

July 10, 2019

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Brown 32-35

Project Number - [none]

Attached are your analytical results for KMG - Brown 32-35 received by Origins Laboratory, Inc. July 08, 2019. This project is associated with Origins project number Y907122-01.

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 - Brown 32-35

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01 - 070819	Y907122-01	Water	July 8, 2019 10:17	07/08/2019 16:45
BH02 - 070819	Y907122-02	Water	July 8, 2019 10:18	07/08/2019 16:45
BH03 - 070819	Y907122-03	Water	July 8, 2019 10:29	07/08/2019 16:45
BH04 - 070819	Y907122-04	Water	July 8, 2019 10:28	07/08/2019 16:45

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 - Brown 32-35

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y907122

Client: Tasman

Client Project ID: Brown 32-35

Checklist Completed by: JG

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

Date/time completed: 7/9 / 2019

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 5.0 °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 type="checkbox"/>	<input checked="" 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 CO ₃ +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.

JG
 Reviewed by (Project Manager)

7/10/19
 Date/Time Reviewed

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

BH01 - 070819
7/8/2019 10:17:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907122-01 (Water)

BTEX by EPA 8260D

Benzene	11.6	1.00	ug/L	1	B9G0905	KDK	07/09/2019	07/09/2019	
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	101 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	106 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	108 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

BH02 - 070819
7/8/2019 10:18:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907122-02 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9G0905	KDK	07/09/2019	07/09/2019	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	101 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	106 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	106 %	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 - Brown 32-35

BH03 - 070819
7/8/2019 10:29:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907122-03 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9G0905	KDK	07/09/2019	07/09/2019	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	107 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

BH04 - 070819
7/8/2019 10:28:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907122-04 (Water)

BTEX by EPA 8260D

Benzene	ND	4.00	ug/L	4	B9G0905	KDK	07/09/2019	07/09/2019	U
Toluene	ND	4.00	"	"	"	KDK	"	"	U
Ethylbenzene	7.44	4.00	"	"	"	KDK	"	"	
Xylenes, total	ND	4.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	103 %	70-130			"	"		"	
Surrogate: Toluene-d8	105 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	105 %	70-130			"	"		"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

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 B9G0905 - EPA 5030B (Water)

Blank (B9G0905-BLK1)

Prepared: 07/09/2019 Analyzed: 07/09/2019

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	67		"	62.5		107	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

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 B9G0905 - EPA 5030B (Water)

Blank (B9G0905-BLK2)

Prepared: 07/09/2019 Analyzed: 07/09/2019

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	66		"	62.5		106	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

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 B9G0905 - EPA 5030B (Water)

LCS (B9G0905-BS1)

Prepared: 07/09/2019 Analyzed: 07/09/2019

Benzene	55.3	1.00	ug/L	50.0		111	70-130			
Toluene	55.8	1.00	"	50.0		112	70-130			
Ethylbenzene	48.2	1.00	"	50.0		96.5	70-130			
m,p-Xylene	95.0	2.00	"	100		95.0	70-130			
o-Xylene	46.4	1.00	"	50.0		92.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.4	70-130			
Surrogate: Toluene-d8	66		"	62.5		106	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		107	70-130			

Origins Laboratory, Inc.



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 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

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 B9G0905 - EPA 5030B (Water)

LCS (B9G0905-BS2)

Prepared: 07/09/2019 Analyzed: 07/09/2019

Benzene	58.5	1.00	ug/L	50.0		117	70-130			
Toluene	59.8	1.00	"	50.0		120	70-130			
Ethylbenzene	52.9	1.00	"	50.0		106	70-130			
m,p-Xylene	104	2.00	"	100		104	70-130			
o-Xylene	50.0	1.00	"	50.0		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		107	70-130			
Surrogate: Toluene-d8	66		"	62.5		105	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		107	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

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 B9G0905 - EPA 5030B (Water)

