



Quandary Consultants

December 31, 2024

Mike Dinkel

2252 Emerson St.

Denver

CO

80205

Project Name - KMG - Jones Guy H Gas UN2

Project Number - [none]

Attached are your analytical results for KMG - Jones Guy H Gas UN2 received by Origins Laboratory November 21, 2024. This project is associated with Origins project number E4K0652-01.

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 - Jones Guy H Gas UN2

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-BG01@3'	E4K0652-01	Soil	November 21, 2024 11:30	11/21/2024 15:15
WH-BG01@6'	E4K0652-02	Soil	November 21, 2024 11:31	11/21/2024 15:15
WH-BG02@3'	E4K0652-03	Soil	November 21, 2024 11:32	11/21/2024 15:15
WH-BG02@6'	E4K0652-04	Soil	November 21, 2024 11:33	11/21/2024 15:15
WH-BG03@3'	E4K0652-05	Soil	November 21, 2024 11:34	11/21/2024 15:15
WH-BG03@6'	E4K0652-06	Soil	November 21, 2024 11:35	11/21/2024 15:15
WH-BG04@3'	E4K0652-07	Soil	November 21, 2024 11:36	11/21/2024 15:15
WH-BG04@6'	E4K0652-08	Soil	November 21, 2024 11:37	11/21/2024 15:15
WH-BG05@3'	E4K0652-09	Soil	November 21, 2024 11:38	11/21/2024 15:15
WH-BG05@6'	E4K0652-10	Soil	November 21, 2024 11:39	11/21/2024 15:15
WH-B01@6'	E4K0652-11	Soil	November 21, 2024 12:50	11/21/2024 15:15
FL-B01@4'	E4K0652-12	Soil	November 21, 2024 12:59	11/21/2024 15:15
FL-B03@2'	E4K0652-13	Soil	November 21, 2024 13:21	11/21/2024 15:15
GW-01	E4K0652-14	Water	November 21, 2024 13:30	11/21/2024 15:15

Origins Laboratory



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2252 Emerson St.

Denver CO 80205

Mike Dinkel

Project Number: [none]

Project: KMG - Jones Guy H Gas UN2

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Quandary Consultants
 2252 Emerson St.
 Denver CO 80205

Mike Dinkel
 Project Number: [none]
 Project: KMG - Jones Guy H Gas UN2

LABORATORY INC

ORIGINAL WORK ORDER #

Eykosa

Client: Kerr-McGee Oil & Gas Division, LP
 Address: 501 N. Division St.
Platteville, CO, 80651

Project Manager: Mike Dinkel
 Project Name: Jones Guy H Gas UN2
 Project Number: 715

Telephone Number: 781-691-7788
 Email Address: MDU@ORIGINSLABORATORY.COM

Collected By: Will J
 Invoice/Billing Info: Erik Mickelson

S=Soil | SO=Solid | 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
1	WH-BG01 @ 3'	11/21/2014	130	5	N/A			
2	WH-BG01 @ 6'	11/21/2014	131					
3	WH-BG02 @ 3'		132					
4	WH-BG02 @ 6'		133					
5	WH-BG03 @ 3'		134					
6	WH-BG03 @ 6'		135					
7	WH-BG04 @ 3'		136					
8	WH-BG04 @ 6'		137					
9	WH-BG05 @ 3'		138					
10	WH-BG05 @ 6'		139					

Relinquished By: Will J Date: 11/21/2014 Time: 1515 Received By: WS Date: 11/21/2014 Time: 155

Temp Received: 48 Received On Ice? Yes No

Turnaround Time: SAME DAY 24 Hr 48 Hr 72 Hr

Standard

Origins Laboratory



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 2252 Emerson St.
 Denver CO 80205

Mike Dinkel
 Project Number: [none]
 Project: KMG - Jones Guy H Gas UN2

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: E4K0652

Client: Quandary
 Client Project ID: Jones Guy H Gas UN2

Checklist Completed by: KA / WS
 Date/time completed: 11/21/24

Shipped Via: HD
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: N/A

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

Cooler Number/Temperature: 1 / 48 °C _____ °C _____ °C (Describe) _____ °C

Thermometer ID: FOOT

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⁾ ?		/		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 HNO3, HCl, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			/	
Additional Comments (if any):	① missing all samples except samples 2, 13 & 14 only have 2 jars instead of 3 12&13 WS 11/21/24			

⁽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) KA

Date/Time Reviewed 11/21/24

Origins Laboratory



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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-BG01@3'
11/21/2024 11:30:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-01 (Soil)

Boron (DTPA Sorbitol)

Boron	0.148		0.100	mg/L	1	B4K2210	11/22/2024	11/25/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	20.7		0.499	meq/L	10	[CALC]	11/22/2024	11/25/2024	
Magnesium	6.99		0.823	"	"	"	"	"	
Sodium	24.9		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	7.97			pH Units	1	B4K2225	11/22/2024	11/25/2024	
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SAR by 20B Saturated Paste

SAR	6.69		0.0100	SAR	1	B4K2218	11/22/2024	11/25/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	4.56		0.00500	mmhos/cm	1	B4K2225	11/22/2024	11/25/2024	
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Table 915 metals by EPA 6020B

Arsenic	2.91		0.262	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Barium	73.2		9.05	"	"	"	"	"	
Cadmium	0.0923		0.0905	"	"	"	"	"	
Copper	ND		9.05	"	"	"	"	"	

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Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-BG01@3'
11/21/2024 11:30:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-01 (Soil)

Table 915 metals by EPA 6020B

Lead	5.03		0.905	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Nickel	8.25		0.905	"	"	"	"	"	
Selenium	0.245		0.235	"	"	"	"	"	
Silver	ND		0.0905	"	"	"	"	"	
Zinc	ND		33.5	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.158	0.395	mg/kg dry	1	2722490	12/20/2024	12/27/2024	U
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Origins Laboratory



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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-BG01@6'
11/21/2024 11:31:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-02 (Soil)

Boron (DTPA Sorbitol)

Boron	0.407		0.101	mg/L	1	B4K2210	11/22/2024	11/25/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	5.16		0.499	meq/L	10	[CALC]	11/22/2024	11/25/2024	
Magnesium	5.17		0.823	"	"	"	"	"	
Sodium	18.1		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.17			pH Units	1	B4K2225	11/22/2024	11/25/2024	
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SAR by 20B Saturated Paste

SAR	7.98		0.0100	SAR	1	B4K2218	11/22/2024	11/25/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	2.79		0.00500	mmhos/cm	1	B4K2225	11/22/2024	11/25/2024	
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Table 915 metals by EPA 6020B

Arsenic	6.83		0.251	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Barium	162		8.64	"	"	"	"	"	
Cadmium	0.259		0.0864	"	"	"	"	"	
Copper	10.3		8.64	"	"	"	"	"	

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Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-BG01@6'
11/21/2024 11:31:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-02 (Soil)

Table 915 metals by EPA 6020B

Lead	7.25		0.864	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Nickel	11.4		0.864	"	"	"	"	"	
Selenium	0.492		0.225	"	"	"	"	"	
Silver	ND		0.0864	"	"	"	"	"	
Zinc	36.7		32.0	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.187	0.466	mg/kg dry	1	2722490	12/20/2024	12/27/2024	U
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Origins Laboratory



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2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-BG02@3'
11/21/2024 11:32:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-03 (Soil)

