



Tasman Geosciences

Andy Sagen

6855 West 119th Avenue

Broomfield CO 80020

October 10, 2024

**Project Name - KMG - Tuttle L 16-7**

**Project Number - GS-10048**

Attached are your analytical results for KMG - Tuttle L 16-7 received by Origins Laboratory September 20, 2024. This project is associated with Origins project number E409652-01.

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



Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01R2-092024	E409652-01	Water	September 20, 2024 14:20	09/20/2024 16:50
BH04R-092024	E409652-02	Water	September 20, 2024 13:35	09/20/2024 16:50
BH08R-092024	E409652-03	Water	September 20, 2024 14:35	09/20/2024 16:50
BH09R-092024	E409652-04	Water	September 20, 2024 14:45	09/20/2024 16:50
BH10-092024	E409652-05	Water	September 20, 2024 14:24	09/20/2024 16:50
BH11R-092024	E409652-06	Water	September 20, 2024 13:58	09/20/2024 16:50
BH12-092024	E409652-07	Water	September 20, 2024 13:26	09/20/2024 16:50
BH13-092024	E409652-08	Water	September 20, 2024 14:37	09/20/2024 16:50
BH14-092024	E409652-09	Water	September 20, 2024 14:11	09/20/2024 16:50
BH15-092024	E409652-10	Water	September 20, 2024 13:50	09/20/2024 16:50
BH16-092024	E409652-11	Water	September 20, 2024 12:55	09/20/2024 16:50
BH17-092024	E409652-12	Water	September 20, 2024 13:08	09/20/2024 16:50

Origins Laboratory

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6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

# ORIGINS

LABORATORY, INC

www.originslaboratory.com

F4090052

page ☐ of ☐ 2

Client: GSH/Tasman  
Address: 6855 W 119th Ave.  
Broomfield, CO 80020  
Telephone Number: (720) 939-3631 (Call with any questions)  
Email Address: OXY/Tasman Distribution List

Project Manager: Andy Sagen  
Project Name: Tuttle L 16-7  
Project Number: GS-10048  
Samples Collected By: *[Signature]*

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				EOMC Table 915 methods	Sample Instructions	
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa #	Other	BTEXN	1,2,4 TMB	1,3,5 TMB			TDS
BH01R-092024	9/20/24	1420	1														
BH04R-092024	9/20/24	1339	1														
BH08R-092024	9/20/24	1435	1														
BH09R-092024	9/20/24	1440	1														
BH10-092024	9/20/24	1424	1														
BH11R-092024	9/20/24	1350	1														
BH12-092024	9/20/24	1326	1														
BH13-092024	9/20/24	1437	1														
BH14-092024	9/20/24	1411	1														
BH15-092024	9/20/24	1350	1														
Relinquished By: <i>[Signature]</i> Date: 9/20/24 Time: 1450				Received By: <i>[Signature]</i> Date: 9/20/24 Time: 1605				Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input checked="" type="checkbox"/> Standard									
Relinquished By: <i>[Signature]</i> Date: 9/20/24 Time: 1450				Received By: <i>[Signature]</i> Date: 9/20/24 Time: 1605													

Date Results Needed

3.3

Origins Laboratory

*[Signature]*

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Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

# ORIGINS

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EXP06052

page 2 of 2

Client: GSH/Tasman  
Address: 6855 W 118th Ave.  
Broomfield, CO 80020  
Telephone Number: (720) 939-3631 (Call with any questions)  
Email Address: OXY/Tasman Distribution List

Project Manager: Andy Sagen  
Project Name: Tuttle L 16-7  
Project Number: GS-10048  
Samples Collected By: J. RAMEY