Matrix Spike (B9G0905-MS1)	Source: Y907123-04			Prepared: 07/09/2019 Analyzed: 07/09/2019						
Benzene	60.2	1.00	ug/L	50.0	ND	120	70-130			
Toluene	60.6	1.00	"	50.0	ND	121	70-130			
Ethylbenzene	53.3	1.00	"	50.0	0.100	106	70-130			
m,p-Xylene	106	2.00	"	100	ND	106	70-130			
o-Xylene	50.6	1.00	"	50.0	ND	101	70-130			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		95.7	70-130			
Surrogate: Toluene-d8	66		"	62.5		106	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		106	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

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 B9G0905 - EPA 5030B (Water)

Matrix Spike (B9G0905-MS2)	Source: Y907123-03			Prepared: 07/09/2019 Analyzed: 07/09/2019						
Benzene	58.4	1.00	ug/L	50.0	ND	117	70-130			
Toluene	58.4	1.00	"	50.0	ND	117	70-130			
Ethylbenzene	54.3	1.00	"	50.0	1.42	106	70-130			
m,p-Xylene	104	2.00	"	100	0.310	103	70-130			
o-Xylene	50.6	1.00	"	50.0	0.420	100	70-130			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.4	70-130			
Surrogate: Toluene-d8	69		"	62.5		110	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		107	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

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 B9G0905 - EPA 5030B (Water)

Matrix Spike Dup (B9G0905-MSD1)	Source: Y907123-04			Prepared: 07/09/2019 Analyzed: 07/09/2019						
Benzene	57.6	1.00	ug/L	50.0	ND	115	70-130	4.42	20	
Toluene	57.5	1.00	"	50.0	ND	115	70-130	5.22	20	
Ethylbenzene	50.1	1.00	"	50.0	0.100	100	70-130	6.23	20	
m,p-Xylene	100	2.00	"	100	ND	100	70-130	5.95	20	
o-Xylene	48.6	1.00	"	50.0	ND	97.2	70-130	3.99	20	
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		96.8	70-130			
Surrogate: Toluene-d8	66		"	62.5		105	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		107	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

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 B9G0905 - EPA 5030B (Water)

Matrix Spike Dup (B9G0905-MSD2)	Source: Y907123-03			Prepared: 07/09/2019 Analyzed: 07/09/2019						
Benzene	57.8	1.00	ug/L	50.0	ND	116	70-130	1.10	20	
Toluene	58.6	1.00	"	50.0	ND	117	70-130	0.376	20	
Ethylbenzene	54.1	1.00	"	50.0	1.42	105	70-130	0.461	20	
m,p-Xylene	101	2.00	"	100	0.310	100	70-130	2.89	20	
o-Xylene	50.1	1.00	"	50.0	0.420	99.4	70-130	0.913	20	
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.8	70-130			
Surrogate: Toluene-d8	70		"	62.5		112	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		107	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Brown 32-35

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

September 19, 2019

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Brown 32-35

Project Number - 89805834

Attached are your analytical results for KMG - Brown 32-35 received by Origins Laboratory, Inc. September 13, 2019. This project is associated with Origins project number Y909207-01.

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: 89805834
Project: KMG - Brown 32-35

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Brown 32-35 BH05	Y909207-01	Water	September 13, 2019 12:05	09/13/2019 15:40
Brown 32-35 BH06	Y909207-02	Water	September 13, 2019 12:22	09/13/2019 15:40
Brown 32-35 BH07	Y909207-03	Water	September 13, 2019 12:40	09/13/2019 15:40

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89805834
 Project: KMG - Brown 32-35

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y909207

Client: Tasman

Client Project ID: Brown 32-35

Checklist Completed by: JG

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

Date/time completed: 9/16/2019

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 12.0 °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) OP

Date/Time Reviewed 9/17/19

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: 89805834
 Project: KMG - Brown 32-35

Brown 32-35 BH05
9/13/2019 12:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909207-01 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B911711	KDK	09/17/2019	09/19/2019	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	99.7 %	70-130				"	"	"	
Surrogate: Toluene-d8	101 %	70-130				"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	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: 89805834
 Project: KMG - Brown 32-35

