

July 07, 2016

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Howard 15-27A

Project Number - [none]

Attached are your analytical results for KMG - Howard 15-27A received by Origins Laboratory, Inc. June 30, 2016. This project is associated with Origins project number X607011-01.

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 - Howard 15-27A

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01 - 06/30/16	X607011-01	Water	June 30, 2016 10:33	06/30/2016 17:00
BH02 - 06/30/16	X607011-02	Water	June 30, 2016 10:23	06/30/2016 17:00
BH03 - 06/30/16	X607011-03	Water	June 30, 2016 10:40	06/30/2016 17:00
BH04 - 06/30/16	X607011-04	Water	June 30, 2016 10:49	06/30/2016 17:00
BH05 - 06/30/16	X607011-05	Water	June 30, 2016 10:58	06/30/2016 17:00
BH06 - 06/30/16	X607011-06	Water	June 30, 2016 11:08	06/30/2016 17:00
BH07 - 06/30/16	X607011-07	Water	June 30, 2016 10:07	06/30/2016 17:00
BH08 - 06/30/16	X607011-08	Water	June 30, 2016 11:18	06/30/2016 17:00

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
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Howard 15-27A

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X607011

Client: Tasman

Client Project ID: KMG-Howard 15-27A

Checklist Completed by: Jeff Smith

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

Date/time completed: 7/6/12

Airbill #: NA

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

Cooler Number/Temperature: 1 / 5.1 °C / _____ °C / _____ °C (Describe) _____ °C

Thermometer ID: TOU3

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ^{(1)?}	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact ^{(1)?}	X			
Was adequate sample volume provided ^{(1)?}	X			
Are short holding time analytes or samples with HTs due within 48 hours present ^{(1)?}		X		
Is a chain-of-custody (COC) present and filled out completely ^{(1)?}	X			
Does the COC agree with the number and type of sample bottles received ^{(1)?}	X			
Do the sample IDs on the bottle labels match the COC ^{(1)?}	X			
Is the COC properly relinquished by the client with date and time recorded ^{(1)?}	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		X		
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)	X			Jr/L
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.

Jeff Smith
 Reviewed by (Project Manager)

7/6/12
 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 - Howard 15-27A

BH01 - 06/30/16
6/30/2016 10:33:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X607011-01 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B6G0606	07/06/2016	07/06/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>	99.2 %	84-121			"	"	"	
<i>Surrogate: Toluene-d8</i>	96.2 %	85-115			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	102 %	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 - Howard 15-27A

BH02 - 06/30/16
6/30/2016 10:23:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X607011-02 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B6G0606	07/06/2016	07/06/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	98.2 %	84-121			"	"	"	
Surrogate: Toluene-d8	97.6 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.8 %	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 - Howard 15-27A

BH03 - 06/30/16
6/30/2016 10:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X607011-03 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B6G0606	07/06/2016	07/07/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	95.6 %	84-121			"	"	"	
Surrogate: Toluene-d8	97.1 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	104 %	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 - Howard 15-27A

BH04 - 06/30/16
6/30/2016 10:49:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X607011-04 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B6G0606	07/06/2016	07/07/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	93.7 %	84-121			"	"	"	
Surrogate: Toluene-d8	96.4 %	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 - Howard 15-27A

BH05 - 06/30/16
6/30/2016 10:58:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X607011-05 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B6G0606	07/06/2016	07/07/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	95.8 %	84-121			"	"	"	
Surrogate: Toluene-d8	96.1 %	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 - Howard 15-27A

BH06 - 06/30/16
6/30/2016 11:08:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X607011-06 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B6G0606	07/06/2016	07/07/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	94.8 %	84-121			"	"	"	
Surrogate: Toluene-d8	96.3 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	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 - Howard 15-27A

BH07 - 06/30/16
6/30/2016 10:07:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X607011-07 (Water)

BTEX by EPA 8260C

Benzene	38.2	1.00	ug/L	1	B6G0606	07/06/2016	07/07/2016	
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	74.4	1.00	"	"	"	"	"	
Xylenes, total	232	1.00	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	110 %	84-121			"	"	"	
Surrogate: Toluene-d8	136 %	85-115			"	"	"	S-04
Surrogate: 4-Bromofluorobenzene	117 %	84-114			"	"	"	S-04

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Howard 15-27A

BH08 - 06/30/16
6/30/2016 11:18:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X607011-08 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B6G0606	07/06/2016	07/07/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	95.6 %	84-121			"	"	"	
Surrogate: Toluene-d8	97.6 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	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 - Howard 15-27A

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 B6G0606 - EPA 5030B (Water)

Blank (B6G0606-BLK1)

Prepared: 07/06/2016 Analyzed: 07/06/2016

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	63		"	62.5		101	84-121			
Surrogate: Toluene-d8	61		"	62.5		96.9	85-115			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		103	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 - Howard 15-27A

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 B6G0606 - EPA 5030B (Water)

LCS (B6G0606-BS1)

Prepared: 07/06/2016 Analyzed: 07/06/2016

Benzene	50.8	1.00	ug/L	50.0		102	73.3-129			
Toluene	48.8	1.00	"	50.0		97.7	76.2-123			
Ethylbenzene	47.6	1.00	"	50.0		95.2	73.6-130			
m,p-Xylene	95.7	2.00	"	100		95.7	76.1-126			
o-Xylene	48.4	1.00	"	50.0		96.9	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5		101	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		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 - Howard 15-27A

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 B6G0606 - EPA 5030B (Water)

Matrix Spike (B6G0606-MS1)	Source: X607006-03			Prepared: 07/06/2016 Analyzed: 07/06/2016						
Benzene	53.9	1.00	ug/L	50.0	ND	108	74-130			
Toluene	51.5	1.00	"	50.0	ND	103	73-131			
Ethylbenzene	49.9	1.00	"	50.0	ND	99.7	76-132			
m,p-Xylene	102	2.00	"	100	ND	102	69-139			
o-Xylene	50.3	1.00	"	50.0	ND	101	74-131			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.3	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.4	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 - Howard 15-27A

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 B6G0606 - EPA 5030B (Water)

Matrix Spike Dup (B6G0606-MSD1)	Source: X607006-03			Prepared: 07/06/2016 Analyzed: 07/06/2016						
Benzene	51.4	1.00	ug/L	50.0	ND	103	74-130	4.64	20	
Toluene	48.8	1.00	"	50.0	ND	97.7	73-131	5.26	20	
Ethylbenzene	47.7	1.00	"	50.0	ND	95.4	76-132	4.47	20	
m,p-Xylene	98.6	2.00	"	100	ND	98.6	69-139	3.29	20	
o-Xylene	49.0	1.00	"	50.0	ND	98.1	74-131	2.54	20	
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.9	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	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 - Howard 15-27A

Notes and Definitions

U Sample is Non-Detect.