Boron (DTPA Sorbitol)

Boron	0.434		0.0984	mg/L	1	B4K2210	11/22/2024	11/25/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	7.18		0.499	meq/L	10	[CALC]	11/22/2024	11/25/2024	
Magnesium	6.65		0.823	"	"	"	"	"	
Sodium	19.5		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.21			pH Units	1	B4K2225	11/22/2024	11/25/2024	
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SAR by 20B Saturated Paste

SAR	7.41		0.0100	SAR	1	B4K2218	11/22/2024	11/25/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	2.98		0.00500	mmhos/cm	1	B4K2225	11/22/2024	11/25/2024	
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Table 915 metals by EPA 6020B

Arsenic	3.14		0.279	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Barium	100		9.62	"	"	"	"	"	
Cadmium	ND		0.0962	"	"	"	"	"	
Copper	ND		9.62	"	"	"	"	"	

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Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-BG02@3'
11/21/2024 11:32:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-03 (Soil)

Table 915 metals by EPA 6020B

Lead	5.40		0.962	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Nickel	7.90		0.962	"	"	"	"	"	
Selenium	ND		0.250	"	"	"	"	"	
Silver	ND		0.0962	"	"	"	"	"	
Zinc	ND		35.6	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.181	0.451	mg/kg dry	1	2722490	12/20/2024	12/27/2024	U
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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-BG02@6'
11/21/2024 11:33:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-04 (Soil)

Boron (DTPA Sorbitol)

Boron	0.363		0.0998	mg/L	1	B4K2210	11/22/2024	11/25/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	1.53		0.499	meq/L	10	[CALC]	11/22/2024	11/25/2024	
Magnesium	1.93		0.823	"	"	"	"	"	
Sodium	16.2		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.53			pH Units	1	B4K2225	11/22/2024	11/25/2024	
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SAR by 20B Saturated Paste

SAR	12.3		0.0100	SAR	1	B4K2218	11/22/2024	11/25/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	2.06		0.00500	mmhos/cm	1	B4K2225	11/22/2024	11/25/2024	
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Table 915 metals by EPA 6020B

Arsenic	2.52		0.267	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Barium	52.6		9.22	"	"	"	"	"	
Cadmium	ND		0.0922	"	"	"	"	"	
Copper	ND		9.22	"	"	"	"	"	

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2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-BG02@6'
11/21/2024 11:33:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-04 (Soil)

Table 915 metals by EPA 6020B

Lead	4.29		0.922	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Nickel	6.76		0.922	"	"	"	"	"	
Selenium	ND		0.240	"	"	"	"	"	
Silver	ND		0.0922	"	"	"	"	"	
Zinc	ND		34.1	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.187	0.467	mg/kg dry	1	2722490	12/20/2024	12/27/2024	U
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2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-BG03@3'
11/21/2024 11:34:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-05 (Soil)

Boron (DTPA Sorbitol)

Boron	0.782		0.101	mg/L	1	B4K2210	11/22/2024	11/25/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	16.3		0.499	meq/L	10	[CALC]	11/22/2024	11/25/2024	
Magnesium	5.42		0.823	"	"	"	"	"	
Sodium	21.2		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.03			pH Units	1	B4K2225	11/22/2024	11/25/2024	
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SAR by 20B Saturated Paste

SAR	6.44		0.0100	SAR	1	B4K2218	11/22/2024	11/25/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	3.84		0.00500	mmhos/cm	1	B4K2225	11/22/2024	11/25/2024	
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Table 915 metals by EPA 6020B

Arsenic	3.50		0.271	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Barium	72.5		9.35	"	"	"	"	"	
Cadmium	0.0953		0.0935	"	"	"	"	"	
Copper	ND		9.35	"	"	"	"	"	

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2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-BG03@3'
11/21/2024 11:34:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-05 (Soil)

Table 915 metals by EPA 6020B

Lead	5.77		0.935	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Nickel	9.35		0.935	"	"	"	"	"	
Selenium	ND		0.243	"	"	"	"	"	
Silver	ND		0.0935	"	"	"	"	"	
Zinc	ND		34.6	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.170	0.425	mg/kg dry	1	2722490	12/20/2024	12/27/2024	U
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2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-BG03@6'
11/21/2024 11:35:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-06 (Soil)

Boron (DTPA Sorbitol)

Boron	0.858		0.0990	mg/L	1	B4K2210	11/22/2024	11/25/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	2.67		0.499	meq/L	10	[CALC]	11/22/2024	11/25/2024	
Magnesium	2.34		0.823	"	"	"	"	"	
Sodium	9.44		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.25			pH Units	1	B4K2225	11/22/2024	11/25/2024	
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SAR by 20B Saturated Paste

SAR	5.97		0.0100	SAR	1	B4K2218	11/22/2024	11/25/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.62		0.00500	mmhos/cm	1	B4K2225	11/22/2024	11/25/2024	
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Table 915 metals by EPA 6020B

Arsenic	3.65		0.269	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Barium	89.5		9.28	"	"	"	"	"	
Cadmium	ND		0.0928	"	"	"	"	"	
Copper	ND		9.28	"	"	"	"	"	

Origins Laboratory



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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-BG03@6'
11/21/2024 11:35:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-06 (Soil)

Table 915 metals by EPA 6020B

Lead	5.95		0.928	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Nickel	9.06		0.928	"	"	"	"	"	
Selenium	ND		0.241	"	"	"	"	"	
Silver	ND		0.0928	"	"	"	"	"	
Zinc	ND		34.3	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.188	0.469	mg/kg dry	1	2722490	12/20/2024	12/27/2024	U
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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 - Jones Guy H Gas UN2

WH-BG04@3'
11/21/2024 11:36:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-07 (Soil)

Boron (DTPA Sorbitol)

Boron	1.13		0.0988	mg/L	1	B4K2210	11/22/2024	11/25/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	5.64		0.499	meq/L	10	[CALC]	11/22/2024	11/25/2024	
Magnesium	5.27		0.823	"	"	"	"	"	
Sodium	28.5		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.31			pH Units	1	B4K2225	11/22/2024	11/25/2024	
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SAR by 20B Saturated Paste

SAR	12.2		0.0100	SAR	1	B4K2218	11/22/2024	11/25/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	3.92		0.00500	mmhos/cm	1	B4K2225	11/22/2024	11/25/2024	
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Table 915 metals by EPA 6020B

Arsenic	4.36		0.278	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Barium	87.8		9.60	"	"	"	"	"	
Cadmium	0.126		0.0960	"	"	"	"	"	
Copper	ND		9.60	"	"	"	"	"	

Origins Laboratory



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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-BG04@3'
11/21/2024 11:36:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-07 (Soil)

Table 915 metals by EPA 6020B

Lead	6.14		0.960	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Nickel	9.58		0.960	"	"	"	"	"	
Selenium	ND		0.250	"	"	"	"	"	
Silver	ND		0.0960	"	"	"	"	"	
Zinc	ND		35.5	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.146	0.365	mg/kg dry	1	2722490	12/20/2024	12/27/2024	U
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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 - Jones Guy H Gas UN2

WH-BG04@6'
11/21/2024 11:37:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-08 (Soil)

Boron (DTPA Sorbitol)

