

January 09, 2019

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Tuttle L 17-6

Project Number - [none]

Attached are your analytical results for KMG - Tuttle L 17-6 received by Origins Laboratory, Inc. January 04, 2019. This project is associated with Origins project number Y901057-01.

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
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Tuttle L 17-6

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01R - 010419	Y901057-01	Water	January 4, 2019 14:14	01/04/2019 16:40
BH02R - 010419	Y901057-02	Water	January 4, 2019 13:22	01/04/2019 16:40
BH04 - 010419	Y901057-03	Water	January 4, 2019 13:58	01/04/2019 16:40
BH08 - 010419	Y901057-04	Water	January 4, 2019 13:32	01/04/2019 16:40
BH09 - 010419	Y901057-05	Water	January 4, 2019 14:05	01/04/2019 16:40
BH10 - 010419	Y901057-06	Water	January 4, 2019 13:34	01/04/2019 16:40
BH11 - 010419	Y901057-07	Water	January 4, 2019 14:16	01/04/2019 16:40
BH12 - 010419	Y901057-08	Water	January 4, 2019 13:42	01/04/2019 16:40
BH13 - 010419	Y901057-09	Water	January 4, 2019 13:45	01/04/2019 16:40
BH14 - 010419	Y901057-10	Water	January 4, 2019 13:23	01/04/2019 16:40

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

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 LABORATORY, INC
 www.originslaboratory.com
 page 1 of 1

Client: APC / Tasman
 Address: 6899 N Pecos St
 Denver CO 80221
 Telephone Number: 815-979-8348
 Project Manager/Send Report To: Bob Cornez
 Email Address: rcornez@tasman-geo.com
 Project Name/Number: Tuttle L17-6/89156107
 Samples Collected By: Alison Dahl, Brian Gabel

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

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis/Method	Sample Instructions	Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input checked="" type="checkbox"/>
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa #			
BH01R-010419	1/4/19	1414	3	X				X			BTEX	1	
BH02R-010419		1322									X	2	
BH04-010419		1358										3	
BH08-010419		1332										4	
BH09-010419		1405										5	
BH10-010419		1334										6	
BH11-010419		1416										7	
BH12-010419		1342										8	
BH13-010419		1345										9	
BH14-010419		1323										10	
Relinquished By: <i>Alison Dahl</i>	Date: 1/4/19	Time: 16:40	Time: 16:40	Received By: <i>Bob Cornez</i>	Date: 1/4/19	Time: 14:19	Date: 1/4/19	Time: 14:19	Time: 14:19	Time: 14:19	Time: 14:19	Time: 14:19	Time: 14:19
Relinquished By:	Date:	Time:	Time:	Received By:	Date:	Time:	Date:	Time:	Time:	Time:	Time:	Time:	Time:

Date Results Needed:

Comments:

Origins Laboratory, Inc.

Jefe Pellegrini

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y901057 Client: Tasman
 Client Project ID: KMG - Tuttle L 17-6
 Checklist Completed by: JG Shipped Via: HD
 Date/time completed: 1/7/19 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: DIA
 Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____ (Describe)
 Cooler Number/Temperature: 1 / 1.8 °C _____ °C _____ °C _____ °C
 Thermometer ID: T603

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<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 ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<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 ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)		<input checked="" type="checkbox"/>		
Additional Comments (if any):				

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

Reviewed by (Project Manager) [Signature] Date/Time Reviewed 1/8/19

Origins Laboratory, Inc.

Jefe Pellegrini

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH01R - 010419

1/4/2019 2:14:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y901057-01 (Water)

BTEX by EPA 8260C

Benzene	71.6	4.00	ug/L	4	B9A0805	JTD	01/08/2019	01/08/2019	
Toluene	ND	4.00	"	"	"	JTD	"	"	U
Ethylbenzene	4.28	4.00	"	"	"	JTD	"	"	
Xylenes, total	14.8	4.00	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4	97.5 %	84-121			"	"	"	"	
Surrogate: Toluene-d8	100 %	85-115			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	84-114			"	"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH02R - 010419