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

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 13, 2016

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Howard 15-27A

Project Number - [none]

Attached are your analytical results for KMG - Howard 15-27A received by Origins Laboratory, Inc. September 06, 2016. This project is associated with Origins project number X609053-01.

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 - Howard 15-27A

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	X609053-01	Water	September 6, 2016 9:55	09/06/2016 14:33
BH02	X609053-02	Water	September 6, 2016 9:55	09/06/2016 14:33
BH03	X609053-03	Water	September 6, 2016 10:10	09/06/2016 14:33
BH04	X609053-04	Water	September 6, 2016 10:10	09/06/2016 14:33
BH05	X609053-05	Water	September 6, 2016 10:20	09/06/2016 14:33
BH06	X609053-06	Water	September 6, 2016 10:25	09/06/2016 14:33
BH07	X609053-07	Water	September 6, 2016 10:30	09/06/2016 14:33
BH08	X609053-08	Water	September 6, 2016 10:40	09/06/2016 14:33

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: [none]
 Project: KMG - Howard 15-27A

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X609053

Client: Tasman

Client Project ID: KMG - Howard 15 - 27A

Checklist Completed by: Jeff Smith

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

Date/time completed: 9/8/12

Airbill #: NA

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

Cooler Number/Temperature: 1 / 1.7 °C / _____ °C / _____ °C (Describe) _____ °C

Thermometer ID: TCB

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ^{(1)?}	X			
Is there ice present (document if blue ice is used)	✓			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		f		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		✓		
Were all samples received intact ^{(1)?}	X			
Was adequate sample volume provided ^{(1)?}	✓			
Are short holding time analytes or samples with HTs due within 48 hours present ^{(1)?}		f		
Is a chain-of-custody (COC) present and filled out completely ^{(1)?}	X			
Does the COC agree with the number and type of sample bottles received ^{(1)?}	f			
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)?}	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		X		
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)		f		
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.

Jeff Smith
 Reviewed by (Project Manager)

9/8/12
 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 - Howard 15-27A

BH01
9/6/2016 9:55:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X609053-01 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B611001	09/10/2016	09/10/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	112 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	94.1 %	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 - Howard 15-27A

BH02
9/6/2016 9:55:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X609053-02 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B611001	09/10/2016	09/10/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>	113 %	84-121			"	"	"	
<i>Surrogate: Toluene-d8</i>	100 %	85-115			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	97.2 %	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 - Howard 15-27A

BH03
9/6/2016 10:10:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X609053-03 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B611001	09/10/2016	09/10/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	114 %	84-121			"	"	"	
Surrogate: Toluene-d8	100 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	94.6 %	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 - Howard 15-27A

BH04
9/6/2016 10:10:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X609053-04 (Water)

BTEX by EPA 8260C

Benzene	ND	4.00	ug/L	4	B611001	09/10/2016	09/10/2016	U
Toluene	ND	4.00	"	"	"	"	"	U
Ethylbenzene	ND	4.00	"	"	"	"	"	U
Xylenes, total	ND	4.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	112 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.4 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.6 %	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 - Howard 15-27A

BH05
9/6/2016 10:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X609053-05 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B611001	09/10/2016	09/10/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	115 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.9 %	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 - Howard 15-27A

BH06
9/6/2016 10:25:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X609053-06 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B611001	09/10/2016	09/10/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	114 %	84-121			"	"	"	
Surrogate: Toluene-d8	102 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.1 %	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 - Howard 15-27A

BH07

9/6/2016 10:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X609053-07 (Water)

BTEX by EPA 8260C

Benzene	54.4	4.00	ug/L	4	B611001	09/10/2016	09/10/2016	
Toluene	ND	4.00	"	"	"	"	"	U
Ethylbenzene	68.9	4.00	"	"	"	"	"	
Xylenes, total	186	4.00	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	113 %	84-121			"	"	"	
Surrogate: Toluene-d8	100 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	94.0 %	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 - Howard 15-27A

BH08

9/6/2016 10:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 X609053-08 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B611001	09/10/2016	09/10/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	114 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.7 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.0 %	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 - Howard 15-27A

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 B611001 - EPA 5030B (Water)

Blank (B611001-BLK1)

Prepared: 09/10/2016 Analyzed: 09/10/2016

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	72		"	62.5	115		84-121			
Surrogate: Toluene-d8	62		"	62.5	99.2		85-115			
Surrogate: 4-Bromofluorobenzene	59		"	62.5	94.7		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 - Howard 15-27A

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 B611001 - EPA 5030B (Water)

LCS (B611001-BS1)

Prepared: 09/10/2016 Analyzed: 09/10/2016

Benzene	45.9	1.00	ug/L	50.0		91.8	73.3-129			
Toluene	47.4	1.00	"	50.0		94.9	76.2-123			
Ethylbenzene	48.7	1.00	"	50.0		97.5	73.6-130			
m,p-Xylene	96.3	2.00	"	100		96.3	76.1-126			
o-Xylene	49.2	1.00	"	50.0		98.3	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	68		"	62.5		109	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.4	85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.3	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 - Howard 15-27A

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 B611001 - EPA 5030B (Water)

Matrix Spike (B611001-MS1)	Source: X609054-03			Prepared: 09/10/2016 Analyzed: 09/10/2016						
Benzene	49.6	1.00	ug/L	50.0	ND	99.1	74-130			
Toluene	51.4	1.00	"	50.0	ND	103	73-131			
Ethylbenzene	54.1	1.00	"	50.0	ND	108	76-132			
m,p-Xylene	109	2.00	"	100	ND	109	69-139			
o-Xylene	53.6	1.00	"	50.0	ND	107	74-131			
Surrogate: 1,2-Dichloroethane-d4	68		"	62.5		109	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.9	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 - Howard 15-27A

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 B611001 - EPA 5030B (Water)

Matrix Spike Dup (B611001-MSD1)	Source: X609054-03			Prepared: 09/10/2016 Analyzed: 09/10/2016						
Benzene	49.9	1.00	ug/L	50.0	ND	99.9	74-130	0.724	20	
Toluene	51.6	1.00	"	50.0	ND	103	73-131	0.311	20	
Ethylbenzene	54.0	1.00	"	50.0	ND	108	76-132	0.185	20	
m,p-Xylene	108	2.00	"	100	ND	108	69-139	1.03	20	
o-Xylene	54.2	1.00	"	50.0	ND	108	74-131	1.10	20	
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		106	84-121			
Surrogate: Toluene-d8	61		"	62.5		98.2	85-115			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		94.8	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 - Howard 15-27A

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

December 28, 2016

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Howard 15-27A

Project Number - 88541237

Attached are your analytical results for KMG - Howard 15-27A received by Origins Laboratory, Inc. December 20, 2016. This project is associated with Origins project number X612240-01.

