



**Absaroka
Joel Mason
112 High St.**

January 07, 2025

Buffalo WY 82834

Project Name - #6 McCormick 24-3

Project Number - CIT.CO.0931

Attached are your analytical results for #6 McCormick 24-3 received by Origins Laboratory November 27, 2024. This project is associated with Origins project number E4L0007-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory
303.433.1322
projectmanager@originslab.com





Absaroka
112 High St.
Buffalo WY 82834

Joel Mason
Project Number: CIT.CO.0931
Project: #6 McCormick 24-3

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MCC24-3#6BG@2	E4L0007-01	Soil	November 26, 2024 14:45	11/27/2024 12:33

Origins Laboratory

Jen Pellegrini For Jordan A. Bynon, Project Manager

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ORIGINS LABORATORY

On behalf of Enthralpy Analytical Amelia Jensen reissued report on 01.16.2025 12:58

Absaroka
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Project Number: CIT.CO.0931
Project: #6 McCormick 24-3

ORIGINS

PH10007

Page of

Client: Enthralpy/Absaroka
Address: _____
Telephone Number: 307-262-8975
Email Address: amjensen@absarokasolutions.com
Project Manager: Joel Mason
Project Name: #6 McCormick 24-3
Project Number: CIT.CO.0931
Collected By: TSJ/JMS
Invoice Billing Info: Offsite - Client
We World: _____
Site/Street/Zip: _____
City/State/Zip: _____

Sample ID	Date Sampled	Time Sampled	# of Containers	Matrix Preserving	Analysis			Comments
					Table 916	Table 916	Table 916	
MCCO-41606092	11/26/2024	14:45	3	UNP	X	X	X	
MCCO-41606092	11/26/2024	14:08	3	UNP	X	X	X	
MCCO-41606092	11/26/2024	15:15	3	UNP	X	X	X	

Temp Received: 3°F Received On Ice? Yes No

Temp/round Time
 48 Hr 72
 SAME DAY 24

Relinquished By: Joel Mason Date: 11/26/24 Time: 2:00
Received By: [Signature] Date: 11/27/24 Time: 1:33

Origins Laboratory

Joel Pellegrini

Jen Pellegrini For Jordan A. Bynon, Project Manager

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ORIGINS LABORATORY

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Joel Mason
Project Number: CIT.CO.0931
Project: #6 McCormick 24-3

Origins Laboratory F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: E4UDD07 Client: Absaroka
Client Project ID: #6 McCormick 24-3

Checklist Completed by: TSM / VS Shipped Via: FED
Date/Time completed: 12/2/24 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
Airbill #: N/A

Matrix(s) Received: (Check all that apply) Soil/Solid Water Other: _____

Cooler Number/Temperature: 137 °C / _____ °C / _____ °C (Describe)

Thermometer ID: 7007

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	/			
Is there ice present (document if blue ice is used)	/			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		/		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		/		
Were all samples received intact ⁽¹⁾ ?	/			
Was adequate sample volume provided ⁽¹⁾ ?	/			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		/		
Is a chain-of-custody (COC) 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 with date and time recorded ⁽¹⁾ ?	/			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			/	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subsaturated analyses in order to insure sample integrity)(pH <2 for samples preserved with HNO ₃ , HCl, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			/	
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) AM Date/Time Reviewed 12/3/24

Origins Laboratory



Jen Pellegrini For Jordan A. Bynon, Project Manager

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Joel Mason
Project Number: CIT.CO.0931
Project: #6 McCormick 24-3

MCC24-3#6BG@2'
11/26/2024 2:45:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0007-01 (Soil)

Boron (DTPA Sorbitol)

Boron	0.448		0.0997	mg/L	1	B4L0214	12/02/2024	12/03/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	1.32		0.499	meq/L	10	[CALC]	12/02/2024	12/03/2024	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.34			pH Units	1	B4L0228	12/02/2024	12/03/2024	
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SAR by 20B Saturated Paste

SAR	0.397		0.0100	SAR	1	B4L0221	12/02/2024	12/03/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.309		0.00500	mmhos/cm	1	B4L0228	12/02/2024	12/03/2024	
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Table 915 metals by EPA 6020B