Boron	0.223		0.101	mg/L	1	B4K2210	11/22/2024	11/25/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	3.07		0.499	meq/L	10	[CALC]	11/22/2024	11/25/2024	
Magnesium	2.80		0.823	"	"	"	"	"	
Sodium	8.80		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.24			pH Units	1	B4K2225	11/22/2024	11/25/2024	
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SAR by 20B Saturated Paste

SAR	5.14		0.0100	SAR	1	B4K2218	11/22/2024	11/25/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.61		0.00500	mmhos/cm	1	B4K2225	11/22/2024	11/25/2024	
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Table 915 metals by EPA 6020B

Arsenic	1.98		0.280	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Barium	43.5		9.66	"	"	"	"	"	
Cadmium	ND		0.0966	"	"	"	"	"	
Copper	ND		9.66	"	"	"	"	"	

Origins Laboratory



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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-BG04@6'
11/21/2024 11:37:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-08 (Soil)

Table 915 metals by EPA 6020B

Lead	3.66		0.966	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Nickel	5.89		0.966	"	"	"	"	"	
Selenium	ND		0.251	"	"	"	"	"	
Silver	ND		0.0966	"	"	"	"	"	
Zinc	ND		35.7	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.155	0.387	mg/kg dry	1	2722490	12/20/2024	12/27/2024	U
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Origins Laboratory



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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-BG05@3'
11/21/2024 11:38:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-09 (Soil)

Boron (DTPA Sorbitol)

Boron	0.244		0.101	mg/L	1	B4K2210	11/22/2024	11/25/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	4.01		0.499	meq/L	10	[CALC]	11/22/2024	11/25/2024	
Magnesium	2.01		0.823	"	"	"	"	"	
Sodium	3.51		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.04			pH Units	1	B4K2225	11/22/2024	11/25/2024	
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SAR by 20B Saturated Paste

SAR	2.02		0.0100	SAR	1	B4K2218	11/22/2024	11/25/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.02		0.00500	mmhos/cm	1	B4K2225	11/22/2024	11/25/2024	
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Table 915 metals by EPA 6020B

Arsenic	3.31		0.259	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Barium	69.4		8.92	"	"	"	"	"	
Cadmium	ND		0.0892	"	"	"	"	"	
Copper	ND		8.92	"	"	"	"	"	

Origins Laboratory



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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-BG05@3'
11/21/2024 11:38:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-09 (Soil)

Table 915 metals by EPA 6020B

Lead	5.53		0.892	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Nickel	9.11		0.892	"	"	"	"	"	
Selenium	ND		0.232	"	"	"	"	"	
Silver	ND		0.0892	"	"	"	"	"	
Zinc	ND		33.0	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.167	0.418	mg/kg dry	1	2722490	12/20/2024	12/27/2024	U
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Origins Laboratory



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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-BG05@6'
11/21/2024 11:39:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-10 (Soil)

Boron (DTPA Sorbitol)

Boron	0.196		0.101	mg/L	1	B4K2210	11/22/2024	11/25/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	22.6		0.499	meq/L	10	[CALC]	11/22/2024	11/25/2024	
Magnesium	13.3		0.823	"	"	"	"	"	
Sodium	28.0		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	7.96			pH Units	1	B4K2225	11/22/2024	11/25/2024	
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SAR by 20B Saturated Paste

SAR	6.60		0.0100	SAR	1	B4K2218	11/22/2024	11/25/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	5.11		0.00500	mmhos/cm	1	B4K2225	11/22/2024	11/25/2024	
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Table 915 metals by EPA 6020B

Arsenic	3.04		0.280	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Barium	75.8		9.66	"	"	"	"	"	
Cadmium	ND		0.0966	"	"	"	"	"	
Copper	ND		9.66	"	"	"	"	"	

Origins Laboratory



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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-BG05@6'
11/21/2024 11:39:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-10 (Soil)

Table 915 metals by EPA 6020B

Lead	5.79		0.966	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Nickel	9.59		0.966	"	"	"	"	"	
Selenium	ND		0.251	"	"	"	"	"	
Silver	ND		0.0966	"	"	"	"	"	
Zinc	ND		35.7	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.173	0.434	mg/kg dry	1	2722490	12/20/2024	12/27/2024	U
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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 - Jones Guy H Gas UN2

WH-B01@6'

11/21/2024 12:50:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory
E4K0652-11 (Soil)**

Boron (DTPA Sorbitol)

Boron	0.874		0.0981	mg/L	1	B4K2210	11/22/2024	11/25/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4K2146	11/21/2024	11/21/2024	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	76.0 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4K2147	11/21/2024	11/22/2024	Ua
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Benzene	ND		0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Toluene	ND		0.00200	"	"	"	"	"	Ua
Xylenes, total	ND		0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	Ua

Surrogate: 1,2-Dichloroethane-d4	111 %		70-130			"	"	"	
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Origins Laboratory



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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

WH-B01@6'

11/21/2024 12:50:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory
E4K0652-11 (Soil)**

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	105 %		70-130			B4K21 47	11/21/2024	11/22/2024	
Surrogate: 4-Bromofluorobenzene	96.9 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	3.51		0.499	meq/L	10	[CALC]	11/22/2024	11/25/2024	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	5.79		0.435	"	"	"	"	"	

PAH by 8270E SIM

1-Methylnaphthalene	ND	0.00126	0.00383	mg/kg dry	1	2714859	12/04/2024	12/04/2024	U
2-Methylnaphthalene	ND	0.00126	0.00383	"	"	"	"	"	U
Acenaphthene	ND	0.00126	0.00383	"	"	"	"	"	U
Anthracene	ND	0.00126	0.00383	"	"	"	"	"	U
Benzo(a)anthracene	ND	0.00126	0.00383	"	"	"	"	"	U
Benzo(a)pyrene	ND	0.00126	0.00383	"	"	"	"	"	U
Benzo(b)fluoranthene	ND	0.00126	0.00383	"	"	"	"	"	U
Benzo(k)fluoranthene	ND	0.00126	0.00383	"	"	"	"	"	U
Chrysene	ND	0.00126	0.00383	"	"	"	"	"	U
Dibenzo(a,h)anthracene	ND	0.00126	0.00383	"	"	"	"	"	U
Fluoranthene	ND	0.00126	0.00383	"	"	"	"	"	U

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 - Jones Guy H Gas UN2

WH-B01@6'

11/21/2024 12:50:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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GEL Laboratories, LLC

E4K0652-11 (Soil)

PAH by 8270E SIM

Fluorene	ND	0.00126	0.00383	mg/kg dry	1	2714859	12/04/2024	12/04/2024	U
Indeno(1,2,3-cd)pyrene	ND	0.00126	0.00383	"	"	"	"	"	U
Naphthalene	ND	0.00126	0.00383	"	"	"	"	"	U
Pyrene	ND	0.00126	0.00383	"	"	"	"	"	U

Surrogate: 5-alpha-Androstane 67 % 22-135 " " "

pH in Soil by 9045D

pH 11.4 pH Units 1 B4K2225 11/22/2024 11/25/2024

SAR by 20B Saturated Paste

SAR 4.36 0.0100 SAR 1 B4K2218 11/22/2024 11/25/2024

Specific Conductance Mod. 9050A

Specific Conductance (EC) 1.26 0.00500 mmhos/cm 1 B4K2225 11/22/2024 11/25/2024

Table 915 metals by EPA 6020B

Arsenic	5.93	0.278	mg/kg	10	B4K2145	11/21/2024	11/22/2024
Barium	101	9.58	"	"	"	"	"
Cadmium	0.325	0.0958	"	"	"	"	"