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: 88541237
Project: KMG - Howard 15-27A

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01 - 12/20/16	X612240-01	Water	December 20, 2016 9:07	12/20/2016 14:34
BH02 - 12/20/16	X612240-02	Water	December 20, 2016 9:12	12/20/2016 14:34
BH03 - 12/20/16	X612240-03	Water	December 20, 2016 9:20	12/20/2016 14:34
BH04 - 12/20/16	X612240-04	Water	December 20, 2016 9:25	12/20/2016 14:34
BH06 - 12/20/16	X612240-05	Water	December 20, 2016 9:35	12/20/2016 14:34
BH08 - 12/20/16	X612240-06	Water	December 20, 2016 9:46	12/20/2016 14:34

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: 88541237
 Project: KMG - Howard 15-27A

www.originslaboratory.com

page 1 of 1

ORIGINS
 LABORATORY, INC

X612240

Client: Tasman Geosciences for APC
 Address: _____
 Project Manager: Bob Cornez
 Project Name: Howard 15-27A
 Project Number: 88541237
 Samples Collected By: Kate F. West P.
 Telephone Number: (352) 262-9910
 Email Address: fco@tasman-geo.com

Sample ID Description	Date Sampled	Time Sampled	# of Containers				Received By:	Time:	Date:	Received By:	Time:	Date:	Analysis	Sample Instructions
			Unpreserved	HCl	HNO ₃	Other								
BH01-12/20/10	12/20/10	907	X	X			X	3					BTEX 8260	1
BH02-12/20/10	12/20/10	912	X	X			X	3					BTEX 8260	2
BH03-12/20/10	12/20/10	920	X	X			X	3					BTEX 8260	3
BH04-12/20/10	12/20/10	925	X	X			X	3					BTEX 8260	4
BH06-12/20/10	12/20/10	935	X	X			X	3					BTEX 8260	5
BH08-12/20/10	12/20/10	946	X	X			X	3					BTEX 8260	6
														7
														8
														9
														10
Relinquished by:	Date: 12/20/10	Time: 1434					Received By:	Time: 1434	Date: 12-20-10			Analysis: BTEX 8260	Sample Instructions: Standard	
Relinquished by:	Date:	Time:					Received By:	Time:	Date:			Analysis:	Sample Instructions:	

Date Results Needed: 8-9

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: 88541237
 Project: KMG - Howard 15-27A

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X162240

Client: Tasman

Client Project ID: KMG - Howard 15-27A

Checklist Completed by: Jeff Smith

Shipped Via: 4D
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 12-21-16

Airbill #: NA

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

Cooler Number/Temperature: 1 18.9 °C 1 °C 1 °C (Describe)

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⁾ ?		X		Sampled Same Day
Is there ice present (document if blue ice is used)	<			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<		
Were all samples received intact ⁽¹⁾ ?	+			
Was adequate sample volume provided ⁽¹⁾ ?	<			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		+		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		+		
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	X			HCL
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.

[Signature]
 Reviewed by (Project Manager)

12-21-16
 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: 88541237
 Project: KMG - Howard 15-27A

BH01 - 12/20/16

12/20/2016 9:07:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 X612240-01 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B6L2703	12/27/2016	12/27/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	103 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.5 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	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: 88541237
 Project: KMG - Howard 15-27A

BH02 - 12/20/16

12/20/2016 9:12:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 X612240-02 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B6L2703	12/27/2016	12/27/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	104 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.2 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %	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: 88541237
 Project: KMG - Howard 15-27A

BH03 - 12/20/16

12/20/2016 9:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 X612240-03 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B6L2703	12/27/2016	12/28/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	103 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.9 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.2 %	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: 88541237
 Project: KMG - Howard 15-27A

BH04 - 12/20/16

12/20/2016 9:25:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 X612240-04 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B6L2703	12/27/2016	12/28/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	102 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.3 %	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: 88541237
 Project: KMG - Howard 15-27A

BH06 - 12/20/16

12/20/2016 9:35:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 X612240-05 (Water)

BTEX by EPA 8260C

Benzene	1.00	1.00	ug/L	1	B6L2703	12/27/2016	12/28/2016	
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	102 %	84-121			"	"	"	
Surrogate: Toluene-d8	96.8 %	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: 88541237
 Project: KMG - Howard 15-27A

BH08 - 12/20/16

12/20/2016 9:46:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 X612240-06 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B6L2703	12/27/2016	12/28/2016	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	103 %	84-121			"	"	"	
Surrogate: Toluene-d8	100 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.7 %	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: 88541237
 Project: KMG - Howard 15-27A

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 B6L2703 - EPA 5030B (Water)

Blank (B6L2703-BLK1)

Prepared: 12/27/2016 Analyzed: 12/27/2016

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	63		"	62.5		100	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	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: 88541237
 Project: KMG - Howard 15-27A

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 B6L2703 - EPA 5030B (Water)

Blank (B6L2703-BLK2)

Prepared: 12/27/2016 Analyzed: 12/27/2016

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	63		"	62.5		100	84-121			
Surrogate: Toluene-d8	62		"	62.5		98.9	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	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: 88541237
 Project: KMG - Howard 15-27A

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 B6L2703 - EPA 5030B (Water)

LCS (B6L2703-BS1)

Prepared: 12/27/2016 Analyzed: 12/27/2016

Benzene	43.8	1.00	ug/L	50.0		87.7	73.3-129			
Toluene	43.6	1.00	"	50.0		87.2	76.2-123			
Ethylbenzene	43.2	1.00	"	50.0		86.4	73.6-130			
m,p-Xylene	85.0	2.00	"	100		85.0	76.1-126			
o-Xylene	45.5	1.00	"	50.0		91.0	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.5	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.5	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.7	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88541237
 Project: KMG - Howard 15-27A

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 B6L2703 - EPA 5030B (Water)

LCS (B6L2703-BS2)