Brown 32-35 BH06
9/13/2019 12:22:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909207-02 (Water)

BTEX by EPA 8260D

Benzene	64.1	1.00	ug/L	1	B911711	KDK	09/17/2019	09/19/2019	
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	11.5	1.00	"	"	"	KDK	"	"	
Xylenes, total	26.9	1.00	"	"	"	KDK	"	"	

Surrogate: 1,2-Dichloroethane-d4	102 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	99.2 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %	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: 89805834
 Project: KMG - Brown 32-35

Brown 32-35 BH07
9/13/2019 12:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909207-03 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B911711	KDK	09/17/2019	09/19/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	3.20	1.00	"	"	"	KDK	"	"	

Surrogate: 1,2-Dichloroethane-d4	101 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	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: 89805834
 Project: KMG - Brown 32-35

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 B9I1711 - EPA 5030B (Water)

Blank (B9I1711-BLK1)

Prepared: 09/17/2019 Analyzed: 09/18/2019

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	66		"	62.5		105	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.9	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: 89805834
 Project: KMG - Brown 32-35

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 B9I1711 - EPA 5030B (Water)

LCS (B9I1711-BS1)

Prepared: 09/17/2019 Analyzed: 09/18/2019

Benzene	48.4	1.00	ug/L	50.0		96.9	70-130			
Toluene	47.8	1.00	"	50.0		95.6	70-130			
Ethylbenzene	46.3	1.00	"	50.0		92.5	70-130			
m,p-Xylene	90.8	2.00	"	100		90.8	70-130			
o-Xylene	46.0	1.00	"	50.0		92.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.2	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.0	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: 89805834
 Project: KMG - Brown 32-35

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 B9I1711 - EPA 5030B (Water)

Matrix Spike (B9I1711-MS1)	Source: Y909204-01			Prepared: 09/17/2019 Analyzed: 09/19/2019						
Benzene	48.0	1.00	ug/L	50.0	ND	95.9	70-130			
Toluene	48.2	1.00	"	50.0	ND	96.4	70-130			
Ethylbenzene	48.7	1.00	"	50.0	0.080	97.3	70-130			
m,p-Xylene	93.6	2.00	"	100	0.240	93.4	70-130			
o-Xylene	46.5	1.00	"	50.0	ND	93.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.8	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.9	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: 89805834
 Project: KMG - Brown 32-35

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 B911711 - EPA 5030B (Water)

Matrix Spike Dup (B911711-MSD1)	Source: Y909204-01			Prepared: 09/17/2019 Analyzed: 09/19/2019						
Benzene	51.5	1.00	ug/L	50.0	ND	103	70-130	7.22	20	
Toluene	51.2	1.00	"	50.0	ND	102	70-130	6.00	20	
Ethylbenzene	52.3	1.00	"	50.0	0.080	104	70-130	7.09	20	
m,p-Xylene	101	2.00	"	100	0.240	100	70-130	7.09	20	
o-Xylene	49.6	1.00	"	50.0	ND	99.1	70-130	6.33	20	
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.6	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.3	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: 89805834
Project: KMG - Brown 32-35

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

October 29, 2019

Tasman Geosciences

Bob Cornez

6855 Wet 119th Avenue

Broomfield CO 80020

Project Name - KMG - Brown 32-35

Project Number - [none]

Attached are your analytical results for KMG - Brown 32-35 received by Origins Laboratory, Inc. October 25, 2019. This project is associated with Origins project number Y910403-01.

