

January 12, 2024

Tasman Geosciences

Andy Sagen

6855 West 119th Avenue

Broomfield CO 80020

**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, Inc. December 18, 2023. This project is associated with Origins project number Y312557-01.

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, Inc.  
303.433.1322  
o-squad@oelabinc.com



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
BH01R2-121823	Y312557-01	Water	December 18, 2023 14:16	12/18/2023 16:40
BH04R-121823	Y312557-02	Water	December 18, 2023 13:36	12/18/2023 16:40
BH08R-121823	Y312557-03	Water	December 18, 2023 14:03	12/18/2023 16:40
BH09R-121823	Y312557-04	Water	December 18, 2023 14:28	12/18/2023 16:40
BH10-121823	Y312557-05	Water	December 18, 2023 13:49	12/18/2023 16:40
BH11R-121823	Y312557-06	Water	December 18, 2023 14:07	12/18/2023 16:40
BH12-121823	Y312557-07	Water	December 18, 2023 13:51	12/18/2023 16:40
BH13-121823	Y312557-08	Water	December 18, 2023 14:31	12/18/2023 16:40
BH14-121823	Y312557-09	Water	December 18, 2023 13:35	12/18/2023 16:40

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 Project: KMG - Tuttle L 16-7

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: 4312557 Client: Tasman  
 Checklist Completed by: EHIS Client Project ID: Tuttle L 16-7  
 Date/time completed: 12/18/12 Shipped Via: HO  
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Airbill #: N/A  
 Matrix(s) Received: (Check all that apply): Soil/Solid  Water  Other: \_\_\_\_\_  
 Cooler Number/Temperature: 116 °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C (Describe)  
 Thermometer ID: 7004

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 (> ¼ 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) [Signature]

Date/Time Reviewed 12/18/12

Origins Laboratory, Inc.

[Signature]

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Tasman Geosciences  
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 Broomfield CO 80020

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

**BH01R2-121823**

**12/18/2023 2:16:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y312557-01 (Water)**

**Anions by IC 300.0**

Chloride	151	31.2	mg/L	125	B3L2103	STW	12/21/2023	12/29/2023	
Sulfate	187	31.2	"	"	"	STW	"	"	

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

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B3L1940	HKS	12/19/2023	12/21/2023	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	HKS	"	"	U
Benzene	ND	1.00	"	"	"	HKS	"	"	U
Ethylbenzene	ND	1.00	"	"	"	HKS	"	"	U
Naphthalene	ND	2.00	"	"	"	HKS	"	"	U
Toluene	ND	1.00	"	"	"	HKS	"	"	U
Xylenes, total	ND	1.00	"	"	"	HKS	"	"	U

Surrogate: 1,2-Dichloroethane-d4	108 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	104 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	95.3 %	70-130			"	"	"	"	

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	1150	5.00	mg/L	1	B3L1919	KRM	12/19/2023	12/22/2023	
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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

**BH04R-121823**

**12/18/2023 1:36:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y312557-02 (Water)**

**Anions by IC 300.0**

Chloride	147	31.2	mg/L	125	B3L2103	STW	12/21/2023	12/29/2023	
Sulfate	205	31.2	"	"	"	STW	"	"	

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

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B3L1940	HKS	12/19/2023	12/21/2023	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	HKS	"	"	U
Benzene	ND	1.00	"	"	"	HKS	"	"	U
Ethylbenzene	ND	1.00	"	"	"	HKS	"	"	U
Naphthalene	ND	2.00	"	"	"	HKS	"	"	U
Toluene	ND	1.00	"	"	"	HKS	"	"	U
Xylenes, total	ND	1.00	"	"	"	HKS	"	"	U

Surrogate: 1,2-Dichloroethane-d4	110 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	104 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	95.8 %	70-130			"	"	"	"	

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	1100	5.00	mg/L	1	B3L1919	KRM	12/19/2023	12/22/2023	
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**BH08R-121823**

**12/18/2023 2:03:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y312557-03 (Water)**

**Anions by IC 300.0**

Chloride	227	31.2	mg/L	125	B3L2103	STW	12/21/2023	12/29/2023	
Sulfate	253	31.2	"	"	"	STW	"	"	