Prepared: 12/27/2016 Analyzed: 12/27/2016

Benzene	45.1	1.00	ug/L	50.0		90.3	73.3-129			
Toluene	45.4	1.00	"	50.0		90.8	76.2-123			
Ethylbenzene	44.5	1.00	"	50.0		89.0	73.6-130			
m,p-Xylene	88.8	2.00	"	100		88.8	76.1-126			
o-Xylene	47.0	1.00	"	50.0		94.1	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.6	84-121			
Surrogate: Toluene-d8	62		"	62.5		98.8	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88541237
 Project: KMG - Howard 15-27A

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 B6L2703 - EPA 5030B (Water)

Matrix Spike (B6L2703-MS1)	Source: X612240-01			Prepared: 12/27/2016 Analyzed: 12/27/2016						
Benzene	40.4	1.00	ug/L	50.0	ND	80.7	74-130			
Toluene	40.1	1.00	"	50.0	ND	80.2	73-131			
Ethylbenzene	37.8	1.00	"	50.0	ND	75.6	76-132			QM-07
m,p-Xylene	76.5	2.00	"	100	ND	76.5	69-139			
o-Xylene	41.7	1.00	"	50.0	ND	83.5	74-131			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.4	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: 88541237
 Project: KMG - Howard 15-27A

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 B6L2703 - EPA 5030B (Water)

Matrix Spike (B6L2703-MS2)	Source: X612240-02			Prepared: 12/27/2016 Analyzed: 12/27/2016						
Benzene	41.1	1.00	ug/L	50.0	ND	82.2	74-130			
Toluene	40.4	1.00	"	50.0	ND	80.8	73-131			
Ethylbenzene	39.3	1.00	"	50.0	ND	78.6	76-132			
m,p-Xylene	78.4	2.00	"	100	ND	78.4	69-139			
o-Xylene	42.4	1.00	"	50.0	ND	84.9	74-131			
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		102	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	84-114			

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88541237
 Project: KMG - Howard 15-27A

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 B6L2703 - EPA 5030B (Water)

Matrix Spike Dup (B6L2703-MSD1)	Source: X612240-01			Prepared: 12/27/2016 Analyzed: 12/27/2016						
Benzene	40.3	1.00	ug/L	50.0	ND	80.5	74-130	0.223	20	
Toluene	40.5	1.00	"	50.0	ND	81.0	73-131	1.07	20	
Ethylbenzene	39.4	1.00	"	50.0	ND	78.8	76-132	4.22	20	
m,p-Xylene	77.4	2.00	"	100	ND	77.4	69-139	1.21	20	
o-Xylene	41.4	1.00	"	50.0	ND	82.8	74-131	0.770	20	
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.8	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.1	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: 88541237
 Project: KMG - Howard 15-27A

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 B6L2703 - EPA 5030B (Water)

Matrix Spike Dup (B6L2703-MSD2)	Source: X612240-02			Prepared: 12/27/2016 Analyzed: 12/27/2016						
Benzene	40.3	1.00	ug/L	50.0	ND	80.6	74-130	2.06	20	
Toluene	40.1	1.00	"	50.0	ND	80.3	73-131	0.621	20	
Ethylbenzene	39.0	1.00	"	50.0	ND	77.9	76-132	0.920	20	
m,p-Xylene	77.0	2.00	"	100	ND	77.0	69-139	1.79	20	
o-Xylene	40.8	1.00	"	50.0	ND	81.5	74-131	4.01	20	
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		104	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		102	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 88541237
Project: KMG - Howard 15-27A

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.

March 08, 2017

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Howard 15-27A

Project Number - 88541237

Attached are your analytical results for KMG - Howard 15-27A received by Origins Laboratory, Inc. March 01, 2017. This project is associated with Origins project number Y703013-01.

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: 88541237
Project: KMG - Howard 15-27A

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01-03/01/17	Y703013-01	Water	March 1, 2017 10:59	03/01/2017 13:05
BH02-03/01/17	Y703013-02	Water	March 1, 2017 11:08	03/01/2017 13:05
BH03-03/01/17	Y703013-03	Water	March 1, 2017 11:13	03/01/2017 13:05
BH04-03/01/17	Y703013-04	Water	March 1, 2017 11:19	03/01/2017 13:05
BH05-03/01/17	Y703013-05	Water	March 1, 2017 11:27	03/01/2017 13:05
BH06-03/01/17	Y703013-06	Water	March 1, 2017 11:32	03/01/2017 13:05
BH08-03/01/17	Y703013-07	Water	March 1, 2017 11:45	03/01/2017 13:05

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: 88541237
 Project: KMG - Howard 15-27A

www.originslaboratory.com

1703013

page 1 of 1



Client: APC
 Address:
 Telephone Number: 303 810 2414
 Email Address: bcornez@tasman-geo.com

Project Manager: Bob Cornez
 Project Name: Howard 15-27A
 Project Number: 88541237
 Samples Collected By: Matt P.

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions		
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air/Surface Container #			Other	
B101-03/01/17	3/1/17	10:59	3	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>					1	
B102-03/01/17		11:08	3	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>					2	
B103-03/01/17		11:13	3	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>					3	
B104-03/01/17		11:19	3	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>					4	
B105-03/01/17		11:27	3	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>					5	
B106-03/01/17		11:32	2	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>					6	
B108-03/01/17		11:45	3	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>					7	
													8	
													9	
													10	

Relinquished By: [Signature]
 Date: 3/1/17
 Time: 1305

Received By: [Signature]
 Date: 3-1-17
 Time: 1305

Turnaround Time:
 Same Day 24 Hr
 48 Hr 72 Hr
 Standard

Date Results Needed: [Blank]

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

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: 88541237
 Project: KMG - Howard 15-27A

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4703013

Client: Tasman

Client Project ID: KMG - Howard 15-27A

Checklist Completed by: Don W

Shipped Via: 140
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 3-1-12 1352

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 59 °C 1 / _____ °C 1 / _____ °C 1 / _____ °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⁾ ?	/			
Is there ice present (document if blue ice is used)	/			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		/		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		/		
Were all samples received intact ⁽¹⁾ ?	/			
Was adequate sample volume provided ⁽¹⁾ ?	/			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		/		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	/			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	/			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	/			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	/			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		/		
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaASO2+NaOH, ZnAc+NaOH)		/		
Additional Comments (if any):				

⁽¹⁾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: [Signature] Project Manager

Date/Time Reviewed: 3/2/12

Origins Laboratory, Inc.

