



Quandary Consultants

November 21, 2024

Mike Dinkel

2252 Emerson St.

Denver CO 80205

**Project Name - KMG - Goodin 15N 15N 16N
16N-B6HZ**

Project Number - [none]

Attached are your analytical results for KMG - Goodin 15N 15N 16N 16N-B6HZ received by Origins Laboratory November 20, 2024. This project is associated with Origins project number E4K0605-01.

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



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Quandary Consultants
 2252 Emerson St.
 Denver CO 80205

Mike Dinkel
 Project Number: [none]
 Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BG-05@3'	E4K0605-01	Soil	November 20, 2024 8:51	11/20/2024 14:01
BG-05@6'	E4K0605-02	Soil	November 20, 2024 8:52	11/20/2024 14:01
BG-05@9'	E4K0605-03	Soil	November 20, 2024 8:53	11/20/2024 14:01
BG-06@3'	E4K0605-04	Soil	November 20, 2024 8:54	11/20/2024 14:01
BG-06@6'	E4K0605-05	Soil	November 20, 2024 8:55	11/20/2024 14:01
BG-06@9'	E4K0605-06	Soil	November 20, 2024 8:56	11/20/2024 14:01
BG-07@3'	E4K0605-07	Soil	November 20, 2024 8:57	11/20/2024 14:01
BG-07@6'	E4K0605-08	Soil	November 20, 2024 8:58	11/20/2024 14:01
BG-07@9'	E4K0605-09	Soil	November 20, 2024 8:59	11/20/2024 14:01
BG-08@3'	E4K0605-10	Soil	November 20, 2024 9:00	11/20/2024 14:01
BG-08@6'	E4K0605-11	Soil	November 20, 2024 9:01	11/20/2024 14:01
BG-08@9'	E4K0605-12	Soil	November 20, 2024 9:02	11/20/2024 14:01
BG-09@3'	E4K0605-13	Soil	November 20, 2024 9:38	11/20/2024 14:01
BG-09@6'	E4K0605-14	Soil	November 20, 2024 9:39	11/20/2024 14:01

Origins Laboratory



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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BG-09@9'	E4K0605-15	Soil	November 20, 2024 9:40	11/20/2024 14:01
BG-10@3'	E4K0605-16	Soil	November 20, 2024 9:41	11/20/2024 14:01
BG-10@6'	E4K0605-17	Soil	November 20, 2024 9:42	11/20/2024 14:01
BG-10@9'	E4K0605-18	Soil	November 20, 2024 9:43	11/20/2024 14:01

Origins Laboratory



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.

Quandary Consultants
 2252 Emerson St.
 Denver CO 80205

Mike Dinkel
 Project Number: [none]
 Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

ORIGINS

LABORATORY INC

Client: Leona-Magee Oil & Gas Division, LP

Address: 501 N. Division St.

PATTEVILLE, CO, 80651

Telephone Number: 7851691-7788

Email Address: ADULTER@QUANDARYCONSULTANTS.COM

Project Manager: **MIKE DINKEL**

Project Name: Goodin 15N 15N 16N 16N-B6HZ

Project Number: 915

Collected By: Will J.

Invoice/Billing Info: Erik Mikelson

S=Soil | SO=Soil | O=Oil | A=Air | G=Gas | UNP=Unpres | HCL=Hydrochloric | HNO3=Nitric | H2SO4=Sulfuric | NaOH=Sodium Hydroxide

Sample ID	Date Sampled	Time Sampled	# of Containers	Matrix	Preservative	Analysis		Comments
BG-05051	11-20-24	851	2	S	N/A	X		
BG-05061		852				X		
BG-05091		853				X		
BG-06031		854				X		
BG-06061		855				X		
BG-06091		856				X		
BG-07031		857				X		
BG-07061		858				X		
BG-07091		859				X		

Relinquished By: Will J. Date: 11-20-24 Time: 14:00 Received By: [Signature] Date: 11/20/24 Time: 14:01

Temp Received: 33 Received On Ice? Yes No

Turnaround Time: SAME DAY 24 Hr 48 Hr 72 Hr

Standard

Origins Laboratory

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.