Arsenic	5.45		0.273	mg/kg	10	B4L0247	12/02/2024	12/05/2024	
Barium	196		9.43	"	"	"	"	"	
Cadmium	0.194		0.0943	"	"	"	"	"	
Copper	15.9		9.43	"	"	"	"	"	

Origins Laboratory

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Jen Pellegrini For Jordan A. Bynon, Project Manager



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Project: #6 McCormick 24-3

MCC24-3#6BG@2'
11/26/2024 2:45:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	---------------------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory
E4L0007-01 (Soil)

Table 915 metals by EPA 6020B

Lead	12.5		0.943	mg/kg	10	B4L0247	12/02/2024	12/05/2024	
Nickel	18.3		0.943	"	"	"	"	"	
Selenium	ND		0.245	"	"	"	"	"	Ua
Silver	ND		0.0943	"	"	"	"	"	Ua
Zinc	66.9		34.9	"	"	"	"	"	

Total Metals 7196A

Hexavalent Chromium	ND	0.175	0.436	mg/kg dry	1	2725597	12/24/2024	12/30/2024	U
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Metals by EPA 6000/7000 Series Methods - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4L0247 - EPA 3050B

Blank (B4L0247-BLK1)

Prepared: 12/02/2024 Analyzed: 12/05/2024

Arsenic	ND	0.290	mg/kg							Ua
Barium	ND	10.0	"							Ua
Cadmium	ND	0.100	"							Ua
Copper	ND	10.0	"							Ua
Lead	ND	1.00	"							Ua
Nickel	ND	1.00	"							Ua
Selenium	ND	0.260	"							Ua
Silver	ND	0.100	"							Ua
Zinc	ND	37.0	"							Ua

LCS (B4L0247-BS1)

Prepared: 12/02/2024 Analyzed: 12/05/2024

Arsenic	5.38	0.290	mg/kg	5.00		108	80-120			
Barium	480	10.0	"	500		96.1	80-120			
Cadmium	4.94	0.100	"	5.00		98.8	80-120			
Copper	52.9	10.0	"	50.0		106	80-120			
Lead	5.14	1.00	"	5.00		103	80-120			
Nickel	5.41	1.00	"	5.00		108	80-120			
Selenium	5.12	0.260	"	5.00		102	80-120			
Silver	5.14	0.100	"	5.00		103	80-120			
Zinc	53.6	37.0	"	50.0		107	80-120			

Matrix Spike (B4L0247-MS1)

Source: E4K0902-01

Prepared: 12/02/2024 Analyzed: 12/05/2024

Arsenic	6.94	0.274	mg/kg	4.72	2.09	103	75-125			
Barium	842	9.44	"	472	167	143	75-125			QM-07
Cadmium	4.99	0.0944	"	4.72	0.150	102	75-125			
Copper	62.8	9.44	"	47.2	13.8	104	75-125			
Lead	18.5	0.944	"	4.72	13.0	117	75-125			

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Metals by EPA 6000/7000 Series Methods - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4L0247 - EPA 3050B

Matrix Spike (B4L0247-MS1)

Source: E4K0902-01

Prepared: 12/02/2024 Analyzed: 12/05/2024

Nickel	15.4	0.944	mg/kg	4.72	11.2	89.9	75-125			
Selenium	4.70	0.245	"	4.72	0.179	95.8	75-125			
Silver	5.11	0.0944	"	4.72	0.0531	107	75-125			
Zinc	101	34.9	"	47.2	53.5	101	75-125			

Matrix Spike Dup (B4L0247-MSD1)

Source: E4K0902-01

Prepared: 12/02/2024 Analyzed: 12/05/2024

Arsenic	6.66	0.275	mg/kg	4.74	2.09	96.5	75-125	4.03	20	
Barium	718	9.47	"	474	167	116	75-125	16.0	20	
Cadmium	4.90	0.0947	"	4.74	0.150	100	75-125	1.86	20	
Copper	61.8	9.47	"	47.4	13.8	101	75-125	1.57	20	
Lead	17.2	0.947	"	4.74	13.0	89.2	75-125	7.26	20	
Nickel	14.7	0.947	"	4.74	11.2	75.1	75-125	4.55	20	
Selenium	4.88	0.246	"	4.74	0.179	99.2	75-125	3.72	20	
Silver	4.89	0.0947	"	4.74	0.0531	102	75-125	4.27	20	
Zinc	98.1	35.0	"	47.4	53.5	94.3	75-125	3.06	20	