Jefe Pellegrini

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88541237
 Project: KMG - Howard 15-27A

BH01-03/01/17
 3/1/2017 10:59:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 Y703013-01 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7C0603	03/06/2017	03/07/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	102 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.1 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.3 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88541237
 Project: KMG - Howard 15-27A

BH02-03/01/17
 3/1/2017 11:08:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 Y703013-02 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7C0603	03/06/2017	03/07/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	103 %	84-121			"	"	"	
Surrogate: Toluene-d8	100 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.5 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88541237
 Project: KMG - Howard 15-27A

BH03-03/01/17
 3/1/2017 11:13:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 Y703013-03 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7C0603	03/06/2017	03/07/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	102 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.6 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.3 %	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: 88541237
 Project: KMG - Howard 15-27A

BH04-03/01/17
3/1/2017 11:19:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y703013-04 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7C0603	03/06/2017	03/07/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>	103 %	84-121			"	"	"	
<i>Surrogate: Toluene-d8</i>	99.5 %	85-115			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	96.9 %	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: 88541237
 Project: KMG - Howard 15-27A

BH05-03/01/17
 3/1/2017 11:27:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 Y703013-05 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7C0603	03/06/2017	03/07/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	102 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.7 %	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: 88541237
 Project: KMG - Howard 15-27A

BH06-03/01/17
 3/1/2017 11:32:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 Y703013-06 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7C0603	03/06/2017	03/07/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	102 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.1 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88541237
 Project: KMG - Howard 15-27A

BH08-03/01/17
3/1/2017 11:45:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y703013-07 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7C0603	03/06/2017	03/07/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	103 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.9 %	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: 88541237
 Project: KMG - Howard 15-27A

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 B7C0603 - EPA 5030B (Water)

Blank (B7C0603-BLK1)

Prepared: 03/06/2017 Analyzed: 03/07/2017

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	63		"	62.5		101	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.0	85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		95.4	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: 88541237
 Project: KMG - Howard 15-27A

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 B7C0603 - EPA 5030B (Water)

Blank (B7C0603-BLK2)

Prepared: 03/06/2017 Analyzed: 03/06/2017

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	63		"	62.5		101	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		95.1	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: 88541237
 Project: KMG - Howard 15-27A

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 B7C0603 - EPA 5030B (Water)

LCS (B7C0603-BS1)

Prepared: 03/06/2017 Analyzed: 03/07/2017

Benzene	47.7	1.00	ug/L	50.0		95.4	73.3-129			
Toluene	47.0	1.00	"	50.0		94.0	76.2-123			
Ethylbenzene	48.8	1.00	"	50.0		97.6	73.6-130			
m,p-Xylene	95.1	2.00	"	100		95.1	76.1-126			
o-Xylene	48.6	1.00	"	50.0		97.2	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5		101	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	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: 88541237
 Project: KMG - Howard 15-27A

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 B7C0603 - EPA 5030B (Water)

LCS (B7C0603-BS2)

Prepared: 03/06/2017 Analyzed: 03/06/2017

Benzene	48.3	1.00	ug/L	50.0		96.6	73.3-129			
Toluene	47.5	1.00	"	50.0		95.1	76.2-123			
Ethylbenzene	51.4	1.00	"	50.0		103	73.6-130			
m,p-Xylene	99.6	2.00	"	100		99.6	76.1-126			
o-Xylene	48.7	1.00	"	50.0		97.5	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5		100	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.6	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	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: 88541237
 Project: KMG - Howard 15-27A

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 B7C0603 - EPA 5030B (Water)

Matrix Spike (B7C0603-MS1)	Source: Y703002-03			Prepared: 03/06/2017 Analyzed: 03/06/2017						
Benzene	52.2	1.00	ug/L	50.0	ND	104	74-130			
Toluene	54.2	1.00	"	50.0	ND	108	73-131			
Ethylbenzene	56.0	1.00	"	50.0	ND	112	76-132			
m,p-Xylene	108	2.00	"	100	ND	108	69-139			
o-Xylene	51.8	1.00	"	50.0	ND	104	74-131			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		96.9	84-121			
Surrogate: Toluene-d8	65		"	62.5		104	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.6	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: 88541237
 Project: KMG - Howard 15-27A

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 B7C0603 - EPA 5030B (Water)

Matrix Spike (B7C0603-MS2)	Source: Y703002-03			Prepared: 03/06/2017 Analyzed: 03/06/2017						
Benzene	52.4	1.00	ug/L	50.0	ND	105	74-130			
Toluene	53.8	1.00	"	50.0	ND	108	73-131			
Ethylbenzene	54.3	1.00	"	50.0	ND	109	76-132			
m,p-Xylene	107	2.00	"	100	ND	107	69-139			
o-Xylene	51.2	1.00	"	50.0	ND	102	74-131			
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5		100	84-121			
Surrogate: Toluene-d8	66		"	62.5		105	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.8	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88541237
 Project: KMG - Howard 15-27A

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 B7C0603 - EPA 5030B (Water)

Matrix Spike Dup (B7C0603-MSD1)	Source: Y703002-03			Prepared: 03/06/2017 Analyzed: 03/06/2017						
Benzene	50.7	1.00	ug/L	50.0	ND	101	74-130	2.86	20	
Toluene	50.7	1.00	"	50.0	ND	101	73-131	6.66	20	
Ethylbenzene	52.2	1.00	"	50.0	ND	104	76-132	6.95	20	
m,p-Xylene	104	2.00	"	100	ND	104	69-139	3.58	20	
o-Xylene	50.0	1.00	"	50.0	ND	100	74-131	3.44	20	
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.8	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.2	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88541237
 Project: KMG - Howard 15-27A

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 B7C0603 - EPA 5030B (Water)

Matrix Spike Dup (B7C0603-MSD2)	Source: Y703002-03			Prepared: 03/06/2017 Analyzed: 03/06/2017						
Benzene	48.7	1.00	ug/L	50.0	ND	97.4	74-130	7.20	20	
Toluene	47.9	1.00	"	50.0	ND	95.8	73-131	11.5	20	
Ethylbenzene	50.1	1.00	"	50.0	ND	100	76-132	7.93	20	
m,p-Xylene	100	2.00	"	100	ND	100	69-139	6.43	20	
o-Xylene	48.7	1.00	"	50.0	ND	97.4	74-131	4.95	20	
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		98.3	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.6	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: 88541237
Project: KMG - Howard 15-27A

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 07, 2017

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Howard 15-27A

Project Number - 88541237

Attached are your analytical results for KMG - Howard 15-27A received by Origins Laboratory, Inc. June 02, 2017. This project is associated with Origins project number Y706044-01.