Quandary Consultants
 2252 Emerson St.
 Denver CO 80205

Mike Dinkel
 Project Number: [none]
 Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: F4K0605

Client: Quandary

Client Project ID: Goodin 15N 15N 16N 16N B6HZ

Checklist Completed by: MW / WS

Shipped Via: HD

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 11/20/24

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 33 °C _____ / _____ °C _____ / _____ °C (Describe)

Thermometer ID: T007

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 subcontracted 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.

Chlynn Nish
 Reviewed by (Project Manager)

11/20/24
 Date/Time Reviewed

Origins Laboratory

J. Bynon

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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

BG-05@3'

11/20/2024 8:51:00AM

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

**Origins Laboratory
E4K0605-01 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	1.61		0.268	mg/kg	10	B4K2039	11/20/2024	11/21/2024	
Barium	46.2		9.23	"	"	"	"	"	
Cadmium	ND		0.0923	"	"	"	"	"	
Copper	ND		9.23	"	"	"	"	"	
Lead	4.88		0.923	"	"	"	"	"	
Nickel	3.38		0.923	"	"	"	"	"	
Selenium	ND		0.240	"	"	"	"	"	
Silver	ND		0.0923	"	"	"	"	"	
Zinc	ND		34.1	"	"	"	"	"	

Origins Laboratory



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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

BG-05@6'

11/20/2024 8:52:00AM

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

**Origins Laboratory
E4K0605-02 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	2.31		0.268	mg/kg	10	B4K2039	11/20/2024	11/21/2024	
Barium	75.8		9.25	"	"	"	"	"	
Cadmium	0.107		0.0925	"	"	"	"	"	
Copper	ND		9.25	"	"	"	"	"	
Lead	6.40		0.925	"	"	"	"	"	
Nickel	6.80		0.925	"	"	"	"	"	
Selenium	ND		0.241	"	"	"	"	"	
Silver	ND		0.0925	"	"	"	"	"	
Zinc	ND		34.2	"	"	"	"	"	

Origins Laboratory



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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

BG-05@9'

11/20/2024 8:53:00AM

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

**Origins Laboratory
E4K0605-03 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	4.71		0.265	mg/kg	10	B4K2039	11/20/2024	11/21/2024	
Barium	154		9.14	"	"	"	"	"	
Cadmium	0.228		0.0914	"	"	"	"	"	
Copper	10.8		9.14	"	"	"	"	"	
Lead	8.12		0.914	"	"	"	"	"	
Nickel	11.7		0.914	"	"	"	"	"	
Selenium	ND		0.238	"	"	"	"	"	
Silver	ND		0.0914	"	"	"	"	"	
Zinc	35.4		33.8	"	"	"	"	"	

Origins Laboratory



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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

BG-06@3'

11/20/2024 8:54:00AM

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

**Origins Laboratory
E4K0605-04 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	1.71		0.265	mg/kg	10	B4K2039	11/20/2024	11/21/2024	
Barium	50.8		9.15	"	"	"	"	"	
Cadmium	0.0969		0.0915	"	"	"	"	"	
Copper	ND		9.15	"	"	"	"	"	
Lead	5.32		0.915	"	"	"	"	"	
Nickel	3.97		0.915	"	"	"	"	"	
Selenium	ND		0.238	"	"	"	"	"	
Silver	ND		0.0915	"	"	"	"	"	
Zinc	ND		33.8	"	"	"	"	"	

Origins Laboratory



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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

BG-06@6'

11/20/2024 8:55:00AM

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

**Origins Laboratory
E4K0605-05 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	4.34		0.245	mg/kg	10	B4K2039	11/20/2024	11/21/2024	
Barium	124		8.44	"	"	"	"	"	
Cadmium	0.125		0.0844	"	"	"	"	"	
Copper	9.52		8.44	"	"	"	"	"	
Lead	10.7		0.844	"	"	"	"	"	
Nickel	14.1		0.844	"	"	"	"	"	
Selenium	ND		0.219	"	"	"	"	"	
Silver	ND		0.0844	"	"	"	"	"	
Zinc	47.5		31.2	"	"	"	"	"	

Origins Laboratory



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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

BG-06@9'