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 - Jones Guy H Gas UN2

WH-B01@6'

11/21/2024 12:50:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-11 (Soil)

Table 915 metals by EPA 6020B

Copper	13.0		9.58	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Lead	11.5		0.958	"	"	"	"	"	
Nickel	12.5		0.958	"	"	"	"	"	
Selenium	ND		0.249	"	"	"	"	"	
Silver	ND		0.0958	"	"	"	"	"	
Zinc	46.9		35.4	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.163	0.409	mg/kg dry	1	2722490	12/20/2024	12/27/2024	U
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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 - Jones Guy H Gas UN2

FL-B01@4'

11/21/2024 12:59:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-12 (Soil)

Boron (DTPA Sorbitol)

Boron	0.212		0.0988	mg/L	1	B4K2210	11/22/2024	11/25/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4K2146	11/21/2024	11/21/2024	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	78.5 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4K2147	11/21/2024	11/22/2024	Ua
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Benzene	ND		0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Toluene	ND		0.00200	"	"	"	"	"	Ua
Xylenes, total	ND		0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	Ua

Surrogate: 1,2-Dichloroethane-d4	112 %		70-130			"	"	"	
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Origins Laboratory



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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

FL-B01@4'

11/21/2024 12:59:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-12 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	100 %		70-130			B4K21 47	11/21/2024	11/22/2024	
Surrogate: 4-Bromofluorobenzene	110 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	1.55		0.499	meq/L	10	[CALC]	11/22/2024	11/25/2024	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	0.927		0.435	"	"	"	"	"	

PAH by 8270E SIM

1-Methylnaphthalene	ND	0.00124	0.00375	mg/kg dry	1	2714859	12/04/2024	12/04/2024	U
2-Methylnaphthalene	ND	0.00124	0.00375	"	"	"	"	"	U
Acenaphthene	0.00375	0.00124	0.00375	"	"	"	"	"	
Anthracene	0.0413	0.00124	0.00375	"	"	"	"	"	
Benzo(a)anthracene	0.265	0.00124	0.00375	"	"	"	"	"	
Benzo(a)pyrene	0.161	0.00124	0.00375	"	"	"	"	"	
Benzo(b)fluoranthene	0.236	0.00124	0.00375	"	"	"	"	"	
Benzo(k)fluoranthene	0.0732	0.00124	0.00375	"	"	"	"	"	
Chrysene	0.241	0.00124	0.00375	"	"	"	"	"	
Dibenzo(a,h)anthracene	0.0221	0.00124	0.00375	"	"	"	"	"	
Fluoranthene	0.524	0.00124	0.00375	"	"	"	"	"	
Fluorene	0.00525	0.00124	0.00375	"	"	"	"	"	

Origins Laboratory



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Quandary Consultants
 2252 Emerson St.
 Denver CO 80205

Mike Dinkel
 Project Number: [none]
 Project: KMG - Jones Guy H Gas UN2

FL-B01@4'

11/21/2024 12:59:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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GEL Laboratories, LLC

E4K0652-12 (Soil)

PAH by 8270E SIM

Indeno(1,2,3-cd)pyrene	0.0826	0.00124	0.00375	mg/kg dry	1	2714859	12/04/2024	12/04/2024	
Naphthalene	ND	0.00124	0.00375	"	"	"	"	"	U
Pyrene	0.460	0.00124	0.00375	"	"	"	"	"	

Surrogate: 5-alpha-Androstane 81 % 22-135 " " "

pH in Soil by 9045D

pH 8.34 pH Units 1 B4K2225 11/22/2024 11/25/2024

SAR by 20B Saturated Paste

SAR 0.882 0.0100 SAR 1 B4K2218 11/22/2024 11/25/2024

Specific Conductance Mod. 9050A

Specific Conductance (EC) 0.391 0.00500 mmhos/cm 1 B4K2225 11/22/2024 11/25/2024

Table 915 metals by EPA 6020B

Arsenic	3.66	0.280	mg/kg	10	B4K2145	11/21/2024	11/22/2024
Barium	74.0	9.67	"	"	"	"	"
Cadmium	0.159	0.0967	"	"	"	"	"
Copper	ND	9.67	"	"	"	"	"

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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

FL-B01@4'

11/21/2024 12:59:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-12 (Soil)

Table 915 metals by EPA 6020B

Lead	8.12		0.967	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Nickel	8.52		0.967	"	"	"	"	"	
Selenium	ND		0.251	"	"	"	"	"	
Silver	ND		0.0967	"	"	"	"	"	
Zinc	ND		35.8	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.174	0.435	mg/kg dry	1	2722490	12/20/2024	12/27/2024	U
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Origins Laboratory



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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

FL-B03@2'

11/21/2024 1:21:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-13 (Soil)

Boron (DTPA Sorbitol)

Boron	0.149		0.0988	mg/L	1	B4K2210	11/22/2024	11/25/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4K2146	11/21/2024	11/21/2024	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	78.5 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4K2147	11/21/2024	11/22/2024	Ua
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Benzene	ND		0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Toluene	ND		0.00200	"	"	"	"	"	Ua
Xylenes, total	ND		0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	Ua

Surrogate: 1,2-Dichloroethane-d4	105 %		70-130			"	"	"	
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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

FL-B03@2'

11/21/2024 1:21:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-13 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	108 %		70-130			B4K21 47	11/21/2024	11/22/2024	
Surrogate: 4-Bromofluorobenzene	95.8 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	1.71		0.499	meq/L	10	[CALC]	11/22/2024	11/25/2024	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

PAH by 8270E SIM

1-Methylnaphthalene	ND	0.00121	0.00367	mg/kg dry	1	2714859	12/04/2024	12/04/2024	U
2-Methylnaphthalene	ND	0.00121	0.00367	"	"	"	"	"	U
Acenaphthene	ND	0.00121	0.00367	"	"	"	"	"	U
Anthracene	ND	0.00121	0.00367	"	"	"	"	"	U
Benzo(a)anthracene	0.00660	0.00121	0.00367	"	"	"	"	"	
Benzo(a)pyrene	0.00660	0.00121	0.00367	"	"	"	"	"	
Benzo(b)fluoranthene	0.00990	0.00121	0.00367	"	"	"	"	"	
Benzo(k)fluoranthene	0.00293	0.00121	0.00367	"	"	"	"	"	J
Chrysene	0.00660	0.00121	0.00367	"	"	"	"	"	
Dibenzo(a,h)anthracene	ND	0.00121	0.00367	"	"	"	"	"	U
Fluoranthene	0.00807	0.00121	0.00367	"	"	"	"	"	
Fluorene	ND	0.00121	0.00367	"	"	"	"	"	U

Origins Laboratory



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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

FL-B03@2'

11/21/2024 1:21:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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GEL Laboratories, LLC

E4K0652-13 (Soil)

PAH by 8270E SIM

Indeno(1,2,3-cd)pyrene	0.00367	0.00121	0.00367	mg/kg dry	1	2714859	12/04/2024	12/04/2024	
Naphthalene	ND	0.00121	0.00367	"	"	"	"	"	U
Pyrene	0.0103	0.00121	0.00367	"	"	"	"	"	