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

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B3L1940	HKS	12/19/2023	12/21/2023	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	HKS	"	"	U
Benzene	ND	1.00	"	"	"	HKS	"	"	U
Ethylbenzene	ND	1.00	"	"	"	HKS	"	"	U
Naphthalene	ND	2.00	"	"	"	HKS	"	"	U
Toluene	ND	1.00	"	"	"	HKS	"	"	U
Xylenes, total	ND	1.00	"	"	"	HKS	"	"	U

Surrogate: 1,2-Dichloroethane-d4	110 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	104 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	96.8 %	70-130			"	"	"	"	

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	1050	5.00	mg/L	1	B3L1919	KRM	12/19/2023	12/22/2023	
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 Project: KMG - Tuttle L 16-7

**BH09R-121823**

**12/18/2023 2:28:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y312557-04 (Water)**

**Anions by IC 300.0**

Chloride	415	31.2	mg/L	125	B3L2103	STW	12/21/2023	12/29/2023	
Sulfate	ND	31.2	"	"	"	STW	"	"	U

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

1,2,4-Trimethylbenzene	6.25	2.00	ug/L	1	B3L1940	HKS	12/19/2023	12/21/2023	
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	HKS	"	"	U
Benzene	67.0	1.00	"	"	"	HKS	"	"	
Ethylbenzene	ND	1.00	"	"	"	HKS	"	"	U
Naphthalene	ND	2.00	"	"	"	HKS	"	"	U
Toluene	ND	1.00	"	"	"	HKS	"	"	U
Xylenes, total	13.1	1.00	"	"	"	HKS	"	"	

Surrogate: 1,2-Dichloroethane-d4	112 %	70-130			"	"			
Surrogate: Toluene-d8	104 %	70-130			"	"			
Surrogate: 4-Bromofluorobenzene	94.8 %	70-130			"	"			

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	976	5.00	mg/L	1	B3L1919	KRM	12/19/2023	12/22/2023	
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**BH10-121823**

**12/18/2023 1:49:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y312557-05 (Water)**

**Anions by IC 300.0**

Chloride	648	31.2	mg/L	125	B3L2103	STW	12/21/2023	12/29/2023	
Sulfate	191	31.2	"	"	"	STW	"	"	

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

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B3L1940	HKS	12/19/2023	12/21/2023	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	HKS	"	"	U
Benzene	ND	1.00	"	"	"	HKS	"	"	U
Ethylbenzene	ND	1.00	"	"	"	HKS	"	"	U
Naphthalene	ND	2.00	"	"	"	HKS	"	"	U
Toluene	ND	1.00	"	"	"	HKS	"	"	U
Xylenes, total	ND	1.00	"	"	"	HKS	"	"	U

Surrogate: 1,2-Dichloroethane-d4	107 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	104 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	97.9 %	70-130			"	"	"	"	

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	1580	5.00	mg/L	1	B3L1919	KRM	12/19/2023	12/22/2023	
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 Broomfield CO 80020

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

**BH11R-121823**  
**12/18/2023 2:07:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y312557-06 (Water)**

**Anions by IC 300.0**

Chloride	478	31.2	mg/L	125	B3L2103	STW	12/21/2023	12/30/2023	
Sulfate	2640	31.2	"	"	"	STW	"	"	

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

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B3L1940	HKS	12/19/2023	12/21/2023	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	HKS	"	"	U
Benzene	ND	1.00	"	"	"	HKS	"	"	U
Ethylbenzene	ND	1.00	"	"	"	HKS	"	"	U
Naphthalene	ND	2.00	"	"	"	HKS	"	"	U
Toluene	ND	1.00	"	"	"	HKS	"	"	U
Xylenes, total	ND	1.00	"	"	"	HKS	"	"	U

Surrogate: 1,2-Dichloroethane-d4	116 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	103 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	94.9 %	70-130			"	"	"	"	

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	4550	5.00	mg/L	1	B3L1918	KRM	12/19/2023	12/21/2023	
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 Project: KMG - Tuttle L 16-7

**BH12-121823**

**12/18/2023 1:51:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y312557-07 (Water)**

**Anions by IC 300.0**

Chloride	107	31.2	mg/L	125	B3L2103	STW	12/21/2023	12/30/2023	
Sulfate	323	31.2	"	"	"	STW	"	"	