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 Wet 119th Avenue
Broomfield CO 80020

Bob Cornez
Project Number: [none]
Project: KMG - Brown 32-35

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01 - 102519	Y910403-01	Water	October 25, 2019 16:15	10/25/2019 18:00
BH02 - 102519	Y910403-02	Water	October 25, 2019 16:36	10/25/2019 18:00
BH03 - 102519	Y910403-03	Water	October 25, 2019 16:18	10/25/2019 18:00
BH04 - 102519	Y910403-04	Water	October 25, 2019 15:38	10/25/2019 18:00
BH05 - 102519	Y910403-05	Water	October 25, 2019 15:38	10/25/2019 18:00
BH06 - 102519	Y910403-06	Water	October 25, 2019 15:55	10/25/2019 18:00
BH07 - 102519	Y910403-07	Water	October 25, 2019 15:56	10/25/2019 18:00
BH08 - 102519	Y910403-08	Water	October 25, 2019 15:20	10/25/2019 18:00
BH09 - 102519	Y910403-09	Water	October 25, 2019 15:21	10/25/2019 18:00
BH10 - 102519	Y910403-10	Water	October 25, 2019 15:37	10/25/2019 18:00

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
 6855 Wet 119th Avenue
 Broomfield CO 80020

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

www.originslaboratory.com

page 1 of 1

ORIGINS
LABORATORY, INC

Client: APC/OXY/TASMAN
 Address: 6855 W 119th Ave

Telephone Number: 970-927-0393
 Email Address: rcornez@tasman-geo.com

Project Manager: Robert Cornez
 Project Name: Brown 32-35
 Project Number: 89805834
 Samples Collected By: MR/RA

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Other			Other
BH01 - 102519	10/25/19	16:15	3					X					
BH02 - 102519		16:36											
BH03 - 102519		16:16											
BH04 - 102519		16:38											
BH05 - 102519		15:38											
BH06 - 102519		15:55											
BH07 - 102519		15:56											
BH08 - 102519		15:20											
BH09 - 102519		15:21											
BH10 - 102519		15:37											
Relinquished By: <i>[Signature]</i>	Date: 10/25/19	Time: 1800	Time: 1800	Received By: <i>[Signature]</i>	Date: 10/25/19	Time: 1800	Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input checked="" type="checkbox"/>						
Relinquished By:	Date:	Time:	Time:	Received By:	Date:	Time:							

Date Results Needed: 2.5

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
 6855 Wet 119th Avenue
 Broomfield CO 80020

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y910403

Client: Tasman

Client Project ID: Brown 32-35

Checklist Completed by: JG KDK

Shipped Via: HD

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

Date/time completed: 10 / 28 / 2019

Airbill #: N/A

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

(Describe)

Cooler Number/Temperature: 1 / 2.5 °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 type="checkbox"/>	<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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 NaAsO ₂ +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input type="checkbox"/>	<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) CYP

Date/Time Reviewed 10/29/19

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
 6855 Wet 119th Avenue
 Broomfield CO 80020

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

BH01 - 102519
10/25/2019 4:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y910403-01 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9J2805	KDK	10/28/2019	10/28/2019	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	87.1 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	103 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	94.1 %	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
 6855 Wet 119th Avenue
 Broomfield CO 80020

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

BH02 - 102519
10/25/2019 4:36:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y910403-02 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9J2805	KDK	10/28/2019	10/28/2019	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	88.4 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	103 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	106 %	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
 6855 Wet 119th Avenue
 Broomfield CO 80020

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

BH03 - 102519
10/25/2019 4:18:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y910403-03 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9J2805	KDK	10/28/2019	10/28/2019	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	91.7 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	105 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	96.3 %	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
 6855 Wet 119th Avenue
 Broomfield CO 80020

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

BH04 - 102519
10/25/2019 3:38:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y910403-04 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9J2805	KDK	10/28/2019	10/28/2019	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	92.9 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	102 %	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
 6855 Wet 119th Avenue
 Broomfield CO 80020

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

BH05 - 102519
10/25/2019 3:38:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y910403-05 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9J2805	KDK	10/28/2019	10/28/2019	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	90.7 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	105 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	107 %	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
 6855 Wet 119th Avenue
 Broomfield CO 80020

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

BH06 - 102519

10/25/2019 3:55:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y910403-06 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9J2805	KDK	10/28/2019	10/28/2019	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	94.8 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	99.4 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	96.1 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 Wet 119th Avenue
 Broomfield CO 80020