Surrogate: 5-alpha-Androstane 79 % 22-135 " " "

pH in Soil by 9045D

pH	8.28			pH Units	1	B4K2225	11/22/2024	11/25/2024	
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SAR by 20B Saturated Paste

SAR	0.280		0.0100	SAR	1	B4K2218	11/22/2024	11/25/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.330		0.00500	mmhos/cm	1	B4K2225	11/22/2024	11/25/2024	
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Table 915 metals by EPA 6020B

Arsenic	2.23		0.249	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Barium	51.7		8.60	"	"	"	"	"	
Cadmium	0.153		0.0860	"	"	"	"	"	
Copper	ND		8.60	"	"	"	"	"	

Origins Laboratory



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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

FL-B03@2'

11/21/2024 1:21:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0652-13 (Soil)

Table 915 metals by EPA 6020B

Lead	6.63		0.860	mg/kg	10	B4K2145	11/21/2024	11/22/2024	
Nickel	6.97		0.860	"	"	"	"	"	
Selenium	ND		0.223	"	"	"	"	"	
Silver	ND		0.0860	"	"	"	"	"	
Zinc	ND		31.8	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.100	0.251	mg/kg dry	1	2722490	12/20/2024	12/27/2024	U
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Origins Laboratory



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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

GW-01

11/21/2024 1:30:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory
E4K0652-14 (Water)**

Anions by IC 300.0

Chloride	427		31.2	mg/L	125	B4K2203	11/22/2024	11/23/2024	
Sulfate	1760		31.2	"	"	"	"	"	

BTEX+N+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		2.00	ug/L	1	B4K2161	11/21/2024	11/21/2024	Ua
1,3,5-Trimethylbenzene	ND		2.00	"	"	"	"	"	Ua
Benzene	ND		1.00	"	"	"	"	"	Ua
Ethylbenzene	ND		1.00	"	"	"	"	"	Ua
Naphthalene	ND		2.00	"	"	"	"	"	Ua
Toluene	ND		1.00	"	"	"	"	"	Ua
Xylenes, total	ND		1.00	"	"	"	"	"	Ua

Surrogate: 1,2-Dichloroethane-d4	112 %		70-130			"	"	"	
Surrogate: Toluene-d8	102 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %		70-130			"	"	"	

Total Dissolved Solids by 2540C

Total Dissolved Solids	3820		5.00	mg/L	1	B4K2743	11/27/2024	12/01/2024	
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Origins Laboratory



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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4K2146 - EPA 3550B										
Blank (B4K2146-BLK1)										
					Prepared: 11/21/2024 Analyzed: 11/21/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							Ua
Residual Range Organics (C28-C40)	ND	100	"							Ua
Surrogate: o-Terphenyl	19		"	24.9		78.3	50-150			

Origins Laboratory



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Quandary Consultants
 2252 Emerson St.
 Denver CO 80205

Mike Dinkel
 Project Number: [none]
 Project: KMG - Jones Guy H Gas UN2

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4K2146 - EPA 3550B										
LCS (B4K2146-BS1)										
					Prepared: 11/21/2024 Analyzed: 11/21/2024					
Diesel (C10-C28)	990	50.0	mg/kg	1000		99.0	70-130			
Residual Range Organics (C28-C40)	1040	200	"	1000		104	70-130			
Surrogate: o-Terphenyl	49		"	49.8		97.6	50-150			

Origins Laboratory

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Jordan A. Bynon, Project Manager



Quandary Consultants
 2252 Emerson St.
 Denver CO 80205

Mike Dinkel
 Project Number: [none]
 Project: KMG - Jones Guy H Gas UN2

Extractable Petroleum Hydrocarbons by 8015D - 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 B4K2146 - EPA 3550B

Matrix Spike (B4K2146-MS1)	Source: E4K0651-15		Prepared: 11/21/2024 Analyzed: 11/21/2024							
Diesel (C10-C28)	956	50.0	mg/kg	1000	ND	95.6	70-130			
Residual Range Organics (C28-C40)	999	200	"	1000	ND	99.9	70-130			
Surrogate: o-Terphenyl	48		"	49.8		96.5	50-150			

Origins Laboratory

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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4K2146 - EPA 3550B										
Matrix Spike Dup (B4K2146-MSD1)		Source: E4K0651-15			Prepared: 11/21/2024 Analyzed: 11/21/2024					
Diesel (C10-C28)	981	50.0	mg/kg	1000	ND	98.1	70-130	2.52	35	
Residual Range Organics (C28-C40)	1020	200	"	1000	ND	102	70-130	2.38	35	
Surrogate: o-Terphenyl	50		"	49.8		99.9	50-150			

Origins Laboratory



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Quandary Consultants
 2252 Emerson St.
 Denver CO 80205

Mike Dinkel
 Project Number: [none]
 Project: KMG - Jones Guy H Gas UN2

Extractable Petroleum Hydrocarbons by 8015D - 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 B4K2147 - EPA 5030 (soil)

Blank (B4K2147-BLK1)

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

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							Ua
1,3,5-Trimethylbenzene	ND	0.00200	"							Ua
Benzene	ND	0.00200	"							Ua
Ethylbenzene	ND	0.00200	"							Ua
Naphthalene	ND	0.00380	"							Ua
Toluene	ND	0.00200	"							Ua
Xylenes, total	ND	0.00200	"							Ua
Gasoline Range Hydrocarbons	ND	0.200	"							Ua
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125	103		70-130			
Surrogate: Toluene-d8	0.13		"	0.125	106		70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	96.7		70-130			

Origins Laboratory

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Jordan A. Bynon, Project Manager

Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

Volatile Organic Compounds by GC/MS SW846 8260D - 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 B4K2147 - EPA 5030 (soil)

LCS (B4K2147-BS1)

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

1,2,4-Trimethylbenzene	0.104	0.00200	mg/kg	0.100		104	70-130			
1,3,5-Trimethylbenzene	0.105	0.00200	"	0.100		105	70-130			
Benzene	0.0916	0.00200	"	0.100		91.6	70-130			
Ethylbenzene	0.108	0.00200	"	0.100		108	70-130			
Naphthalene	0.107	0.00380	"	0.100		107	70-130			
Toluene	0.0963	0.00200	"	0.100		96.3	70-130			
o-Xylene	0.106	0.00200	"	0.100		106	70-130			
m,p-Xylene	0.216	0.00400	"	0.200		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.7	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		105	70-130			

Origins Laboratory



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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

Volatile Organic Compounds by GC/MS SW846 8260D - 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 B4K2147 - EPA 5030 (soil)

Matrix Spike (B4K2147-MS1)	Source: E4K0651-14			Prepared: 11/21/2024 Analyzed: 11/21/2024						
1,2,4-Trimethylbenzene	0.100	0.00200	mg/kg	0.100	ND	100	70-130			
1,3,5-Trimethylbenzene	0.101	0.00200	"	0.100	ND	101	70-130			
Benzene	0.0929	0.00200	"	0.100	ND	92.9	70-130			
Ethylbenzene	0.104	0.00200	"	0.100	ND	104	70-130			
Naphthalene	0.105	0.00380	"	0.100	ND	105	70-130			
Toluene	0.0967	0.00200	"	0.100	ND	96.7	70-130			
o-Xylene	0.104	0.00200	"	0.100	ND	104	70-130			
m,p-Xylene	0.208	0.00400	"	0.200	ND	104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		106	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		105	70-130			