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative			Matrix			Analysis						EOMC Table 915 methods
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	As Sampled	Other	BTEXN	1,2,4 TMB	1,3,5 TMB	TDS	
BHL6-092024	9/20/24	1253	4	✓					✓			✓	✓	✓		1
BHL7-092024	9/20/24	1308	4	✓					✓			✓	✓	✓		2
																3
																4
																5
																6
																7
																8
																9
																10
Relinquished By: <u>[Signature]</u>	Date: <u>9/20/2024</u>	Time: <u>1650</u>	Received By: <u>[Signature]</u>	Date: <u>9/20/2024</u>	Time: <u>1650</u>	Turnaround Time: <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input checked="" type="checkbox"/> Standard										
Relinquished By: <u>[Signature]</u>	Date: <u>9/20/2024</u>	Time: <u>1650</u>	Received By: <u>[Signature]</u>	Date: <u>9/20/2024</u>	Time: <u>1650</u>											

Fax: 303.265.9645

Phone: 303.439.1322

Denver, CO 80211

1725 Elk Place

Date Results Needed

## Origins Laboratory

Byron

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: E409452 Client: Tasman  
Client Project ID: Tuttle L 16-7

Checklist Completed by: JP / MN Shipped Via: HD  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)  
Date/time completed: 9/20/24 Airbill #: N/A

Matrix(s) Received: (Check all that apply): Soil/Solid ☒ Water ☐ Other: NA

Cooler Number/Temperature: 1 / 3.3 °C / 1 °C / 1 °C (Describe) 1 °C

Thermometer ID: T085

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ½ inch bubble) present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (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 <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

<sup>(1)</sup> 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) JP Date/Time Reviewed 9/24/24

Origins Laboratory

*J. Bynon*

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6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

BH01R2-092024

9/20/2024 2:20:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E409652-01 (Water)**

**Anions by IC 300.0**

Chloride	148		31.2	mg/L	125	B4I2403	09/24/2024	09/26/2024	
Sulfate	68.8		31.2	"	"	"	"	"	

**BTEX+N+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		2.00	ug/L	1	B4I2530	09/25/2024	09/25/2024	U
1,3,5-Trimethylbenzene	ND		2.00	"	"	"	"	"	U
Benzene	ND		1.00	"	"	"	"	"	U
Ethylbenzene	ND		1.00	"	"	"	"	"	U
Naphthalene	ND		2.00	"	"	"	"	"	U
Toluene	ND		1.00	"	"	"	"	"	U
Xylenes, total	ND		1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	95.3 %	70-130	"	"	"
Surrogate: Toluene-d8	95.8 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	101 %	70-130	"	"	"

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	1280		5.00	mg/L	1	B4I2307	09/23/2024	09/26/2024	
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Origins Laboratory

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6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

BH04R-092024

9/20/2024 1:39:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E409652-02 (Water)**

**Anions by IC 300.0**

Chloride	130		31.2	mg/L	125	B4I2403	09/24/2024	09/26/2024	
Sulfate	163		31.2	"	"	"	"	"	

**BTEX+N+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		2.00	ug/L	1	B4I2530	09/25/2024	09/25/2024	U
1,3,5-Trimethylbenzene	ND		2.00	"	"	"	"	"	U
Benzene	ND		1.00	"	"	"	"	"	U
Ethylbenzene	ND		1.00	"	"	"	"	"	U
Naphthalene	ND		2.00	"	"	"	"	"	U
Toluene	ND		1.00	"	"	"	"	"	U
Xylenes, total	ND		1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	100 %	70-130	"	"	"
Surrogate: Toluene-d8	93.0 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	92.3 %	70-130	"	"	"

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	964		5.00	mg/L	1	B4I2307	09/23/2024	09/26/2024	
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Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

BH08R-092024

9/20/2024 2:35:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E409652-03 (Water)**

**Anions by IC 300.0**

Chloride	104	31.2	mg/L	125	B4I2403	09/24/2024	09/26/2024	
Sulfate	238	31.2	"	"	"	"	"	"

**BTEX+N+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B4I2530	09/25/2024	09/25/2024	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	U
Benzene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Naphthalene	ND	2.00	"	"	"	"	"	U
Toluene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	99.3 %	70-130	"	"	"
Surrogate: Toluene-d8	93.8 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	92.8 %	70-130	"	"	"