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Classical Chemistry Parameters - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4L0214 - DTPA Sorbitol Preparation

Blank (B4L0214-BLK1)

Prepared: 12/02/2024 Analyzed: 12/03/2024

Boron	ND	0.100	mg/L							Ua
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Duplicate (B4L0214-DUP1)

Source: E4K0902-08

Prepared: 12/02/2024 Analyzed: 12/03/2024

Boron	0.246	0.0989	mg/L		0.235			4.64	50	
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Batch B4L0221 - Saturated Paste Metals

Blank (B4L0221-BLK1)

Prepared: 12/02/2024 Analyzed: 12/03/2024

Calcium PPM	ND	10.0	mg/L							Ua
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SAR	ND	0.0100	SAR							Ua
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Magnesium PPM	ND	10.0	mg/L							Ua
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Sodium PPM	ND	10.0	"							Ua
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Duplicate (B4L0221-DUP1)

Source: E4K0902-08

Prepared: 12/02/2024 Analyzed: 12/03/2024

Calcium PPM	12.8	10.0	mg/L		12.9			0.776	50	
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SAR	ND	0.0100	SAR		2.73				200	Ua
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Magnesium PPM	8.01	10.0	mg/L		8.07			0.746	50	Ua
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Sodium PPM	52.8	10.0	"		50.8			3.77	50	
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Saturated Paste - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4L0228 - Saturated Paste pH/EC

Blank (B4L0228-BLK1)

Prepared: 12/02/2024 Analyzed: 12/03/2024

Specific Conductance (EC) ND 0.00500 mmhos/cm Ua

Duplicate (B4L0228-DUP1)

Source: E4K0902-08

Prepared: 12/02/2024 Analyzed: 12/03/2024

Specific Conductance (EC) 0.396 0.00500 mmhos/cm 0.398 0.378 25

pH 8.54 pH Units 8.50 0.469 25

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Project Number: CIT.CO.0931
Project: #6 McCormick 24-3

Total Metals 7196A - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2725597 - SW846 3060A

BLANK (1205959573-BLK)

Prepared: 12/24/2024 Analyzed: 12/30/2024

Hexavalent Chromium ND 0.347 mg/kg - U

LCS (1205959574-BKS)

Prepared: 12/24/2024 Analyzed: 12/30/2024

Hexavalent Chromium 3.19 0.316 mg/kg 3.16 101 80-120

DUP (1205959575 D)

Source: 698370001

Prepared: 12/24/2024 Analyzed: 12/30/2024

Hexavalent Chromium ND 0.279 mg/kg dry <0.112 0-50 N/A 50 U

MS (1205959576 S)

Source: 698370001

Prepared: 12/24/2024 Analyzed: 12/30/2024

Hexavalent Chromium 2.27 0.279 mg/kg dry 2.79 <0.112 79.3 75-125

DUP (1205959577 D)

Source: 698370002

Prepared: 12/24/2024 Analyzed: 12/30/2024

Hexavalent Chromium ND 0.286 mg/kg dry <0.114 0-50 N/A 50 U

MS (1205959578 S)

Source: 698370002

Prepared: 12/24/2024 Analyzed: 12/30/2024

Hexavalent Chromium 1.88 0.286 mg/kg dry 2.86 <0.114 65 75-125

ILCS (1205959579-ILCS)

Prepared: 12/24/2024 Analyzed: 12/30/2024

Hexavalent Chromium 5.54 0.258 mg/kg 5.52 100 80-120

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Joel Mason
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Project: #6 McCormick 24-3

Notes and Definitions

- Ua Sample is Non-Detect.
 - U Result not detected above the detection limit
 - QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
 - ND Analyte NOT DETECTED at or above the reporting limit
 - RPD Relative Percent Difference
- All soil results are reported on a wet weight basis.

Origins Laboratory



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