11/20/2024 8:56:00AM

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

**Origins Laboratory
E4K0605-06 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	2.24		0.249	mg/kg	10	B4K2039	11/20/2024	11/21/2024	
Barium	96.5		8.58	"	"	"	"	"	
Cadmium	0.109		0.0858	"	"	"	"	"	
Copper	ND		8.58	"	"	"	"	"	
Lead	6.00		0.858	"	"	"	"	"	
Nickel	5.81		0.858	"	"	"	"	"	
Selenium	ND		0.223	"	"	"	"	"	
Silver	ND		0.0858	"	"	"	"	"	
Zinc	ND		31.8	"	"	"	"	"	

Origins Laboratory



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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

BG-07@3'

11/20/2024 8:57:00AM

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

**Origins Laboratory
E4K0605-07 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	1.91	0.277	mg/kg	10	B4K2039	11/20/2024	11/21/2024
Barium	57.7	9.56	"	"	"	"	"
Cadmium	0.113	0.0956	"	"	"	"	"
Copper	ND	9.56	"	"	"	"	"
Lead	5.73	0.956	"	"	"	"	"
Nickel	4.75	0.956	"	"	"	"	"
Selenium	ND	0.249	"	"	"	"	"
Silver	ND	0.0956	"	"	"	"	"
Zinc	ND	35.4	"	"	"	"	"

Origins Laboratory



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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

BG-07@6'

11/20/2024 8:58:00AM

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

**Origins Laboratory
E4K0605-08 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	3.94		0.275	mg/kg	10	B4K2039	11/20/2024	11/21/2024	
Barium	111		9.48	"	"	"	"	"	
Cadmium	0.107		0.0948	"	"	"	"	"	
Copper	ND		9.48	"	"	"	"	"	
Lead	6.68		0.948	"	"	"	"	"	
Nickel	8.16		0.948	"	"	"	"	"	
Selenium	ND		0.246	"	"	"	"	"	
Silver	ND		0.0948	"	"	"	"	"	
Zinc	ND		35.1	"	"	"	"	"	

Origins Laboratory



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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

BG-07@9'

11/20/2024 8:59:00AM

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

**Origins Laboratory
E4K0605-09 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	3.60		0.268	mg/kg	10	B4K2039	11/20/2024	11/21/2024	
Barium	113		9.26	"	"	"	"	"	
Cadmium	0.133		0.0926	"	"	"	"	"	
Copper	ND		9.26	"	"	"	"	"	
Lead	8.00		0.926	"	"	"	"	"	
Nickel	9.34		0.926	"	"	"	"	"	
Selenium	ND		0.241	"	"	"	"	"	
Silver	ND		0.0926	"	"	"	"	"	
Zinc	ND		34.3	"	"	"	"	"	

Origins Laboratory



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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

BG-08@3'

11/20/2024 9:00:00AM

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

**Origins Laboratory
E4K0605-10 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	2.57		0.260	mg/kg	10	B4K2039	11/20/2024	11/21/2024	
Barium	106		8.95	"	"	"	"	"	
Cadmium	0.133		0.0895	"	"	"	"	"	
Copper	ND		8.95	"	"	"	"	"	
Lead	7.27		0.895	"	"	"	"	"	
Nickel	7.58		0.895	"	"	"	"	"	
Selenium	ND		0.233	"	"	"	"	"	
Silver	ND		0.0895	"	"	"	"	"	
Zinc	33.6		33.1	"	"	"	"	"	

Origins Laboratory



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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

BG-08@6'

11/20/2024 9:01:00AM

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

**Origins Laboratory
E4K0605-11 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	6.29		0.284	mg/kg	10	B4K2039	11/20/2024	11/21/2024	
Barium	140		9.79	"	"	"	"	"	
Cadmium	0.179		0.0979	"	"	"	"	"	
Copper	13.9		9.79	"	"	"	"	"	
Lead	12.0		0.979	"	"	"	"	"	
Nickel	16.5		0.979	"	"	"	"	"	
Selenium	ND		0.254	"	"	"	"	"	
Silver	ND		0.0979	"	"	"	"	"	
Zinc	50.4		36.2	"	"	"	"	"	