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: 88541237
Project: KMG - Howard 15-27A

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01 - 6/2/17	Y706044-01	Water	June 2, 2017 9:57	06/02/2017 15:35
BH02 - 6/2/17	Y706044-02	Water	June 2, 2017 9:55	06/02/2017 15:35
BH03 - 6/2/17	Y706044-03	Water	June 2, 2017 10:02	06/02/2017 15:35
BH04 - 6/2/17	Y706044-04	Water	June 2, 2017 10:07	06/02/2017 15:35
BH05 - 6/2/17	Y706044-05	Water	June 2, 2017 10:12	06/02/2017 15:35
BH06 - 6/2/17	Y706044-06	Water	June 2, 2017 10:21	06/02/2017 15:35
BH08 - 6/2/17	Y706044-07	Water	June 2, 2017 10:15	06/02/2017 15:35
BH09 - 6/2/17	Y706044-08	Water	June 2, 2017 10:30	06/02/2017 15:35

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.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88541237
 Project: KMG - Howard 15-27A

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4706044

Client: Tasman

Client Project ID: KMG - Howard 15-27A

Checklist Completed by: DL

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

Date/time completed: 6-5-11 1101

Airbill #: NA

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

Cooler Number/Temperature: 1 / 4.0 °C / _____ °C / _____ °C (Describe) _____ °C

Thermometer ID: TOUB

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	/			
Is there ice present (document if blue ice is used)	/			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		/		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		/		
Were all samples received intact ⁽¹⁾ ?	/			
Was adequate sample volume provided ⁽¹⁾ ?	/			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		/		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	/			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	/			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	/			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	/			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		/		
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)		/		
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: [Signature]
 Project Manager

6-5-11 1101
 Date/Time Reviewed

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: 88541237
 Project: KMG - Howard 15-27A

BH01 - 6/2/17
6/2/2017 9:57:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y706044-01 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7F0507	06/05/2017	06/05/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	99.7 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.1 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.4 %	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: 88541237
 Project: KMG - Howard 15-27A

BH02 - 6/2/17
6/2/2017 9:55:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y706044-02 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7F0507	06/05/2017	06/05/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	101 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.0 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	95.2 %	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: 88541237
 Project: KMG - Howard 15-27A

BH03 - 6/2/17
6/2/2017 10:02:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y706044-03 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7F0507	06/05/2017	06/05/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	100 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.3 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.7 %	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: 88541237
 Project: KMG - Howard 15-27A

BH04 - 6/2/17
6/2/2017 10:07:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y706044-04 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7F0507	06/05/2017	06/05/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>	100 %	84-121			"	"	"	
<i>Surrogate: Toluene-d8</i>	101 %	85-115			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	95.9 %	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: 88541237
 Project: KMG - Howard 15-27A

BH05 - 6/2/17
6/2/2017 10:12:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y706044-05 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7F0507	06/05/2017	06/05/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	102 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.5 %	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: 88541237
 Project: KMG - Howard 15-27A

BH06 - 6/2/17
6/2/2017 10:21:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y706044-06 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7F0507	06/05/2017	06/05/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>	101 %	84-121			"	"	"	
<i>Surrogate: Toluene-d8</i>	99.6 %	85-115			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	96.7 %	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: 88541237
 Project: KMG - Howard 15-27A

BH08 - 6/2/17
6/2/2017 10:15:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y706044-07 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7F0507	06/05/2017	06/05/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	100 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	95.5 %	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: 88541237
 Project: KMG - Howard 15-27A

BH09 - 6/2/17
6/2/2017 10:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y706044-08 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7F0507	06/05/2017	06/05/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	102 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.5 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.5 %	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: 88541237
 Project: KMG - Howard 15-27A

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 B7F0507 - EPA 5030B (Water)

Blank (B7F0507-BLK1)

Prepared: 06/05/2017 Analyzed: 06/05/2017

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	62		"	62.5	99.0		84-121			
Surrogate: Toluene-d8	63		"	62.5	101		85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5	95.6		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: 88541237
 Project: KMG - Howard 15-27A

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 B7F0507 - EPA 5030B (Water)

LCS (B7F0507-BS1)

Prepared: 06/05/2017 Analyzed: 06/05/2017

Benzene	42.4	1.00	ug/L	50.0		84.8	73.3-129			
Toluene	43.6	1.00	"	50.0		87.1	76.2-123			
Ethylbenzene	40.2	1.00	"	50.0		80.4	73.6-130			
m,p-Xylene	79.9	2.00	"	100		79.9	76.1-126			
o-Xylene	41.7	1.00	"	50.0		83.3	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		96.8	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.9	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: 88541237
 Project: KMG - Howard 15-27A

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 B7F0507 - EPA 5030B (Water)

Matrix Spike (B7F0507-MS1)	Source: Y706048-02			Prepared: 06/05/2017 Analyzed: 06/05/2017						
Benzene	46.2	1.00	ug/L	50.0	ND	92.4	74-130			
Toluene	48.0	1.00	"	50.0	ND	95.9	73-131			
Ethylbenzene	44.8	1.00	"	50.0	ND	89.6	76-132			
m,p-Xylene	89.1	2.00	"	100	ND	89.1	69-139			
o-Xylene	44.5	1.00	"	50.0	ND	89.0	74-131			
Surrogate: 1,2-Dichloroethane-d4	59		"	62.5		94.9	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.7	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: 88541237
 Project: KMG - Howard 15-27A

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 B7F0507 - EPA 5030B (Water)

Matrix Spike Dup (B7F0507-MSD1)	Source: Y706048-02			Prepared: 06/05/2017 Analyzed: 06/05/2017						
Benzene	43.8	1.00	ug/L	50.0	ND	87.5	74-130	5.38	20	
Toluene	45.4	1.00	"	50.0	ND	90.9	73-131	5.39	20	
Ethylbenzene	42.6	1.00	"	50.0	ND	85.2	76-132	5.04	20	
m,p-Xylene	83.5	2.00	"	100	ND	83.5	69-139	6.45	20	
o-Xylene	42.6	1.00	"	50.0	ND	85.2	74-131	4.36	20	
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		95.3	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.5	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: 88541237
Project: KMG - Howard 15-27A

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 12, 2017

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Howard 15-27A

Project Number - 88541237

Attached are your analytical results for KMG - Howard 15-27A received by Origins Laboratory, Inc. September 06, 2017. This project is associated with Origins project number Y709068-01.