Origins Laboratory



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Quandary Consultants
2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

Volatile Organic Compounds by GC/MS SW846 8260D - 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 B4K2147 - EPA 5030 (soil)

Matrix Spike Dup (B4K2147-MSD1)	Source: E4K0651-14			Prepared: 11/21/2024 Analyzed: 11/21/2024						
1,2,4-Trimethylbenzene	0.0957	0.00200	mg/kg	0.100	ND	95.7	70-130	4.64	20	
1,3,5-Trimethylbenzene	0.0959	0.00200	"	0.100	ND	95.9	70-130	5.36	20	
Benzene	0.0920	0.00200	"	0.100	ND	92.0	70-130	0.974	20	
Ethylbenzene	0.101	0.00200	"	0.100	ND	101	70-130	2.94	20	
Naphthalene	0.100	0.00380	"	0.100	ND	100	70-130	4.74	20	
Toluene	0.0940	0.00200	"	0.100	ND	94.0	70-130	2.79	20	
o-Xylene	0.101	0.00200	"	0.100	ND	101	70-130	2.84	20	
m,p-Xylene	0.202	0.00400	"	0.200	ND	101	70-130	2.84	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		107	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	70-130			

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Mike Dinkel
 Project Number: [none]
 Project: KMG - Jones Guy H Gas UN2

Volatile Organic Compounds by GC/MS SW846 8260D - 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 B4K2161 - EPA 5030B (Water)

Blank (B4K2161-BLK1)

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

1,2,4-Trimethylbenzene	ND	2.00	ug/L							Ua
1,3,5-Trimethylbenzene	ND	2.00	"							Ua
Benzene	ND	1.00	"							Ua
Ethylbenzene	ND	1.00	"							Ua
Naphthalene	ND	2.00	"							Ua
Toluene	ND	1.00	"							Ua
Xylenes, total	ND	1.00	"							Ua
<i>Surrogate: 1,2-Dichloroethane-d4</i>	70		"	62.5	112		70-130			
<i>Surrogate: Toluene-d8</i>	62		"	62.5	99.4		70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	65		"	62.5	105		70-130			

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Volatile Organic Compounds by GC/MS SW846 8260D - 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 B4K2161 - EPA 5030B (Water)

LCS (B4K2161-BS1)

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

1,2,4-Trimethylbenzene	44.4	2.00	ug/L	50.0		88.7	70-130			
1,3,5-Trimethylbenzene	48.5	2.00	"	50.0		96.9	70-130			
Benzene	42.6	1.00	"	50.0		85.2	70-130			
Ethylbenzene	48.4	1.00	"	50.0		96.8	70-130			
m,p-Xylene	87.3	2.00	"	100		87.3	70-130			
Naphthalene	59.4	2.00	"	50.0		119	70-130			
o-Xylene	43.5	1.00	"	50.0		87.0	70-130			
Toluene	42.8	1.00	"	50.0		85.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	72		"	62.5		115	70-130			
Surrogate: Toluene-d8	64		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		105	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260D - 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 B4K2161 - EPA 5030B (Water)

Matrix Spike (B4K2161-MS1)	Source: E4K0652-14			Prepared: 11/21/2024 Analyzed: 11/21/2024						
1,2,4-Trimethylbenzene	51.9	2.00	ug/L	50.0	ND	104	70-130			
1,3,5-Trimethylbenzene	58.5	2.00	"	50.0	ND	117	70-130			
Benzene	50.3	1.00	"	50.0	ND	101	70-130			
Ethylbenzene	56.4	1.00	"	50.0	ND	113	70-130			
m,p-Xylene	103	2.00	"	100	ND	103	70-130			
Naphthalene	66.6	2.00	"	50.0	0.440	132	70-130			QM-07
o-Xylene	50.1	1.00	"	50.0	ND	100	70-130			
Toluene	49.3	1.00	"	50.0	ND	98.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	73		"	62.5		116	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	70-130			

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Project: KMG - Jones Guy H Gas UN2

Volatile Organic Compounds by GC/MS SW846 8260D - 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 B4K2161 - EPA 5030B (Water)

Matrix Spike Dup (B4K2161-MSD1)	Source: E4K0652-14				Prepared: 11/21/2024 Analyzed: 11/21/2024					
1,2,4-Trimethylbenzene	51.9	2.00	ug/L	50.0	ND	104	70-130	0.0385	20	
1,3,5-Trimethylbenzene	57.7	2.00	"	50.0	ND	115	70-130	1.45	20	
Benzene	49.9	1.00	"	50.0	ND	99.7	70-130	0.898	20	
Ethylbenzene	56.0	1.00	"	50.0	ND	112	70-130	0.658	20	
m,p-Xylene	101	2.00	"	100	ND	101	70-130	1.67	20	
Naphthalene	71.6	2.00	"	50.0	0.440	142	70-130	7.15	20	QM-07
o-Xylene	50.4	1.00	"	50.0	ND	101	70-130	0.537	20	
Toluene	49.2	1.00	"	50.0	ND	98.5	70-130	0.122	20	
Surrogate: 1,2-Dichloroethane-d4	72		"	62.5		116	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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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 B4K2145 - EPA 3050B

Blank (B4K2145-BLK1)

Prepared: 11/21/2024 Analyzed: 11/22/2024

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 (B4K2145-BS1)

Prepared: 11/21/2024 Analyzed: 11/22/2024

Arsenic	5.91	0.290	mg/kg	5.00	118	80-120
Barium	528	10.0	"	500	106	80-120
Cadmium	5.86	0.100	"	5.00	117	80-120
Copper	59.0	10.0	"	50.0	118	80-120
Lead	5.45	1.00	"	5.00	109	80-120
Nickel	5.79	1.00	"	5.00	116	80-120
Selenium	5.50	0.260	"	5.00	110	80-120
Silver	5.81	0.100	"	5.00	116	80-120
Zinc	58.9	37.0	"	50.0	118	80-120

Matrix Spike (B4K2145-MS1)

Source: E4K0648-03

Prepared: 11/21/2024 Analyzed: 11/22/2024

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 Project: KMG - Jones Guy H Gas UN2

Metals by EPA 6000/7000 Series Methods - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4K2145 - EPA 3050B

Matrix Spike (B4K2145-MS1)	Source: E4K0648-03			Prepared: 11/21/2024 Analyzed: 11/22/2024						
Arsenic	8.33	0.268	mg/kg	4.62	4.37	85.7	75-125			
Barium	598	9.23	"	462	52.4	118	75-125			
Cadmium	5.64	0.0923	"	4.62	0.110	120	75-125			
Copper	62.2	9.23	"	46.2	6.61	120	75-125			
Lead	9.59	0.923	"	4.62	5.07	97.9	75-125			
Nickel	11.8	0.923	"	4.62	7.17	101	75-125			
Selenium	5.31	0.240	"	4.62	0.159	112	75-125			
Silver	5.56	0.0923	"	4.62	0.0112	120	75-125			
Zinc	76.0	34.2	"	46.2	23.3	114	75-125			