Origins Laboratory



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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

BG-08@9'

11/20/2024 9:02:00AM

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

**Origins Laboratory
E4K0605-12 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	5.40		0.275	mg/kg	10	B4K2039	11/20/2024	11/21/2024	
Barium	200		9.48	"	"	"	"	"	
Cadmium	0.186		0.0948	"	"	"	"	"	
Copper	11.6		9.48	"	"	"	"	"	
Lead	10.4		0.948	"	"	"	"	"	
Nickel	13.9		0.948	"	"	"	"	"	
Selenium	ND		0.246	"	"	"	"	"	
Silver	ND		0.0948	"	"	"	"	"	
Zinc	45.3		35.1	"	"	"	"	"	

Origins Laboratory



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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

BG-09@3'

11/20/2024 9:38:00AM

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

**Origins Laboratory
E4K0605-13 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	2.02	0.259	mg/kg	10	B4K2039	11/20/2024	11/21/2024
Barium	57.0	8.93	"	"	"	"	"
Cadmium	ND	0.0893	"	"	"	"	"
Copper	ND	8.93	"	"	"	"	"
Lead	5.44	0.893	"	"	"	"	"
Nickel	5.49	0.893	"	"	"	"	"
Selenium	ND	0.232	"	"	"	"	"
Silver	ND	0.0893	"	"	"	"	"
Zinc	ND	33.0	"	"	"	"	"

Origins Laboratory



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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

BG-09@6'

11/20/2024 9:39:00AM

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

**Origins Laboratory
E4K0605-14 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	2.96	0.257	mg/kg	10	B4K2039	11/20/2024	11/21/2024	
Barium	96.2	8.85	"	"	"	"	"	
Cadmium	0.0894	0.0885	"	"	"	"	"	
Copper	ND	8.85	"	"	"	"	"	
Lead	6.26	0.885	"	"	"	"	"	
Nickel	7.67	0.885	"	"	"	"	"	
Selenium	ND	0.230	"	"	"	"	"	
Silver	ND	0.0885	"	"	"	"	"	
Zinc	ND	32.8	"	"	"	"	"	

Origins Laboratory



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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

BG-09@9'

11/20/2024 9:40:00AM

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

**Origins Laboratory
E4K0605-15 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	4.49		0.253	mg/kg	10	B4K2039	11/20/2024	11/21/2024	
Barium	160		8.72	"	"	"	"	"	
Cadmium	0.198		0.0872	"	"	"	"	"	
Copper	10.2		8.72	"	"	"	"	"	
Lead	8.35		0.872	"	"	"	"	"	
Nickel	12.1		0.872	"	"	"	"	"	
Selenium	ND		0.227	"	"	"	"	"	
Silver	ND		0.0872	"	"	"	"	"	
Zinc	38.0		32.3	"	"	"	"	"	

Origins Laboratory



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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

BG-10@3'

11/20/2024 9:41:00AM

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

**Origins Laboratory
E4K0605-16 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	1.97	0.243	mg/kg	10	B4K2039	11/20/2024	11/21/2024	
Barium	83.2	8.37	"	"	"	"	"	
Cadmium	ND	0.0837	"	"	"	"	"	
Copper	ND	8.37	"	"	"	"	"	
Lead	5.57	0.837	"	"	"	"	"	
Nickel	5.61	0.837	"	"	"	"	"	
Selenium	ND	0.218	"	"	"	"	"	
Silver	ND	0.0837	"	"	"	"	"	
Zinc	ND	31.0	"	"	"	"	"	

Origins Laboratory



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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

BG-10@6'

11/20/2024 9:42:00AM

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

**Origins Laboratory
E4K0605-17 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	5.68		0.272	mg/kg	10	B4K2039	11/20/2024	11/21/2024	
Barium	131		9.37	"	"	"	"	"	
Cadmium	0.125		0.0937	"	"	"	"	"	
Copper	12.9		9.37	"	"	"	"	"	
Lead	12.5		0.937	"	"	"	"	"	
Nickel	17.9		0.937	"	"	"	"	"	
Selenium	ND		0.243	"	"	"	"	"	
Silver	ND		0.0937	"	"	"	"	"	
Zinc	51.1		34.7	"	"	"	"	"	