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	832	5.00	mg/L	1	B4I2307	09/23/2024	09/26/2024	
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6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

BH09R-092024

9/20/2024 2:49:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E409652-04 (Water)**

**Anions by IC 300.0**

Chloride	187		31.2	mg/L	125	B4I2403	09/24/2024	09/26/2024	
Sulfate	ND		31.2	"	"	"	"	"	

**BTEX+N+TMBs by 8260D**

1,2,4-Trimethylbenzene	10.5		2.00	ug/L	1	B4I2530	09/25/2024	09/25/2024	
1,3,5-Trimethylbenzene	7.84		2.00	"	"	"	"	"	
Benzene	152		1.00	"	"	"	"	"	
Ethylbenzene	ND		1.00	"	"	"	"	"	U
Naphthalene	2.05		2.00	"	"	"	"	"	
Toluene	ND		1.00	"	"	"	"	"	U
Xylenes, total	6.87		1.00	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	103 %		70-130			"	"	"	
Surrogate: Toluene-d8	95.6 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	90.9 %		70-130			"	"	"	

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	746		5.00	mg/L	1	B4I2307	09/23/2024	09/26/2024	
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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

BH10-092024

9/20/2024 2:24:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E409652-05 (Water)**

**Anions by IC 300.0**

Chloride	816	31.2	mg/L	125	B412405	09/24/2024	09/27/2024
Sulfate	228	31.2	"	"	"	"	"

**BTEX+N+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B412530	09/25/2024	09/25/2024	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	U
Benzene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Naphthalene	ND	2.00	"	"	"	"	"	U
Toluene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	97.8 %	70-130	"	"	"
Surrogate: Toluene-d8	97.3 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	91.7 %	70-130	"	"	"

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	2320	5.00	mg/L	1	B412307	09/23/2024	09/26/2024
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Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

BH11R-092024

9/20/2024 1:58:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E409652-06 (Water)**

**Anions by IC 300.0**

Chloride	670		31.2	mg/L	125	B4I2405	09/24/2024	09/27/2024	
Sulfate	2830		31.2	"	"	"	"	"	

**BTEX+N+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		2.00	ug/L	1	B4I2530	09/25/2024	09/25/2024	U
1,3,5-Trimethylbenzene	ND		2.00	"	"	"	"	"	U
Benzene	ND		1.00	"	"	"	"	"	U
Ethylbenzene	ND		1.00	"	"	"	"	"	U
Naphthalene	ND		2.00	"	"	"	"	"	U
Toluene	ND		1.00	"	"	"	"	"	U
Xylenes, total	ND		1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	103 %	70-130	"	"	"
Surrogate: Toluene-d8	96.5 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	92.4 %	70-130	"	"	"

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	5970		5.00	mg/L	1	B4I2307	09/23/2024	09/26/2024	
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6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

BH12-092024

9/20/2024 1:26:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E409652-07 (Water)**

**Anions by IC 300.0**

Chloride	96.7		31.2	mg/L	125	B4I2405	09/24/2024	09/27/2024	
Sulfate	282		31.2	"	"	"	"	"	

**BTEX+N+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		2.00	ug/L	1	B4I2530	09/25/2024	09/25/2024	U
1,3,5-Trimethylbenzene	ND		2.00	"	"	"	"	"	U
Benzene	ND		1.00	"	"	"	"	"	U
Ethylbenzene	ND		1.00	"	"	"	"	"	U
Naphthalene	ND		2.00	"	"	"	"	"	U
Toluene	ND		1.00	"	"	"	"	"	U
Xylenes, total	ND		1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	102 %	70-130	"	"	"
Surrogate: Toluene-d8	97.1 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	92.5 %	70-130	"	"	"

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	964		5.00	mg/L	1	B4I2307	09/23/2024	09/26/2024	
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6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

BH13-092024

9/20/2024 2:37:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E409652-08 (Water)**

