	44.3	68.3	119	75-125		
Cadmium	2.30	0.221	"	2.21	0.137	97.8	75-125		
Copper	53.8	0.443	"	44.3	9.62	99.7	75-125		
Lead	29.6	0.221	"	22.1	9.08	92.7	75-125		
Nickel	52.1	0.443	"	44.3	9.43	96.4	75-125		
Selenium	6.69	0.288	"	4.43	3.15	80.0	75-125		
Silver	2.19	0.0221	"	2.21	0.0644	95.8	75-125		
Zinc	81.8	0.443	"	44.3	36.9	102	75-125		

Matrix Spike Dup (BEF0217-MSD1)

Source: 2105198-09

Prepared: 06/09/21 Analyzed: 06/11/21

Arsenic	46.7	0.221	mg/kg dry	44.3	2.94	98.8	75-125	0.485	25
Barium	110	0.443	"	44.3	68.3	93.2	75-125	10.1	25
Cadmium	2.29	0.221	"	2.21	0.137	97.2	75-125	0.502	25
Copper	52.9	0.443	"	44.3	9.62	97.8	75-125	1.61	25
Lead	29.5	0.221	"	22.1	9.08	92.2	75-125	0.350	25
Nickel	51.3	0.443	"	44.3	9.43	94.6	75-125	1.53	25
Selenium	6.83	0.288	"	4.43	3.15	83.0	75-125	2.00	25
Silver	2.17	0.0221	"	2.21	0.0644	95.1	75-125	0.779	25
Zinc	87.6	0.443	"	44.3	36.9	115	75-125	6.85	25

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Hexavalent Chromium by EPA Method 7196 - Quality Control
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Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BEF0223 - 3060A Mod

Blank (BEF0223-BLK1)										
					Prepared: 06/09/21 Analyzed: 06/10/21					
Chromium, Hexavalent	ND	0.30	mg/kg wet							
LCS (BEF0223-BS1)										
					Prepared: 06/09/21 Analyzed: 06/10/21					
Chromium, Hexavalent	22.2	0.30	mg/kg wet	25.0		89.0	80-120			
Duplicate (BEF0223-DUP1)										
					Source: 2106098-01 Prepared: 06/09/21 Analyzed: 06/10/21					
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND				20	
Matrix Spike (BEF0223-MS1)										
					Source: 2106098-01 Prepared: 06/09/21 Analyzed: 06/10/21					
Chromium, Hexavalent	25.4	0.30	mg/kg dry	29.2	ND	87.0	75-125			
Matrix Spike Dup (BEF0223-MSD1)										
					Source: 2106098-01 Prepared: 06/09/21 Analyzed: 06/10/21					
Chromium, Hexavalent	25.4	0.30	mg/kg dry	29.2	ND	87.0	75-125	0.00	20	

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Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
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Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BEF0245 - General Preparation

Blank (BEF0245-BLK1)

Prepared: 06/10/21 Analyzed: 06/13/21

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

LCS (BEF0245-BS1)

Prepared: 06/10/21 Analyzed: 06/13/21

Calcium	5.16	0.0500	mg/L wet	5.00	103	70-130				
Magnesium	5.35	0.0500	"	5.00	107	70-130				
Sodium	4.97	0.0500	"	5.00	99.4	70-130				

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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 BEF0164 - General Preparation

Duplicate (BEF0164-DUP1)	Source: 2104483-01		Prepared: 06/08/21 Analyzed: 06/09/21			
% Solids	90.8	%		92.0	1.33	20

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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
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Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BEF0270 - General Preparation

Blank (BEF0270-BLK1)

Prepared & Analyzed: 06/11/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BEF0270-BS1)

Prepared & Analyzed: 06/11/21

Specific Conductance (EC) 0.158 0.0100 mmhos/cm 0.150 105 90-110

Duplicate (BEF0270-DUP1)

Source: 2105335-09

Prepared & Analyzed: 06/11/21

Specific Conductance (EC) 0.926 0.0100 mmhos/cm 0.928 0.205 20

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

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

Batch BEF0269 - General Preparation

LCS (BEF0269-BS1)

Prepared & Analyzed: 06/11/21

pH	9.21	pH Units	9.21	100	95-105
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Duplicate (BEF0269-DUP1)

Source: 2104483-01

Prepared & Analyzed: 06/11/21

pH	7.76	pH Units	7.78	0.257	20
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Notes and Definitions

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