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

BH07 - 102519

10/25/2019 3:56:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y910403-07 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9J2805	KDK	10/28/2019	10/28/2019	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	97.5 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	91.9 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	106 %	70-130			"	"	"	"	

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 6855 Wet 119th Avenue
 Broomfield CO 80020

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

BH08 - 102519

10/25/2019 3:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y910403-08 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9J2805	KDK	10/28/2019	10/28/2019	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	90.4 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	112 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	94.4 %	70-130			"	"	"	"	

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Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

BH09 - 102519
10/25/2019 3:21:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y910403-09 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9J2805	KDK	10/28/2019	10/28/2019	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	93.6 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	102 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	91.1 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

BH10 - 102519
10/25/2019 3:37:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y910403-10 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9J2805	KDK	10/28/2019	10/28/2019	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	93.0 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	98.0 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	98.4 %	70-130			"	"	"	"	

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 Broomfield CO 80020

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

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 B9J2805 - EPA 5030B (Water)

Blank (B9J2805-BLK1)

Prepared: 10/28/2019 Analyzed: 10/28/2019

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	51		"	62.5		81.3	70-130			
Surrogate: Toluene-d8	66		"	62.5		105	70-130			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		95.1	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
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 Broomfield CO 80020

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

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 B9J2805 - EPA 5030B (Water)

LCS (B9J2805-BS1)

Prepared: 10/28/2019 Analyzed: 10/28/2019

Benzene	46.6	1.00	ug/L	50.0		93.3	70-130			
Toluene	56.9	1.00	"	50.0		114	70-130			
Ethylbenzene	49.8	1.00	"	50.0		99.6	70-130			
m,p-Xylene	101	2.00	"	100		101	70-130			
o-Xylene	49.3	1.00	"	50.0		98.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	47		"	62.5		75.2	70-130			
Surrogate: Toluene-d8	73		"	62.5		116	70-130			
Surrogate: 4-Bromofluorobenzene	58		"	62.5		92.3	70-130			

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 Broomfield CO 80020

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

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 B9J2805 - EPA 5030B (Water)

Matrix Spike (B9J2805-MS1)	Source: Y910400-09			Prepared: 10/28/2019 Analyzed: 10/28/2019						
Benzene	44.7	1.00	ug/L	50.0	ND	89.5	70-130			
Toluene	48.0	1.00	"	50.0	ND	96.1	70-130			
Ethylbenzene	42.4	1.00	"	50.0	ND	84.7	70-130			
m,p-Xylene	85.1	2.00	"	100	ND	85.1	70-130			
o-Xylene	42.3	1.00	"	50.0	ND	84.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	49		"	62.5		79.1	70-130			
Surrogate: Toluene-d8	65		"	62.5		105	70-130			
Surrogate: 4-Bromofluorobenzene	55		"	62.5		87.3	70-130			

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 Broomfield CO 80020

Bob Cornez
 Project Number: [none]
 Project: KMG - Brown 32-35

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 B9J2805 - EPA 5030B (Water)

Matrix Spike Dup (B9J2805-MSD1)	Source: Y910400-09			Prepared: 10/28/2019 Analyzed: 10/28/2019						
Benzene	46.4	1.00	ug/L	50.0	ND	92.7	70-130	3.58	20	
Toluene	57.4	1.00	"	50.0	ND	115	70-130	17.8	20	
Ethylbenzene	45.2	1.00	"	50.0	ND	90.4	70-130	6.51	20	
m,p-Xylene	91.1	2.00	"	100	ND	91.1	70-130	6.80	20	
o-Xylene	44.5	1.00	"	50.0	ND	89.1	70-130	5.11	20	
Surrogate: 1,2-Dichloroethane-d4	48		"	62.5		76.2	70-130			
Surrogate: Toluene-d8	77		"	62.5		122	70-130			
Surrogate: 4-Bromofluorobenzene	55		"	62.5		88.6	70-130			

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Tasman Geosciences
6855 Wet 119th Avenue
Broomfield CO 80020

Bob Cornez
Project Number: [none]
Project: KMG - Brown 32-35

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.

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