1/4/2019 1:22:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y901057-02 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B9A0805	JTD	01/08/2019	01/08/2019	U
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	98.4 %	84-121			"	"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	84-114			"	"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH04 - 010419

1/4/2019 1:58:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y901057-03 (Water)

BTEX by EPA 8260C

Benzene	1760	50.0	ug/L	50	B9A0805	JTD	01/08/2019	01/08/2019	
Toluene	ND	50.0	"	"	"	JTD	"	"	U
Ethylbenzene	87.0	50.0	"	"	"	JTD	"	"	
Xylenes, total	718	50.0	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4	98.3 %	84-121			"	"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %	84-114			"	"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH08 - 010419

1/4/2019 1:32:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y901057-04 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B9A0805	JTD	01/08/2019	01/08/2019	U
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	99.2 %	84-121			"	"	"	"	
Surrogate: Toluene-d8	100 %	85-115			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	84-114			"	"	"	"	

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH09 - 010419

1/4/2019 2:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y901057-05 (Water)

BTEX by EPA 8260C

Benzene	526	20.0	ug/L	20	B9A0805	JTD	01/08/2019	01/08/2019	
Toluene	ND	20.0	"	"	"	JTD	"	"	U
Ethylbenzene	ND	20.0	"	"	"	JTD	"	"	U
Xylenes, total	70.8	20.0	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4	99.2 %	84-121			"	"	"	"	
Surrogate: Toluene-d8	100 %	85-115			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %	84-114			"	"	"	"	

Origins Laboratory, Inc.



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 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH10 - 010419

1/4/2019 1:34:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y901057-06 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B9A0805	JTD	01/08/2019	01/08/2019	U
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	99.6 %	84-121			"	"	"	"	
Surrogate: Toluene-d8	99.8 %	85-115			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	99.9 %	84-114			"	"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH11 - 010419
1/4/2019 2:16:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y901057-07 (Water)

BTEX by EPA 8260C

Benzene	8270	100	ug/L	100	B9A0805	JTD	01/08/2019	01/08/2019	
Toluene	ND	100	"	"	"	JTD	"	"	U
Ethylbenzene	120	100	"	"	"	JTD	"	"	
Xylenes, total	3590	100	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4	99.9 %	84-121			"	"	"	"	
Surrogate: Toluene-d8	100 %	85-115			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	84-114			"	"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH12 - 010419

1/4/2019 1:42:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y901057-08 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B9A0805	JTD	01/08/2019	01/08/2019	U
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	100 %	84-121			"	"	"	"	
Surrogate: Toluene-d8	99.1 %	85-115			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	84-114			"	"	"	"	

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH13 - 010419

1/4/2019 1:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y901057-09 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B9A0805	JTD	01/08/2019	01/08/2019	U
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	101 %	84-121			"	"	"	"	
Surrogate: Toluene-d8	100 %	85-115			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	98.6 %	84-114			"	"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH14 - 010419

1/4/2019 1:23:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y901057-10 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B9A0805	JTD	01/08/2019	01/08/2019	U
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	99.9 %	84-121			"	"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	97.2 %	84-114			"	"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

Volatile Organic Compounds by GC/MS SW846 8260C - 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 B9A0805 - EPA 5030B (Water)

Blank (B9A0805-BLK1)

Prepared: 01/08/2019 Analyzed: 01/08/2019

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5	97.0		84-121			
Surrogate: Toluene-d8	63		"	62.5	101		85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5	97.7		84-114			

Origins Laboratory, Inc.



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 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

Volatile Organic Compounds by GC/MS SW846 8260C - 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 B9A0805 - EPA 5030B (Water)

Blank (B9A0805-BLK2)

Prepared: 01/08/2019 Analyzed: 01/08/2019

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5	98.2		84-121			
Surrogate: Toluene-d8	62		"	62.5	98.8		85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5	101		84-114			

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

Volatile Organic Compounds by GC/MS SW846 8260C - 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 B9A0805 - EPA 5030B (Water)

LCS (B9A0805-BS1)