**Anions by IC 300.0**

Chloride	106	31.2	mg/L	125	B4I2405	09/24/2024	09/27/2024	
Sulfate	112	31.2	"	"	"	"	"	"

**BTEX+N+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B4I2530	09/25/2024	09/25/2024	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	U
Benzene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Naphthalene	ND	2.00	"	"	"	"	"	U
Toluene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	101 %	70-130	"	"	"
Surrogate: Toluene-d8	96.9 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	92.0 %	70-130	"	"	"

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	874	5.00	mg/L	1	B4I2307	09/23/2024	09/26/2024	
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Origins Laboratory

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

BH14-092024

9/20/2024 2:11:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E409652-09 (Water)**

**Anions by IC 300.0**

Chloride	815		31.2	mg/L	125	B4I2405	09/24/2024	09/27/2024	
Sulfate	152		31.2	"	"	"	"	"	

**BTEX+N+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		2.00	ug/L	1	B4I2530	09/25/2024	09/25/2024	U
1,3,5-Trimethylbenzene	ND		2.00	"	"	"	"	"	U
Benzene	ND		1.00	"	"	"	"	"	U
Ethylbenzene	ND		1.00	"	"	"	"	"	U
Naphthalene	ND		2.00	"	"	"	"	"	U
Toluene	ND		1.00	"	"	"	"	"	U
Xylenes, total	ND		1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	103 %	70-130	"	"	"
Surrogate: Toluene-d8	95.8 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	93.3 %	70-130	"	"	"

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	2320		5.00	mg/L	1	B4I2307	09/23/2024	09/26/2024	
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Origins Laboratory

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

BH15-092024

9/20/2024 1:50:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E409652-10 (Water)**

**Anions by IC 300.0**

Chloride	328		31.2	mg/L	125	B4I2405	09/24/2024	09/27/2024	
Sulfate	97.0		31.2	"	"	"	"	"	

**BTEX+N+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		2.00	ug/L	1	B4I2530	09/25/2024	09/25/2024	U
1,3,5-Trimethylbenzene	ND		2.00	"	"	"	"	"	U
Benzene	ND		1.00	"	"	"	"	"	U
Ethylbenzene	ND		1.00	"	"	"	"	"	U
Naphthalene	ND		2.00	"	"	"	"	"	U
Toluene	ND		1.00	"	"	"	"	"	U
Xylenes, total	ND		1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	99.6 %	70-130	"	"	"
Surrogate: Toluene-d8	95.8 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	94.5 %	70-130	"	"	"

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	1440		5.00	mg/L	1	B4I2307	09/23/2024	09/26/2024	
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Origins Laboratory

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

BH16-092024

9/20/2024 12:53:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E409652-11 (Water)**

**Anions by IC 300.0**

Chloride	126		31.2	mg/L	125	B4I2405	09/24/2024	09/27/2024	
Sulfate	242		31.2	"	"	"	"	"	

**BTEX+N+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		2.00	ug/L	1	B4I2530	09/25/2024	09/25/2024	U
1,3,5-Trimethylbenzene	ND		2.00	"	"	"	"	"	U
Benzene	ND		1.00	"	"	"	"	"	U
Ethylbenzene	ND		1.00	"	"	"	"	"	U
Naphthalene	ND		2.00	"	"	"	"	"	U
Toluene	ND		1.00	"	"	"	"	"	U
Xylenes, total	ND		1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	104 %		70-130			"	"	"	
Surrogate: Toluene-d8	96.9 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	90.7 %		70-130			"	"	"	

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	1130		5.00	mg/L	1	B4I2307	09/23/2024	09/26/2024	
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Origins Laboratory

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

BH17-092024

9/20/2024 1:08:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E409652-12 (Water)**

**Anions by IC 300.0**

Chloride	100		31.2	mg/L	125	B4I2405	09/24/2024	09/27/2024	
Sulfate	181		31.2	"	"	"	"	"	