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: 88541237
Project: KMG - Howard 15-27A

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01 - 9/6/17	Y709068-01	Water	September 6, 2017 13:20	09/06/2017 16:47
BH02 - 9/6/17	Y709068-02	Water	September 6, 2017 13:10	09/06/2017 16:47
BH03 - 9/6/17	Y709068-03	Water	September 6, 2017 13:15	09/06/2017 16:47
BH04 - 9/6/17	Y709068-04	Water	September 6, 2017 13:30	09/06/2017 16:47
BH05 - 9/6/17	Y709068-05	Water	September 6, 2017 13:11	09/06/2017 16:47
BH06 - 9/6/17	Y709068-06	Water	September 6, 2017 13:12	09/06/2017 16:47
BH07R - 9/6/17	Y709068-07	Water	September 6, 2017 13:22	09/06/2017 16:47
BH08 - 9/6/17	Y709068-08	Water	September 6, 2017 13:35	09/06/2017 16:47

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: 88541237
 Project: KMG - Howard 15-27A

www.originslaboratory.com

page 1 of 1

Y709008

ORIGINS
LABORATORY, INC

Client: Tasman Geosciences For APC
 Project Manager: Bob Cornez
 Address: 6899 Pecos St, Unit C
Denver, CO 80221
 Project Name: Howard 15-27A
 Project Number: 88541237
 Telephone Number: _____
 Email Address: cornez@tasman-geo.com
 Samples Collected By: Mitch Miller, Max Garza

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions		
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa			Other	
BH 01 - 9/6/17	9-6-17	1320	3	X				X						
BH 03 - 9/6/17		1310												
BH 03 - 9/6/17		1315												
BH 04 - 9/6/17		1330												
BH 05 - 9/6/17		1311												
BH 06 - 9/6/17		1312												
BH 07R - 9/6/17		1322												
BH 08 - 9/6/17		1335												
Relinquished By: <u>Mitch Miller</u>	Date: <u>9-6-17</u>	Time: <u>1617</u>	Time: <u>1617</u>	Received By: _____	Date: _____	Time: _____	Received By: _____	Date: <u>9/6/17</u>	Time: <u>1617</u>	Turnaround Time: <input type="checkbox"/> Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input checked="" type="checkbox"/> Standard				

Temp Received: 3.2 Date Results Needed _____

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: 88541237
 Project: KMG - Howard 15-27A

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4709068

Client: Tasman

Client Project ID: KMG-Howard 15-27A

Checklist Completed by: Dan

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

Date/time completed: 9-7-13 1043

Airbill #: MA

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

Cooler Number/Temperature: 1 / 3.2 °C / _____ °C / _____ °C / _____ °C (Describe)

Thermometer ID: TCB

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	/			
Is there ice present (document if blue ice is used)	/			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		/		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		/		
Were all samples received intact ⁽¹⁾ ?	/			
Was adequate sample volume provided ⁽¹⁾ ?	/			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		/		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	/			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	/			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	/			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	/			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		/		
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)		/		
Additional Comments (if any):				

⁽¹⁾ 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 9-7-13 1043

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: 88541237
 Project: KMG - Howard 15-27A

BH01 - 9/6/17
9/6/2017 1:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709068-01 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B710803	09/08/2017	09/08/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	114 %	84-121			"	"	"	
Surrogate: Toluene-d8	100 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	88.1 %	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: 88541237
 Project: KMG - Howard 15-27A

BH02 - 9/6/17
9/6/2017 1:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709068-02 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B710803	09/08/2017	09/08/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	116 %	84-121			"	"	"	
Surrogate: Toluene-d8	100 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	86.8 %	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: 88541237
 Project: KMG - Howard 15-27A

BH03 - 9/6/17
9/6/2017 1:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709068-03 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B710803	09/08/2017	09/08/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	112 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.9 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	88.5 %	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: 88541237
 Project: KMG - Howard 15-27A

BH04 - 9/6/17
9/6/2017 1:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709068-04 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B710803	09/08/2017	09/08/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	115 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.5 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	87.8 %	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: 88541237
 Project: KMG - Howard 15-27A

BH05 - 9/6/17
 9/6/2017 1:11:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 Y709068-05 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B710803	09/08/2017	09/09/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	116 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.0 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	88.6 %	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: 88541237
 Project: KMG - Howard 15-27A

BH06 - 9/6/17
9/6/2017 1:12:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709068-06 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B710803	09/08/2017	09/09/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	117 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.5 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	87.6 %	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: 88541237
 Project: KMG - Howard 15-27A

BH07R - 9/6/17
9/6/2017 1:22:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709068-07 (Water)

BTEX by EPA 8260C

Benzene	92.6	1.00	ug/L	1	B710803	09/08/2017	09/09/2017	
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	14.7	1.00	"	"	"	"	"	
Xylenes, total	20.8	1.00	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	117 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.8 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	88.6 %	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: 88541237
 Project: KMG - Howard 15-27A

BH08 - 9/6/17
9/6/2017 1:35:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y709068-08 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B710803	09/08/2017	09/09/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	113 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.3 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	87.7 %	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: 88541237
 Project: KMG - Howard 15-27A

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 B710803 - EPA 5030B (Water)

Blank (B710803-BLK1)

Prepared: 09/08/2017 Analyzed: 09/08/2017

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	69		"	62.5	110		84-121			
Surrogate: Toluene-d8	68		"	62.5	108		85-115			
Surrogate: 4-Bromofluorobenzene	57		"	62.5	90.5		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: 88541237
 Project: KMG - Howard 15-27A

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 B710803 - EPA 5030B (Water)

LCS (B710803-BS1)

Prepared: 09/08/2017 Analyzed: 09/08/2017

Benzene	45.4	1.00	ug/L	50.0		90.7	73.3-129			
Toluene	48.4	1.00	"	50.0		96.7	76.2-123			
Ethylbenzene	46.1	1.00	"	50.0		92.3	73.6-130			
m,p-Xylene	94.2	2.00	"	100		94.2	76.1-126			
o-Xylene	46.4	1.00	"	50.0		92.8	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	73		"	62.5		117	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	54		"	62.5		85.8	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: 88541237
 Project: KMG - Howard 15-27A

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 B710803 - EPA 5030B (Water)

Matrix Spike (B710803-MS1)	Source: Y709093-01			Prepared: 09/08/2017 Analyzed: 09/08/2017						
Benzene	44.6	1.00	ug/L	50.0	ND	89.3	74-130			
Toluene	48.1	1.00	"	50.0	ND	96.2	73-131			
Ethylbenzene	46.8	1.00	"	50.0	ND	93.7	76-132			
m,p-Xylene	96.2	2.00	"	100	ND	96.2	69-139			
o-Xylene	47.0	1.00	"	50.0	ND	93.9	74-131			
Surrogate: 1,2-Dichloroethane-d4	73		"	62.5		116	84-121			
Surrogate: Toluene-d8	62		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	57		"	62.5		90.6	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: 88541237
 Project: KMG - Howard 15-27A