Prepared: 01/08/2019 Analyzed: 01/08/2019

Benzene	42.6	1.00	ug/L	50.0		85.2	73.3-129			
Toluene	43.5	1.00	"	50.0		87.0	76.2-123			
Ethylbenzene	42.9	1.00	"	50.0		85.9	73.6-130			
m,p-Xylene	84.8	2.00	"	100		84.8	76.1-126			
o-Xylene	41.0	1.00	"	50.0		82.0	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.0	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.3	84-114			

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

Volatile Organic Compounds by GC/MS SW846 8260C - 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 B9A0805 - EPA 5030B (Water)

LCS (B9A0805-BS2)

Prepared: 01/08/2019 Analyzed: 01/08/2019

Benzene	46.3	1.00	ug/L	50.0		92.5	73.3-129			
Toluene	46.4	1.00	"	50.0		92.8	76.2-123			
Ethylbenzene	45.2	1.00	"	50.0		90.4	73.6-130			
m,p-Xylene	90.4	2.00	"	100		90.4	76.1-126			
o-Xylene	43.9	1.00	"	50.0		87.8	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.8	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	84-114			

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

Volatile Organic Compounds by GC/MS SW846 8260C - 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 B9A0805 - EPA 5030B (Water)

Matrix Spike (B9A0805-MS1)	Source: Y901057-08			Prepared: 01/08/2019 Analyzed: 01/08/2019						
Benzene	48.2	1.00	ug/L	50.0	ND	96.4	74-130			
Toluene	47.8	1.00	"	50.0	ND	95.7	73-131			
Ethylbenzene	47.2	1.00	"	50.0	ND	94.5	76-132			
m,p-Xylene	94.1	2.00	"	100	0.260	93.9	69-139			
o-Xylene	45.7	1.00	"	50.0	ND	91.5	74-131			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.7	84-121			
Surrogate: Toluene-d8	62		"	62.5		98.9	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.0	84-114			

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B9A0805 - EPA 5030B (Water)

Matrix Spike (B9A0805-MS2)	Source: Y901057-09			Prepared: 01/08/2019 Analyzed: 01/08/2019						
Benzene	51.0	1.00	ug/L	50.0	ND	102	74-130			
Toluene	52.0	1.00	"	50.0	ND	104	73-131			
Ethylbenzene	51.2	1.00	"	50.0	ND	102	76-132			
m,p-Xylene	99.4	2.00	"	100	0.220	99.2	69-139			
o-Xylene	48.7	1.00	"	50.0	ND	97.4	74-131			
Surrogate: 1,2-Dichloroethane-d4	59		"	62.5		94.6	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.2	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B9A0805 - EPA 5030B (Water)

Matrix Spike Dup (B9A0805-MSD1)	Source: Y901057-08			Prepared: 01/08/2019 Analyzed: 01/08/2019						
Benzene	45.9	1.00	ug/L	50.0	ND	91.8	74-130	4.91	20	
Toluene	46.1	1.00	"	50.0	ND	92.2	73-131	3.68	20	
Ethylbenzene	45.2	1.00	"	50.0	ND	90.4	76-132	4.37	20	
m,p-Xylene	89.5	2.00	"	100	0.260	89.2	69-139	5.05	20	
o-Xylene	43.4	1.00	"	50.0	ND	86.7	74-131	5.34	20	
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.3	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.8	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	84-114			

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

Volatile Organic Compounds by GC/MS SW846 8260C - 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 B9A0805 - EPA 5030B (Water)

Matrix Spike Dup (B9A0805-MSD2)	Source: Y901057-09			Prepared: 01/08/2019 Analyzed: 01/08/2019						
Benzene	44.5	1.00	ug/L	50.0	ND	89.0	74-130	13.5	20	
Toluene	44.6	1.00	"	50.0	ND	89.3	73-131	15.2	20	
Ethylbenzene	44.1	1.00	"	50.0	ND	88.2	76-132	14.8	20	
m,p-Xylene	86.2	2.00	"	100	0.220	85.9	69-139	14.2	20	
o-Xylene	42.2	1.00	"	50.0	ND	84.4	74-131	14.3	20	
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		95.6	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.5	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	84-114			

Origins Laboratory, Inc.