Matrix Spike Dup (B4K2145-MSD1)	Source: E4K0648-03			Prepared: 11/21/2024 Analyzed: 11/22/2024						
Arsenic	8.77	0.277	mg/kg	4.78	4.37	92.2	75-125	5.21	20	
Barium	609	9.55	"	478	52.4	117	75-125	1.80	20	
Cadmium	5.80	0.0955	"	4.78	0.110	119	75-125	2.88	20	
Copper	62.4	9.55	"	47.8	6.61	117	75-125	0.302	20	
Lead	10.3	0.955	"	4.78	5.07	109	75-125	6.80	20	
Nickel	11.9	0.955	"	4.78	7.17	98.6	75-125	0.462	20	
Selenium	5.53	0.248	"	4.78	0.159	112	75-125	4.11	20	
Silver	5.69	0.0955	"	4.78	0.0112	119	75-125	2.22	20	
Zinc	78.4	35.3	"	47.8	23.3	116	75-125	3.19	20	

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Classical Chemistry Parameters - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4K2203 - Filter .45um non acidified

Blank (B4K2203-BLK1)

Prepared: 11/22/2024 Analyzed: 11/22/2024

Chloride	ND	0.250	mg/L						
Sulfate	ND	0.250	"						

LCS (B4K2203-BS1)

Prepared: 11/22/2024 Analyzed: 11/23/2024

Chloride	3.97	0.250	mg/L	4.00		99.3	90-110		
Sulfate	3.91	0.250	"	4.00		97.7	90-110		

Matrix Spike (B4K2203-MS1)

Source: E4K0652-14

Prepared: 11/22/2024 Analyzed: 11/23/2024

Chloride	940		mg/L	500	427	103	90-110		
Sulfate	2270		"	500	1760	101	90-110		

Matrix Spike Dup (B4K2203-MSD1)

Source: E4K0652-14

Prepared: 11/22/2024 Analyzed: 11/23/2024

Chloride	945		mg/L	500	427	104	90-110	0.520	5
Sulfate	2290		"	500	1760	106	90-110	1.07	5

Batch B4K2210 - DTPA Sorbitol Preparation

Blank (B4K2210-BLK1)

Prepared: 11/22/2024 Analyzed: 11/25/2024

Boron	ND	0.100	mg/L						
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Duplicate (B4K2210-DUP1)

Source: E4K0648-01

Prepared: 11/22/2024 Analyzed: 11/25/2024

Boron	0.0464	0.0987	mg/L		0.0424			8.99	50
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Batch B4K2218 - Saturated Paste Metals

Blank (B4K2218-BLK1)

Prepared: 11/22/2024 Analyzed: 11/25/2024

Calcium PPM	ND	10.0	mg/L						
SAR	ND	0.0100	SAR						
Magnesium PPM	ND	10.0	mg/L						

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 Project: KMG - Jones Guy H Gas UN2

Classical Chemistry Parameters - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4K2218 - Saturated Paste Metals

Blank (B4K2218-BLK1)

Prepared: 11/22/2024 Analyzed: 11/25/2024

Sodium PPM ND 10.0 mg/L

Duplicate (B4K2218-DUP1)

Source: E4K0648-01

Prepared: 11/22/2024 Analyzed: 11/25/2024

SAR	ND	0.0100	SAR		1.27				200	
Calcium PPM	18.1	10.0	mg/L		15.6			14.4	50	
Magnesium PPM	4.67	10.0	"		4.04			14.5	50	
Sodium PPM	27.8	10.0	"		21.8			24.2	50	

Batch B4K2743 - NO PREP

Blank (B4K2743-BLK1)

Prepared: 11/27/2024 Analyzed: 12/01/2024

Total Dissolved Solids ND 5.00 mg/L

LCS (B4K2743-BS1)

Prepared: 11/27/2024 Analyzed: 12/01/2024

Total Dissolved Solids 986 5.00 mg/L 1010 97.6 90-110

Duplicate (B4K2743-DUP1)

Source: E4K0542-02

Prepared: 11/27/2024 Analyzed: 12/01/2024

Total Dissolved Solids 878 5.00 mg/L 888 1.13 10

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Project: KMG - Jones Guy H Gas UN2

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 B4K2225 - Saturated Paste pH/EC

Blank (B4K2225-BLK1)

Prepared: 11/22/2024 Analyzed: 11/25/2024

Specific Conductance (EC) ND 0.00500 mmhos/cm

Duplicate (B4K2225-DUP1)

Source: E4K0648-01

Prepared: 11/22/2024 Analyzed: 11/25/2024

pH	8.26		pH Units	8.30			0.483	25	
Specific Conductance (EC)	0.331	0.00500	mmhos/cm	0.309			6.69	25	

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 Project Number: [none]
 Project: KMG - Jones Guy H Gas UN2

PAH by 8270E SIM - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2714859 - SW846 3541

BLANK (1205937782-BLK)

Prepared: 12/04/2024 Analyzed: 12/04/2024

Benzo(k)fluoranthene	ND	0.00328	mg/kg				-			U
Benzo(b)fluoranthene	ND	0.00328	"				-			U
1-Methylnaphthalene	ND	0.00328	"				-			U
2-Methylnaphthalene	ND	0.00328	"				-			U
Acenaphthene	ND	0.00328	"				-			U
Anthracene	ND	0.00328	"				-			U
Dibenzo(a,h)anthracene	ND	0.00328	"				-			U
Benzo(a)pyrene	ND	0.00328	"				-			U
Pyrene	ND	0.00328	"				-			U
Chrysene	ND	0.00328	"				-			U
Fluoranthene	ND	0.00328	"				-			U
Fluorene	ND	0.00328	"				-			U
Indeno(1,2,3-cd)pyrene	ND	0.00328	"				-			U
Naphthalene	ND	0.00328	"				-			U
Benzo(a)anthracene	ND	0.00328	"				-			U

Surrogate: 5-alpha-Androstane

0.160

"

0.164

97

22-135

LCS (1205937783-BKS)

Prepared: 12/04/2024 Analyzed: 12/04/2024

1-Methylnaphthalene	0.245	0.00332	mg/kg	0.332		74	39-109			
Benzo(k)fluoranthene	0.237	0.00332	"	0.332		71	40-122			
2-Methylnaphthalene	0.256	0.00332	"	0.332		77	39-110			
Acenaphthene	0.244	0.00332	"	0.332		74	41-112			
Anthracene	0.250	0.00332	"	0.332		75	41-117			
Benzo(a)anthracene	0.260	0.00332	"	0.332		78	42-120			
Benzo(b)fluoranthene	0.254	0.00332	"	0.332		76	39-123			
Pyrene	0.248	0.00332	"	0.332		75	38-117			
Chrysene	0.258	0.00332	"	0.332		78	42-117			

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Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2714859 - SW846 3541

LCS (1205937783-BKS)

Prepared: 12/04/2024 Analyzed: 12/04/2024

Dibenzo(a,h)anthracene	0.255	0.00332	mg/kg	0.332		77	38-132			
Fluoranthene	0.254	0.00332	"	0.332		76	39-119			
Fluorene	0.241	0.00332	"	0.332		73	37-115			
Indeno(1,2,3-cd)pyrene	0.259	0.00332	"	0.332		78	38-133			
Naphthalene	0.246	0.00332	"	0.332		74	38-109			
Benzo(a)pyrene	0.262	0.00332	"	0.332		79	39-127			
Surrogate: 5-alpha-Androstane	0.154		"	0.166		93	22-135			

LCSD (1205937784-BKSD)