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

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B3L1940	HKS	12/19/2023	12/21/2023	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	HKS	"	"	U
Benzene	ND	1.00	"	"	"	HKS	"	"	U
Ethylbenzene	ND	1.00	"	"	"	HKS	"	"	U
Naphthalene	ND	2.00	"	"	"	HKS	"	"	U
Toluene	ND	1.00	"	"	"	HKS	"	"	U
Xylenes, total	ND	1.00	"	"	"	HKS	"	"	U

Surrogate: 1,2-Dichloroethane-d4	113 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	104 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	95.8 %	70-130			"	"	"	"	

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	924	5.00	mg/L	1	B3L1918	KRM	12/19/2023	12/21/2023	
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**BH13-121823**

**12/18/2023 2:31:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y312557-08 (Water)**

**Anions by IC 300.0**

Chloride	142	31.2	mg/L	125	B3L2103	STW	12/21/2023	12/30/2023	
Sulfate	185	31.2	"	"	"	STW	"	"	

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

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B3L1940	HKS	12/19/2023	12/21/2023	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	HKS	"	"	U
Benzene	ND	1.00	"	"	"	HKS	"	"	U
Ethylbenzene	ND	1.00	"	"	"	HKS	"	"	U
Naphthalene	ND	2.00	"	"	"	HKS	"	"	U
Toluene	ND	1.00	"	"	"	HKS	"	"	U
Xylenes, total	ND	1.00	"	"	"	HKS	"	"	U

Surrogate: 1,2-Dichloroethane-d4	114 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	105 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	97.6 %	70-130			"	"	"	"	

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	960	5.00	mg/L	1	B3L1918	KRM	12/19/2023	12/21/2023	
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 Project: KMG - Tuttle L 16-7

**BH14-121823**

**12/18/2023 1:35:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y312557-09 (Water)**

**Anions by IC 300.0**

Chloride	848	31.2	mg/L	125	B3L2103	STW	12/21/2023	12/30/2023	
Sulfate	166	31.2	"	"	"	STW	"	"	

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

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B3L1940	HKS	12/19/2023	12/21/2023	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	HKS	"	"	U
Benzene	ND	1.00	"	"	"	HKS	"	"	U
Ethylbenzene	ND	1.00	"	"	"	HKS	"	"	U
Naphthalene	ND	2.00	"	"	"	HKS	"	"	U
Toluene	ND	1.00	"	"	"	HKS	"	"	U
Xylenes, total	ND	1.00	"	"	"	HKS	"	"	U

Surrogate: 1,2-Dichloroethane-d4	116 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	103 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	97.2 %	70-130			"	"	"	"	

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	2220	5.00	mg/L	1	B3L1918	KRM	12/19/2023	12/21/2023	
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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3L1940 - EPA 5030B (Water)**

**Blank (B3L1940-BLK1)**

Prepared: 12/19/2023 Analyzed: 12/21/2023

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	69		"	62.5		111	70-130			
Surrogate: Toluene-d8	65		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.4	70-130			

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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, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3L1940 - EPA 5030B (Water)**

**LCS (B3L1940-BS1)**

Prepared: 12/19/2023 Analyzed: 12/21/2023

1,2,4-Trimethylbenzene	47.0	2.00	ug/L	50.0		94.0	70-130			
1,3,5-Trimethylbenzene	46.5	2.00	"	50.0		92.9	70-130			
Benzene	48.7	1.00	"	50.0		97.4	70-130			
Ethylbenzene	49.0	1.00	"	50.0		97.9	70-130			
m,p-Xylene	90.4	2.00	"	100		90.4	70-130			
Naphthalene	42.6	2.00	"	50.0		85.1	70-130			
o-Xylene	42.2	1.00	"	50.0		84.5	70-130			
Toluene	53.3	1.00	"	50.0		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		106	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	57		"	62.5		90.7	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3L1940 - EPA 5030B (Water)**

<b>Matrix Spike (B3L1940-MS1)</b>	<b>Source: Y312557-01</b>			<b>Prepared: 12/19/2023 Analyzed: 12/21/2023</b>						
1,2,4-Trimethylbenzene	55.0	2.00	ug/L	50.0	0.140	110	70-130			
1,3,5-Trimethylbenzene	54.1	2.00	"	50.0	0.130	108	70-130			
Benzene	54.6	1.00	"	50.0	ND	109	70-130			
Ethylbenzene	57.0	1.00	"	50.0	0.120	114	70-130			
m,p-Xylene	109	2.00	"	100	ND	109	70-130			
Naphthalene	47.3	2.00	"	50.0	0.310	94.0	70-130			
o-Xylene	54.8	1.00	"	50.0	ND	110	70-130			
Toluene	59.4	1.00	"	50.0	ND	119	70-130			
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		104	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	57		"	62.5		90.8	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3L1940 - EPA 5030B (Water)**