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.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Tuttle L 17-6

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 at a wet weight basis.

Origins Laboratory, Inc.



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.

Jen Pellegrini For Noelle Doyle Mathis, President

June 25, 2019

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Tuttle L 17-6

Project Number - [none]

Attached are your analytical results for KMG - Tuttle L 17-6 received by Origins Laboratory, Inc. June 18, 2019. This project is associated with Origins project number Y906322-01.

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
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Tuttle L 17-6

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01R2 - 061819	Y906322-01	Water	June 18, 2019 14:27	06/18/2019 17:10
BH02R - 061819	Y906322-02	Water	June 18, 2019 10:32	06/18/2019 17:10
BH04R - 061819	Y906322-03	Water	June 18, 2019 14:40	06/18/2019 17:10
BH08R - 061819	Y906322-04	Water	June 18, 2019 14:34	06/18/2019 17:10
BH09R - 061819	Y906322-05	Water	June 18, 2019 14:31	06/18/2019 17:10
BH10 - 061819	Y906322-06	Water	June 18, 2019 10:50	06/18/2019 17:10
BH11R - 061819	Y906322-07	Water	June 18, 2019 14:45	06/18/2019 17:10
BH12 - 061819	Y906322-08	Water	June 18, 2019 10:55	06/18/2019 17:10
BH13 - 061819	Y906322-09	Water	June 18, 2019 11:07	06/18/2019 17:10
BH14 - 061819	Y906322-10	Water	June 18, 2019 10:37	06/18/2019 17:10

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

www.originslaboratory.com

page 1 of 1

ORIGINS
LABORATORY, INC

1906322

Client: APC / Tasman Project Manager/Send Report To: Bob Cornez
 Address: 6899 N Pecos St Email Address: rcornez@tasman-geo.com
 Denver CO 80221 Project Name/Number: Tuttle L 17-6/8156407
 Telephone Number: 303-487-1228 Samples Collected By: Brian G. Morgan

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

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis/Method	Sample Instructions	Turnaround Time:				
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #			Other	Other	Same Day	48 Hr	72 Hr
BH01R2-061819	6/18/19	1427	3	X				X			BTEX						
BH02R-061819		1032															
BH04R-061819		1440															
BH08R-061819		1434															
BH09R-061819		1431															
BH10-061819		1050															
BH11R-061819		1445															
BH12-061819		1055															
BH13-061819		1107															
BH14-061819		1037															
Relinquished by: <i>Bob Cornez</i>	Date: 6/18/19	Time: 1600	Received by: <i>[Signature]</i>	Date: 06/18/19	Time: 1710	Turnaround Time: Same Day <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input checked="" type="checkbox"/>											
Relinquished by:	Date:	Time:	Received by:	Date:	Time:												

Comments:

Origins Laboratory, Inc.

Jefe Pellegrini

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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y906322

Client: Tasman
 Client Project ID: Tuttle L 17-6

Checklist Completed by: JG
 Date/time completed: 6 / 19 / 2019

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

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

Cooler Number/Temperature: 1 / 4.9 °C _____ / _____ °C _____ / _____ °C _____ / _____ °C

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with Na ₂ SO ₂ +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Additional Comments (if any):				

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

Reviewed by (Project Manager) JG

Date/Time Reviewed 6/20/19

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH01R2 - 061819
6/18/2019 2:27:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906322-01 (Water)

BTEX by EPA 8260D

Benzene	420	10.0	ug/L	10	B9F2002	JTD	06/20/2019	06/23/2019	
Toluene	ND	10.0	"	"	"	JTD	"	"	U
Ethylbenzene	75.6	10.0	"	"	"	JTD	"	"	
Xylenes, total	202	10.0	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4	98.7 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	97.1 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH02R - 061819

6/18/2019 10:32:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906322-02 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9F2002	JTD	06/20/2019	06/23/2019	U
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	98.4 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	100 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	97.3 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH04R - 061819
6/18/2019 2:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906322-03 (Water)