**BTEX+N+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		2.00	ug/L	1	B4I2530	09/25/2024	09/25/2024	U
1,3,5-Trimethylbenzene	ND		2.00	"	"	"	"	"	U
Benzene	ND		1.00	"	"	"	"	"	U
Ethylbenzene	ND		1.00	"	"	"	"	"	U
Naphthalene	ND		2.00	"	"	"	"	"	U
Toluene	ND		1.00	"	"	"	"	"	U
Xylenes, total	ND		1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	99.0 %	70-130	"	"	"
Surrogate: Toluene-d8	97.4 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	92.1 %	70-130	"	"	"

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	1060		5.00	mg/L	1	B4I2307	09/23/2024	09/26/2024	
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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

**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
<b>Batch B412530 - EPA 5030B (Water)</b>										
<b>Blank (B412530-BLK1)</b>					Prepared: 09/25/2024 Analyzed: 09/25/2024					
1,2,4-Trimethylbenzene	ND	2.00	ug/L							U
1,3,5-Trimethylbenzene	ND	2.00	"							U
Benzene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Naphthalene	ND	2.00	"							U
Toluene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.8	70-130			
Surrogate: Toluene-d8	59		"	62.5		95.1	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.6	70-130			

Origins Laboratory

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

**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
Batch B4I2530 - EPA 5030B (Water)										
LCS (B4I2530-BS1)					Prepared: 09/25/2024 Analyzed: 09/25/2024					
1,2,4-Trimethylbenzene	41.3	2.00	ug/L	50.0		82.6	70-130			
1,3,5-Trimethylbenzene	41.8	2.00	"	50.0		83.7	70-130			
Benzene	46.6	1.00	"	50.0		93.2	70-130			
Ethylbenzene	40.1	1.00	"	50.0		80.2	70-130			
m,p-Xylene	82.1	2.00	"	100		82.1	70-130			
Naphthalene	40.5	2.00	"	50.0		80.9	70-130			
o-Xylene	40.6	1.00	"	50.0		81.1	70-130			
Toluene	45.6	1.00	"	50.0		91.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	76		"	62.5		121	70-130			
Surrogate: Toluene-d8	57		"	62.5		91.7	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

Origins Laboratory

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

**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
Batch B4I2530 - EPA 5030B (Water)										
Matrix Spike (B4I2530-MS1)		Source: E409457-01			Prepared: 09/25/2024 Analyzed: 09/25/2024					
1,2,4-Trimethylbenzene	58.5	2.00	ug/L	50.0	2.90	111	70-130			
1,3,5-Trimethylbenzene	57.5	2.00	"	50.0	0.630	114	70-130			
Benzene	88.2	1.00	"	50.0	35.0	106	70-130			
Ethylbenzene	63.7	1.00	"	50.0	5.74	116	70-130			
m,p-Xylene	124	2.00	"	100	10.8	113	70-130			
Naphthalene	55.0	2.00	"	50.0	1.84	106	70-130			
o-Xylene	65.5	1.00	"	50.0	9.53	112	70-130			
Toluene	96.4	1.00	"	50.0	39.8	113	70-130			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.0	70-130			
Surrogate: Toluene-d8	59		"	62.5		94.5	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		105	70-130			

Origins Laboratory

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

**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
<b>Batch B4I2530 - EPA 5030B (Water)</b>										
<b>Matrix Spike Dup (B4I2530-MSD1)</b>		<b>Source: E409457-01</b>			Prepared: 09/25/2024 Analyzed: 09/25/2024					
1,2,4-Trimethylbenzene	51.0	2.00	ug/L	50.0	2.90	96.1	70-130	13.8	20	
1,3,5-Trimethylbenzene	49.8	2.00	"	50.0	0.630	98.2	70-130	14.4	20	
Benzene	83.7	1.00	"	50.0	35.0	97.5	70-130	5.14	20	
Ethylbenzene	56.8	1.00	"	50.0	5.74	102	70-130	11.5	20	
m,p-Xylene	110	2.00	"	100	10.8	99.6	70-130	11.4	20	
Naphthalene	53.0	2.00	"	50.0	1.84	102	70-130	3.70	20	
o-Xylene	58.9	1.00	"	50.0	9.53	98.7	70-130	10.6	20	
Toluene	88.4	1.00	"	50.0	39.8	97.2	70-130	8.70	20	
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		95.6	70-130			
Surrogate: Toluene-d8	58		"	62.5		92.3	70-130			
Surrogate: 4-Bromofluorobenzene	68		"	62.5		108	70-130			