Matrix Spike Dup (B3L1940-MSD1)	Source: Y312557-01			Prepared: 12/19/2023 Analyzed: 12/21/2023						
1,2,4-Trimethylbenzene	53.0	2.00	ug/L	50.0	0.140	106	70-130	3.76	20	
1,3,5-Trimethylbenzene	52.6	2.00	"	50.0	0.130	105	70-130	2.85	20	
Benzene	53.5	1.00	"	50.0	ND	107	70-130	2.04	20	
Ethylbenzene	56.3	1.00	"	50.0	0.120	112	70-130	1.13	20	
m,p-Xylene	106	2.00	"	100	ND	106	70-130	1.98	20	
Naphthalene	49.2	2.00	"	50.0	0.310	97.8	70-130	3.89	20	
o-Xylene	54.0	1.00	"	50.0	ND	108	70-130	1.45	20	
Toluene	58.2	1.00	"	50.0	ND	116	70-130	1.96	20	
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		104	70-130			
Surrogate: Toluene-d8	63		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	56		"	62.5		90.2	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

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, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3L1918 - NO PREP**

**Blank (B3L1918-BLK1)**

Prepared: 12/19/2023 Analyzed: 12/21/2023

Total Dissolved Solids ND 5.00 mg/L

**LCS (B3L1918-BS1)**

Prepared: 12/19/2023 Analyzed: 12/21/2023

Total Dissolved Solids 1020 5.00 mg/L 1090 93.2 90-110

**Duplicate (B3L1918-DUP1)**

**Source: Y312526-19**

Prepared: 12/19/2023 Analyzed: 12/21/2023

Total Dissolved Solids 4930 5.00 mg/L 5070 2.76 10

**Batch B3L1919 - NO PREP**

**Blank (B3L1919-BLK1)**

Prepared: 12/19/2023 Analyzed: 12/22/2023

Total Dissolved Solids ND 5.00 mg/L

**LCS (B3L1919-BS1)**

Prepared: 12/19/2023 Analyzed: 12/22/2023

Total Dissolved Solids 1010 5.00 mg/L 1090 92.5 90-110

**Duplicate (B3L1919-DUP1)**

**Source: Y312538-01**

Prepared: 12/19/2023 Analyzed: 12/22/2023

Total Dissolved Solids 5570 5.00 mg/L 5580 0.215 10

**Batch B3L2103 - Filter .45um non acidified**

**Blank (B3L2103-BLK1)**

Prepared: 12/21/2023 Analyzed: 12/29/2023

Chloride ND 0.250 mg/L U

Sulfate ND 0.250 " U

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

**Classical Chemistry Parameters - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B3L2103 - Filter .45um non acidified</b>										
<b>Blank (B3L2103-BLK1)</b>					Prepared: 12/21/2023 Analyzed: 12/29/2023					
<b>LCS (B3L2103-BS1)</b>					Prepared: 12/21/2023 Analyzed: 12/29/2023					
Chloride	4.02	0.250	mg/L	4.00		101	90-110			
Sulfate	4.01	0.250	"	4.00		100	90-110			
<b>Matrix Spike (B3L2103-MS1)</b>		<b>Source: Y312526-21</b>			Prepared: 12/21/2023 Analyzed: 12/29/2023					
Chloride	863		mg/L	500	346	103	90-110			
Sulfate	4520		"	500	3260	251	90-110			QM-02
<b>Matrix Spike Dup (B3L2103-MSD1)</b>		<b>Source: Y312526-21</b>			Prepared: 12/21/2023 Analyzed: 12/29/2023					
Chloride	883		mg/L	500	346	107	90-110	2.29	5	
Sulfate	4650		"	500	3260	277	90-110	2.82	5	QM-02

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Project: KMG - Tuttle L 16-7

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### Notes and Definitions

U Sample is Non-Detect.

QM-02 The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

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