Prepared: 12/04/2024 Analyzed: 12/04/2024

Fluoranthene	0.202	0.00332	mg/kg	0.332		61	39-119	22	30	
Fluorene	0.194	0.00332	"	0.332		58	37-115	22	30	
Indeno(1,2,3-cd)pyrene	0.205	0.00332	"	0.332		62	38-133	23	30	
Naphthalene	0.195	0.00332	"	0.332		59	38-109	23	30	
Dibenzo(a,h)anthracene	0.204	0.00332	"	0.332		61	38-132	22	30	
Chrysene	0.204	0.00332	"	0.332		62	42-117	23	30	
Benzo(k)fluoranthene	0.189	0.00332	"	0.332		57	40-122	22	30	
Benzo(b)fluoranthene	0.200	0.00332	"	0.332		60	39-123	24	30	
Benzo(a)anthracene	0.203	0.00332	"	0.332		61	42-120	24	30	
Anthracene	0.198	0.00332	"	0.332		60	41-117	23	30	
Acenaphthene	0.193	0.00332	"	0.332		58	41-112	23	30	
1-Methylnaphthalene	0.194	0.00332	"	0.332		59	39-109	23	30	
2-Methylnaphthalene	0.204	0.00332	"	0.332		61	39-110	23	30	
Benzo(a)pyrene	0.210	0.00332	"	0.332		63	39-127	22	30	
Pyrene	0.196	0.00332	"	0.332		59	38-117	23	30	
Surrogate: 5-alpha-Androstane	0.121		"	0.166		73	22-135			

MS (1205937785 S)

Source: 697609001

Prepared: 12/04/2024 Analyzed: 12/04/2024

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 Project: KMG - Jones Guy H Gas UN2

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2714859 - SW846 3541

MS (1205937785 S)	Source: 697609001			Prepared: 12/04/2024 Analyzed: 12/04/2024						
1-Methylnaphthalene	0.285	0.00412	mg/kg dry	0.412	<0.00136	69	15-129			
Benzo(k)fluoranthene	0.273	0.00412	"	0.412	<0.00136	66	18-138			
Benzo(b)fluoranthene	0.290	0.00412	"	0.412	<0.00136	70	14-136			
Benzo(a)pyrene	0.304	0.00412	"	0.412	<0.00136	74	16-133			
Benzo(a)anthracene	0.299	0.00412	"	0.412	<0.00136	73	20-132			
Anthracene	0.289	0.00412	"	0.412	<0.00136	70	18-136			
Acenaphthene	0.278	0.00412	"	0.412	<0.00136	67	17-129			
2-Methylnaphthalene	0.295	0.00412	"	0.412	<0.00136	71	15-132			
Dibenzo(a,h)anthracene	0.297	0.00412	"	0.412	<0.00136	72	11-134			
Fluoranthene	0.294	0.00412	"	0.412	<0.00136	71	14-136			
Fluorene	0.278	0.00412	"	0.412	<0.00136	68	16-134			
Indeno(1,2,3-cd)pyrene	0.297	0.00412	"	0.412	<0.00136	72	13-134			
Naphthalene	0.276	0.00412	"	0.412	<0.00136	67	16-126			
Pyrene	0.290	0.00412	"	0.412	<0.00136	70	12-139			
Chrysene	0.299	0.00412	"	0.412	<0.00136	72	19-129			

Surrogate: 5-alpha-Androstane 0.161 " 0.206 0.177 78 22-135

MSD (1205937786 SD)	Source: 697609001			Prepared: 12/04/2024 Analyzed: 12/04/2024						
Benzo(a)anthracene	0.268	0.00411	mg/kg dry	0.411	<0.00136	65	20-132	11	30	
Fluoranthene	0.261	0.00411	"	0.411	<0.00136	64	14-136	12	30	
Fluorene	0.251	0.00411	"	0.411	<0.00136	61	16-134	11	30	
Indeno(1,2,3-cd)pyrene	0.262	0.00411	"	0.411	<0.00136	64	13-134	12	30	
Naphthalene	0.235	0.00411	"	0.411	<0.00136	57	16-126	16	30	
Pyrene	0.255	0.00411	"	0.411	<0.00136	62	12-139	13	30	
Chrysene	0.260	0.00411	"	0.411	<0.00136	63	19-129	14	30	
Benzo(a)pyrene	0.274	0.00411	"	0.411	<0.00136	67	16-133	11	30	
Dibenzo(a,h)anthracene	0.261	0.00411	"	0.411	<0.00136	64	11-134	13	30	

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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 - Jones Guy H Gas UN2

PAH by 8270E SIM - 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 2714859 - SW846 3541

MSD (1205937786 SD)	Source: 697609001			Prepared: 12/04/2024 Analyzed: 12/04/2024						
Benzo(b)fluoranthene	0.259	0.00411	mg/kg dry	0.411	<0.00136	63	14-136	11	30	
Anthracene	0.258	0.00411	"	0.411	<0.00136	63	18-136	12	30	
Acenaphthene	0.249	0.00411	"	0.411	<0.00136	60	17-129	11	30	
2-Methylnaphthalene	0.252	0.00411	"	0.411	<0.00136	61	15-132	16	30	
1-Methylnaphthalene	0.241	0.00411	"	0.411	<0.00136	59	15-129	17	30	
Benzo(k)fluoranthene	0.245	0.00411	"	0.411	<0.00136	60	18-138	11	30	
Surrogate: 5-alpha-Androstane	0.137		"	0.205	0.177	67	22-135			

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2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

**Total Metals by 7196A - Quality Control
GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2722490 - SW846 3060A										
BLANK (1205953283-BLK)					Prepared: 12/20/2024 Analyzed: 12/27/2024					
Hexavalent Chromium	ND	0.397	mg/kg				-			U
LCS (1205953284-BKS)					Prepared: 12/20/2024 Analyzed: 12/27/2024					
Hexavalent Chromium	3.42	0.340	mg/kg	3.40		101	80-120			
DUP (1205953285 D)					Source: E4K0652-01 Prepared: 12/20/2024 Analyzed: 12/27/2024					
Hexavalent Chromium	ND	0.395	mg/kg dry		<0.158		0-50	N/A	50	U
MS (1205953286 S)					Source: E4K0652-01 Prepared: 12/20/2024 Analyzed: 12/27/2024					
Hexavalent Chromium	2.78	0.394	mg/kg dry	3.94	<0.158	70.1	75-125			
DUP (1205953287 D)					Source: E4K0652-02 Prepared: 12/20/2024 Analyzed: 12/27/2024					
Hexavalent Chromium	ND	0.466	mg/kg dry		<0.187		0-50	N/A	50	U
MS (1205953288 S)					Source: E4K0652-02 Prepared: 12/20/2024 Analyzed: 12/27/2024					
Hexavalent Chromium	3.71	0.467	mg/kg dry	4.67	<0.187	79	75-125			
ILCS (1205953289-ILCS)					Prepared: 12/20/2024 Analyzed: 12/27/2024					
Hexavalent Chromium	7.41	0.346	mg/kg	7.01		106	80-120			

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2252 Emerson St.
Denver CO 80205

Mike Dinkel
Project Number: [none]
Project: KMG - Jones Guy H Gas UN2

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.

J Greater than the detection limit but less than the reporting limit

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported on a wet weight basis.

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Jordan A. Bynon, Project Manager