BTEX by EPA 8260D

Benzene	55.5	50.0	ug/L	50	B9F2002	JTD	06/20/2019	06/23/2019	
Toluene	ND	50.0	"	"	"	JTD	"	"	U
Ethylbenzene	ND	50.0	"	"	"	JTD	"	"	U
Xylenes, total	57.5	50.0	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4	98.8 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	98.7 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH08R - 061819

6/18/2019 2:34:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906322-04 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9F2002	JTD	06/20/2019	06/23/2019	U
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	98.7 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	100 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	98.1 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH09R - 061819

6/18/2019 2:31:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906322-05 (Water)

BTEX by EPA 8260D

Benzene	680	20.0	ug/L	20	B9F2002	JTD	06/20/2019	06/23/2019	
Toluene	ND	20.0	"	"	"	JTD	"	"	U
Ethylbenzene	ND	20.0	"	"	"	JTD	"	"	U
Xylenes, total	116	20.0	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4	98.1 %	70-130			"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.9 %	70-130			"	"	"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH10 - 061819

6/18/2019 10:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906322-06 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9F2002	JTD	06/20/2019	06/23/2019	U
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	98.1 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	102 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	97.8 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH11R - 061819
6/18/2019 2:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906322-07 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9F2002	KDK	06/20/2019	06/24/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	98.8 %	70-130			"	"		06/23/2019	
Surrogate: Toluene-d8	100 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	98.1 %	70-130			"	"		"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH12 - 061819
6/18/2019 10:55:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906322-08 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9F2002	JTD	06/20/2019	06/23/2019	U
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	98.9 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	100 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	98.4 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH13 - 061819
6/18/2019 11:07:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906322-09 (Water)

BTEX by EPA 8260D

Benzene	8.08	1.00	ug/L	1	B9F2002	JTD	06/20/2019	06/21/2019	
Toluene	4.93	1.00	"	"	"	JTD	"	"	
Ethylbenzene	4.89	1.00	"	"	"	JTD	"	"	
Xylenes, total	14.9	1.00	"	"	"	JTD	"	"	
Surrogate: 1,2-Dichloroethane-d4	104 %			70-130		"	"	"	
Surrogate: Toluene-d8	100 %			70-130		"	"	"	
Surrogate: 4-Bromofluorobenzene	99.7 %			70-130		"	"	"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH14 - 061819
6/18/2019 10:37:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906322-10 (Water)

BTEX by EPA 8260D

Benzene	2.35	1.00	ug/L	1	B9F2002	JTD	06/20/2019	06/21/2019	
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	100 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	99.6 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	99.7 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

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 B9F2002 - EPA 5030B (Water)

Blank (B9F2002-BLK1)

Prepared: 06/20/2019 Analyzed: 06/21/2019

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.0	70-130			
Surrogate: Toluene-d8	66		"	62.5		105	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.0	70-130			

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

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 B9F2002 - EPA 5030B (Water)

LCS (B9F2002-BS1)

Prepared: 06/20/2019 Analyzed: 06/21/2019

Benzene	48.0	1.00	ug/L	50.0		96.1	70-130			
Toluene	54.6	1.00	"	50.0		109	70-130			
Ethylbenzene	52.8	1.00	"	50.0		106	70-130			
m,p-Xylene	105	2.00	"	100		105	70-130			
o-Xylene	50.9	1.00	"	50.0		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.2	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

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 B9F2002 - EPA 5030B (Water)

Matrix Spike (B9F2002-MS1)	Source: Y906324-03			Prepared: 06/20/2019 Analyzed: 06/21/2019						
Benzene	45.2	1.00	ug/L	50.0	ND	90.4	70-130			
Toluene	44.5	1.00	"	50.0	ND	89.0	70-130			
Ethylbenzene	43.4	1.00	"	50.0	ND	86.8	70-130			
m,p-Xylene	87.1	2.00	"	100	ND	87.1	70-130			
o-Xylene	45.0	1.00	"	50.0	ND	90.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.0	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	70-130			

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

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 B9F2002 - EPA 5030B (Water)