Origins Laboratory

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

**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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**Classical Chemistry Parameters - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4I2307 - NO PREP**

**Blank (B4I2307-BLK1)**

Prepared: 09/23/2024 Analyzed: 09/26/2024

Total Dissolved Solids ND 5.00 mg/L

**LCS (B4I2307-BS1)**

Prepared: 09/23/2024 Analyzed: 09/26/2024

Total Dissolved Solids 1010 5.00 mg/L 1000 101 90-110

**Duplicate (B4I2307-DUP1)**

**Source: E409622-11**

Prepared: 09/23/2024 Analyzed: 09/26/2024

Total Dissolved Solids 1190 5.00 mg/L 1200 0.668 10

**Batch B4I2403 - Filter .45um non acidified**

**Blank (B4I2403-BLK1)**

Prepared: 09/24/2024 Analyzed: 09/26/2024

Chloride ND 0.250 mg/L

Sulfate ND 0.250 "

**LCS (B4I2403-BS1)**

Prepared: 09/24/2024 Analyzed: 09/26/2024

Chloride 4.08 0.250 mg/L 4.00 102 90-110

Sulfate 4.05 0.250 " 4.00 101 90-110

**Matrix Spike (B4I2403-MS1)**

**Source: E409614-21**

Prepared: 09/24/2024 Analyzed: 09/26/2024

Chloride 731 mg/L 500 220 102 90-110

Sulfate 874 " 500 352 104 90-110

**Matrix Spike Dup (B4I2403-MSD1)**

**Source: E409614-21**

Prepared: 09/24/2024 Analyzed: 09/26/2024

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6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

**Classical Chemistry Parameters - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B4I2403 - Filter .45um non acidified</b>										
<b>Matrix Spike Dup (B4I2403-MSD1)</b>		<b>Source: E409614-21</b>			Prepared: 09/24/2024 Analyzed: 09/26/2024					
Chloride	730		mg/L	500	220	102	90-110	0.120	5	
Sulfate	874		"	500	352	104	90-110	0.0429	5	
<b>Batch B4I2405 - Filter .45um non acidified</b>										
<b>Blank (B4I2405-BLK1)</b>		Prepared: 09/24/2024 Analyzed: 09/27/2024								
Chloride	ND	0.250	mg/L							
Sulfate	ND	0.250	"							
<b>LCS (B4I2405-BS1)</b>		Prepared: 09/24/2024 Analyzed: 09/27/2024								
Chloride	3.72	0.250	mg/L	4.00		93.0	90-110			
Sulfate	3.75	0.250	"	4.00		93.7	90-110			
<b>Matrix Spike (B4I2405-MS1)</b>		<b>Source: E409652-05</b>			Prepared: 09/24/2024 Analyzed: 09/27/2024					
Chloride	1280		mg/L	500	816	92.4	90-110			
Sulfate	698		"	500	228	93.9	90-110			
<b>Matrix Spike Dup (B4I2405-MSD1)</b>		<b>Source: E409652-05</b>			Prepared: 09/24/2024 Analyzed: 09/27/2024					
Chloride	1270		mg/L	500	816	91.8	90-110	0.265	5	
Sulfate	707		"	500	228	95.7	90-110	1.27	5	

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Andy Sagen  
Project Number: GS-10048  
Project: KMG - Tuttle L 16-7

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### Notes and Definitions

U Sample is Non-Detect.

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

A handwritten signature in black ink, appearing to read "J. Bynon".

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