Origins Laboratory



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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

BG-10@9'

11/20/2024 9:43:00AM

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

**Origins Laboratory
E4K0605-18 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	3.40		0.262	mg/kg	10	B4K2039	11/20/2024	11/21/2024	
Barium	133		9.05	"	"	"	"	"	
Cadmium	0.150		0.0905	"	"	"	"	"	
Copper	ND		9.05	"	"	"	"	"	
Lead	7.47		0.905	"	"	"	"	"	
Nickel	9.85		0.905	"	"	"	"	"	
Selenium	ND		0.235	"	"	"	"	"	
Silver	ND		0.0905	"	"	"	"	"	
Zinc	ND		33.5	"	"	"	"	"	

Origins Laboratory



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.



Quandary Consultants
 2252 Emerson St.
 Denver CO 80205

Mike Dinkel
 Project Number: [none]
 Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B4K2039 - EPA 3050B

Blank (B4K2039-BLK1)

Prepared: 11/20/2024 Analyzed: 11/21/2024

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

LCS (B4K2039-BS1)

Prepared: 11/20/2024 Analyzed: 11/21/2024

Arsenic	4.97	0.290	mg/kg	5.00		99.4	80-120			
Barium	510	10.0	"	500		102	80-120			
Cadmium	5.13	0.100	"	5.00		103	80-120			
Copper	50.0	10.0	"	50.0		100	80-120			
Lead	5.26	1.00	"	5.00		105	80-120			
Nickel	5.21	1.00	"	5.00		104	80-120			
Selenium	5.74	0.260	"	5.00		115	80-120			
Silver	5.71	0.100	"	5.00		114	80-120			
Zinc	48.9	37.0	"	50.0		97.8	80-120			

Matrix Spike (B4K2039-MS1)

Source: E4K0599-01

Prepared: 11/20/2024 Analyzed: 11/21/2024

Arsenic	11.7	0.267	mg/kg	4.60	6.90	103	75-125			
Barium	636	9.21	"	460	155	104	75-125			
Cadmium	4.76	0.0921	"	4.60	0.141	100	75-125			
Copper	57.5	9.21	"	46.0	11.3	100	75-125			
Lead	17.0	0.921	"	4.60	11.9	111	75-125			

Origins Laboratory

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.



Quandary Consultants
 2252 Emerson St.
 Denver CO 80205

Mike Dinkel
 Project Number: [none]
 Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B4K2039 - EPA 3050B

Matrix Spike (B4K2039-MS1)		Source: E4K0599-01			Prepared: 11/20/2024 Analyzed: 11/21/2024					
Nickel	20.0	0.921	mg/kg	4.60	15.7	93.4	75-125			
Selenium	5.26	0.239	"	4.60	0.333	107	75-125			
Silver	5.05	0.0921	"	4.60	0.0388	109	75-125			
Zinc	94.4	34.1	"	46.0	50.4	95.6	75-125			
Matrix Spike Dup (B4K2039-MSD1)		Source: E4K0599-01			Prepared: 11/20/2024 Analyzed: 11/21/2024					
Arsenic	11.0	0.272	mg/kg	4.68	6.90	87.8	75-125	5.74	20	
Barium	617	9.37	"	468	155	98.8	75-125	2.94	20	
Cadmium	4.82	0.0937	"	4.68	0.141	99.9	75-125	1.34	20	
Copper	56.7	9.37	"	46.8	11.3	96.9	75-125	1.42	20	
Lead	16.4	0.937	"	4.68	11.9	95.0	75-125	3.87	20	
Nickel	19.9	0.937	"	4.68	15.7	88.2	75-125	0.866	20	
Selenium	5.25	0.243	"	4.68	0.333	105	75-125	0.202	20	
Silver	5.16	0.0937	"	4.68	0.0388	109	75-125	2.29	20	
Zinc	93.9	34.7	"	46.8	50.4	92.7	75-125	0.614	20	

Origins Laboratory

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.

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Goodin 15N 15N 16N 16N-B6HZ

Notes and Definitions

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



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.