Matrix Spike Dup (B9F2002-MSD1)	Source: Y906324-03			Prepared: 06/20/2019 Analyzed: 06/21/2019						
Benzene	38.8	1.00	ug/L	50.0	ND	77.5	70-130	15.3	20	
Toluene	38.2	1.00	"	50.0	ND	76.5	70-130	15.2	20	
Ethylbenzene	36.0	1.00	"	50.0	ND	72.0	70-130	18.7	20	
m,p-Xylene	72.9	2.00	"	100	ND	72.9	70-130	17.8	20	
o-Xylene	39.4	1.00	"	50.0	ND	78.9	70-130	13.2	20	
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.8	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.0	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.8	70-130			

Origins Laboratory, Inc.



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.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Tuttle L 17-6

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 at a wet weight basis.

Origins Laboratory, Inc.



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.



August 13, 2019

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Tuttle L 17-6

Project Number - [none]

Attached are your analytical results for KMG - Tuttle L 17-6 received by Origins Laboratory, Inc. August 08, 2019. This project is associated with Origins project number Y908127-01.

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



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Tuttle L 17-6

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH13 - 080819	Y908127-01	Water	August 8, 2019 13:50	08/08/2019 16:35

Origins Laboratory, Inc.



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.

Jen Pellegrini For Noelle Doyle Mathis, President

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y908127

Client: Tasman
 Client Project ID: Tuttle L 17-6

Checklist Completed by: JK KDK
 Date/time completed: 08/09 / 2019

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

Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____
(Describe)
 Cooler Number/Temperature: 1 / 7.8 °C _____ / _____ °C _____ / _____ °C
 Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?		<input checked="" type="checkbox"/>		Sameday
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"/>		<input checked="" type="checkbox"/>	KDK
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 ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
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⁾ ?	<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 ⁽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)	<input checked="" type="checkbox"/>			
Additional Comments (if any):				

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

ap
 Reviewed by (Project Manager)

8/12/19
 Date/Time Reviewed

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH13 - 080819

8/8/2019 1:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y908127-01 (Water)

BTEX by EPA 8260D

Benzene	1.64	1.00	ug/L	1	B9H1202	KDK	08/12/2019	08/12/2019	
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	88.4 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	103 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	119 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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.

Jen Pellegrini For Noelle Doyle Mathis, President

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

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 B9H1202 - EPA 5030B (Water)

Blank (B9H1202-BLK1)

Prepared: 08/12/2019 Analyzed: 08/12/2019

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	56		"	62.5	89.5		70-130			
Surrogate: Toluene-d8	65		"	62.5	104		70-130			
Surrogate: 4-Bromofluorobenzene	75		"	62.5	120		70-130			

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

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 B9H1202 - EPA 5030B (Water)

LCS (B9H1202-BS1)

Prepared: 08/12/2019 Analyzed: 08/12/2019

Benzene	52.0	1.00	ug/L	50.0		104	70-130			
Toluene	55.0	1.00	"	50.0		110	70-130			
Ethylbenzene	51.8	1.00	"	50.0		104	70-130			
m,p-Xylene	103	2.00	"	100		103	70-130			
o-Xylene	51.8	1.00	"	50.0		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	54		"	62.5		87.0	70-130			
Surrogate: Toluene-d8	64		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	73		"	62.5		118	70-130			

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

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

Batch B9H1202 - EPA 5030B (Water)

Matrix Spike (B9H1202-MS1)	Source: Y908128-01			Prepared: 08/12/2019 Analyzed: 08/12/2019						
Benzene	329	1.00	ug/L	50.0	271	118	70-130			QM-07
Toluene	52.2	1.00	"	50.0	0.140	104	70-130			
Ethylbenzene	53.3	1.00	"	50.0	0.200	106	70-130			
m,p-Xylene	103	2.00	"	100	0.420	103	70-130			
o-Xylene	52.8	1.00	"	50.0	0.120	105	70-130			
Surrogate: 1,2-Dichloroethane-d4	55		"	62.5		87.8	70-130			
Surrogate: Toluene-d8	64		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	72		"	62.5		115	70-130			

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

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

Batch B9H1202 - EPA 5030B (Water)

Matrix Spike Dup (B9H1202-MSD1)	Source: Y908128-01			Prepared: 08/12/2019 Analyzed: 08/12/2019						
Benzene	331	1.00	ug/L	50.0	271	120	70-130	0.439	20	
Toluene	56.0	1.00	"	50.0	0.140	112	70-130	7.10	20	
Ethylbenzene	57.6	1.00	"	50.0	0.200	115	70-130	7.65	20	
m,p-Xylene	112	2.00	"	100	0.420	112	70-130	8.17	20	
o-Xylene	56.8	1.00	"	50.0	0.120	113	70-130	7.34	20	
Surrogate: 1,2-Dichloroethane-d4	55		"	62.5		87.2	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	72		"	62.5		116	70-130			

Origins Laboratory, Inc.



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.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Tuttle L 17-6

Notes and Definitions

U Sample is Non-Detect.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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.

Jen Pellegrini For Noelle Doyle Mathis, President

September 12, 2019

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Tuttle L 17-6

Project Number - [none]

Attached are your analytical results for KMG - Tuttle L 17-6 received by Origins Laboratory, Inc. September 09, 2019. This project is associated with Origins project number Y909112-01.

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
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Tuttle L 17-6

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01R2 - 090919	Y909112-01	Water	September 9, 2019 13:39	09/09/2019 15:15
BH02R - 090919	Y909112-02	Water	September 9, 2019 13:18	09/09/2019 15:15
BH04R - 090919	Y909112-03	Water	September 9, 2019 13:17	09/09/2019 15:15
BH08R - 090919	Y909112-04	Water	September 9, 2019 13:30	09/09/2019 15:15
BH09R - 090919	Y909112-05	Water	September 9, 2019 13:53	09/09/2019 15:15
BH10 - 090919	Y909112-06	Water	September 9, 2019 13:07	09/09/2019 15:15
BH11R - 090919	Y909112-07	Water	September 9, 2019 13:26	09/09/2019 15:15
BH12 - 090919	Y909112-08	Water	September 9, 2019 13:08	09/09/2019 15:15
BH13- 090919	Y909112-09	Water	September 9, 2019 13:47	09/09/2019 15:15
BH14 - 090919	Y909112-10	Water	September 9, 2019 13:42	09/09/2019 15:15

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y909112

Client: Tasman

Client Project ID: Tuttle L 17-6

Checklist Completed by: JG

Shipped Via: HD
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 9/10/2019

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 8.1 °C / _____ °C / _____ °C / _____ °C

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?		<input checked="" type="checkbox"/>		<u>Same Day</u>
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 ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<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 ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)		<input checked="" type="checkbox"/>		
Additional Comments (if any):				

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

Reviewed by (Project Manager) JG

Date/Time Reviewed 9/11/19

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH01R2 - 090919

9/9/2019 1:39:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909112-01 (Water)

BTEX by EPA 8260D

Benzene	137	10.0	ug/L	10	B9I1005	KDK	09/10/2019	09/11/2019	
Toluene	ND	10.0	"	"	"	KDK	"	"	U
Ethylbenzene	31.1	10.0	"	"	"	KDK	"	"	
Xylenes, total	76.9	10.0	"	"	"	KDK	"	"	

Surrogate: 1,2-Dichloroethane-d4	102 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	99.4 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	99.3 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH02R - 090919

9/9/2019 1:18:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909112-02 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9I1005	KDK	09/10/2019	09/11/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	103 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	99.3 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	98.9 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH04R - 090919

9/9/2019 1:17:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909112-03 (Water)

BTEX by EPA 8260D

Benzene	485	50.0	ug/L	50	B911005	KDK	09/10/2019	09/11/2019	
Toluene	ND	50.0	"	"	"	KDK	"	"	U
Ethylbenzene	ND	50.0	"	"	"	KDK	"	"	U
Xylenes, total	467	50.0	"	"	"	KDK	"	"	

Surrogate: 1,2-Dichloroethane-d4	103 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	98.6 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH08R - 090919

9/9/2019 1:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909112-04 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9I1005	KDK	09/10/2019	09/11/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	106 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	99.6 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	98.1 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH09R - 090919

9/9/2019 1:53:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909112-05 (Water)

BTEX by EPA 8260D

Benzene	922	50.0	ug/L	50	B9I1005	KDK	09/10/2019	09/11/2019	
Toluene	ND	50.0	"	"	"	KDK	"	"	U
Ethylbenzene	ND	50.0	"	"	"	KDK	"	"	U
Xylenes, total	163	50.0	"	"	"	KDK	"	"	

Surrogate: 1,2-Dichloroethane-d4	102 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	100 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH10 - 090919
9/9/2019 1:07:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909112-06 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9I1005	KDK	09/10/2019	09/11/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	105 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	99.9 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH11R - 090919

9/9/2019 1:26:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909112-07 (Water)

BTEX by EPA 8260D

Benzene	1.00	1.00	ug/L	1	B911005	KDK	09/10/2019	09/11/2019	
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	106 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	97.9 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH12 - 090919

9/9/2019 1:08:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909112-08 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B911005	KDK	09/10/2019	09/11/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	104 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	99.8 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	99.4 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH13- 090919

9/9/2019 1:47:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909112-09 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9I1005	KDK	09/10/2019	09/11/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	106 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	100 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	98.3 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

BH14 - 090919

9/9/2019 1:42:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909112-10 (Water)

BTEX by EPA 8260D

Benzene	1.00	1.00	ug/L	1	B911005	KDK	09/10/2019	09/11/2019	
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	105 %	70-130			"	"		"	
Surrogate: Toluene-d8	98.6 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	97.5 %	70-130			"	"		"	

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

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 B9I1005 - EPA 5030B (Water)

Blank (B9I1005-BLK1)

Prepared: 09/10/2019 Analyzed: 09/10/2019

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		102	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	70-130			

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

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 B9I1005 - EPA 5030B (Water)

LCS (B9I1005-BS1)

Prepared: 09/10/2019 Analyzed: 09/10/2019

Benzene	47.1	1.00	ug/L	50.0		94.1	70-130			
Toluene	48.4	1.00	"	50.0		96.8	70-130			
Ethylbenzene	48.8	1.00	"	50.0		97.5	70-130			
m,p-Xylene	96.0	2.00	"	100		96.0	70-130			
o-Xylene	49.0	1.00	"	50.0		97.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		98.2	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.8	70-130			

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

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 B911005 - EPA 5030B (Water)

Matrix Spike (B911005-MS1)	Source: Y909109-01			Prepared: 09/10/2019 Analyzed: 09/10/2019						
Benzene	49.1	1.00	ug/L	50.0	ND	98.2	70-130			
Toluene	49.8	1.00	"	50.0	ND	99.7	70-130			
Ethylbenzene	51.4	1.00	"	50.0	0.100	103	70-130			
m,p-Xylene	102	2.00	"	100	0.310	102	70-130			
o-Xylene	50.2	1.00	"	50.0	0.110	100	70-130			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.2	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.7	70-130			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.5	70-130			

Origins Laboratory, Inc.



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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Tuttle L 17-6

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 B911005 - EPA 5030B (Water)

Matrix Spike Dup (B911005-MSD1)	Source: Y909109-01			Prepared: 09/10/2019 Analyzed: 09/10/2019						
Benzene	50.3	1.00	ug/L	50.0	ND	101	70-130	2.47	20	
Toluene	50.2	1.00	"	50.0	ND	100	70-130	0.640	20	
Ethylbenzene	51.1	1.00	"	50.0	0.100	102	70-130	0.741	20	
m,p-Xylene	103	2.00	"	100	0.310	102	70-130	0.479	20	
o-Xylene	51.3	1.00	"	50.0	0.110	102	70-130	1.99	20	
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		98.0	70-130			
Surrogate: Toluene-d8	60		"	62.5		95.8	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		96.8	70-130			

Origins Laboratory, Inc.



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.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Tuttle L 17-6

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 at a wet weight basis.

Origins Laboratory, Inc.



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.

Jen Pellegrini For Noelle Doyle Mathis, President