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 B710803 - EPA 5030B (Water)

Matrix Spike Dup (B710803-MSD1)	Source: Y709093-01			Prepared: 09/08/2017 Analyzed: 09/08/2017						
Benzene	45.5	1.00	ug/L	50.0	ND	91.0	74-130	1.86	20	
Toluene	48.4	1.00	"	50.0	ND	96.7	73-131	0.560	20	
Ethylbenzene	47.4	1.00	"	50.0	ND	94.7	76-132	1.15	20	
m,p-Xylene	98.0	2.00	"	100	ND	98.0	69-139	1.76	20	
o-Xylene	47.2	1.00	"	50.0	ND	94.5	74-131	0.594	20	
Surrogate: 1,2-Dichloroethane-d4	74		"	62.5		119	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.6	85-115			
Surrogate: 4-Bromofluorobenzene	57		"	62.5		90.4	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: 88541237
Project: KMG - Howard 15-27A

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

December 13, 2017

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Howard 15-27A

Project Number - 88541237

Attached are your analytical results for KMG - Howard 15-27A received by Origins Laboratory, Inc. December 06, 2017. This project is associated with Origins project number Y712092-01.

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: 88541237
Project: KMG - Howard 15-27A

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01-12/6/17	Y712092-01	Water	December 6, 2017 10:15	12/06/2017 17:00
BH02-12/6/17	Y712092-02	Water	December 6, 2017 9:55	12/06/2017 17:00
BH03-12/6/17	Y712092-03	Water	December 6, 2017 10:05	12/06/2017 17:00
BH04-12/6/17	Y712092-04	Water	December 6, 2017 10:25	12/06/2017 17:00
BH05-12/6/17	Y712092-05	Water	December 6, 2017 10:45	12/06/2017 17:00
BH06-12/6/17	Y712092-06	Water	December 6, 2017 10:55	12/06/2017 17:00
BH07R-12/6/17	Y712092-07	Water	December 6, 2017 11:05	12/06/2017 17:00
BH08-12/6/17	Y712092-08	Water	December 6, 2017 10:35	12/06/2017 17:00

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
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88541237
 Project: KMG - Howard 15-27A

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4712092

Client: Tasman

Client Project ID: KMG - Howard 15-27A

Checklist Completed by: DLK

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

Date/time completed: 12-7-11

Airbill #: NA

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

Cooler Number/Temperature: 1 / 3.6 °C / _____ °C / _____ °C (Describe)

Thermometer ID: TC03

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 NaAsO 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) [Signature]

Date/Time Reviewed 12-7-11

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: 88541237
 Project: KMG - Howard 15-27A

BH01-12/6/17
12/6/2017 10:15:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y712092-01 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7L0810	12/08/2017	12/11/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	112 %	84-121			"	"	"	
Surrogate: Toluene-d8	105 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	104 %	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: 88541237
 Project: KMG - Howard 15-27A

BH02-12/6/17
12/6/2017 9:55:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y712092-02 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7L0810	12/08/2017	12/11/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>	110 %	84-121			"	"	"	
<i>Surrogate: Toluene-d8</i>	103 %	85-115			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	109 %	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: 88541237
 Project: KMG - Howard 15-27A

BH03-12/6/17

12/6/2017 10:05:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 Y712092-03 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7L0810	12/08/2017	12/11/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	110 %	84-121			"	"	"	
Surrogate: Toluene-d8	104 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	108 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88541237
 Project: KMG - Howard 15-27A

BH04-12/6/17
 12/6/2017 10:25:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 Y712092-04 (Water)

BTEX by EPA 8260C

Benzene	ND	4.00	ug/L	4	B7L0810	12/08/2017	12/11/2017	U
Toluene	ND	4.00	"	"	"	"	"	U
Ethylbenzene	ND	4.00	"	"	"	"	"	U
Xylenes, total	ND	4.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	108 %	84-121			"	"	"	
Surrogate: Toluene-d8	102 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	108 %	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: 88541237
 Project: KMG - Howard 15-27A

BH05-12/6/17

12/6/2017 10:45:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 Y712092-05 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7L0810	12/08/2017	12/11/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	111 %	84-121			"	"	"	
Surrogate: Toluene-d8	103 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	106 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88541237
 Project: KMG - Howard 15-27A

BH06-12/6/17
12/6/2017 10:55:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y712092-06 (Water)

BTEX by EPA 8260C

Benzene	4.90	1.00	ug/L	1	B7L0810	12/08/2017	12/11/2017	
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	112 %	84-121			"	"	"	
Surrogate: Toluene-d8	104 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	107 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88541237
 Project: KMG - Howard 15-27A

BH07R-12/6/17
12/6/2017 11:05:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y712092-07 (Water)

BTEX by EPA 8260C

Benzene	88.8	4.00	ug/L	4	B7L0810	12/08/2017	12/11/2017	
Toluene	ND	4.00	"	"	"	"	"	U
Ethylbenzene	ND	4.00	"	"	"	"	"	U
Xylenes, total	ND	4.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	110 %	84-121			"	"	"	
Surrogate: Toluene-d8	103 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	108 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88541237
 Project: KMG - Howard 15-27A

BH08-12/6/17

12/6/2017 10:35:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 Y712092-08 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B7L0810	12/08/2017	12/11/2017	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	111 %	84-121			"	"	"	
Surrogate: Toluene-d8	104 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	108 %	84-114			"	"	"	

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88541237
 Project: KMG - Howard 15-27A

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 B7L0810 - EPA 5030B (Water)

Blank (B7L0810-BLK1)

Prepared: 12/08/2017 Analyzed: 12/11/2017

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	69		"	62.5		111	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	68		"	62.5		108	84-114			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7L0810 - EPA 5030B (Water)

LCS (B7L0810-BS1)

Prepared: 12/08/2017 Analyzed: 12/11/2017

Benzene	43.9	1.00	ug/L	50.0		87.9	73.3-129			
Toluene	44.1	1.00	"	50.0		88.3	76.2-123			
Ethylbenzene	46.9	1.00	"	50.0		93.8	73.6-130			
m,p-Xylene	95.4	2.00	"	100		95.4	76.1-126			
o-Xylene	49.5	1.00	"	50.0		99.0	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	71		"	62.5		114	84-121			
Surrogate: Toluene-d8	64		"	62.5		103	85-115			
Surrogate: 4-Bromofluorobenzene	68		"	62.5		109	84-114			

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Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7L0810 - EPA 5030B (Water)

Matrix Spike (B7L0810-MS1)	Source: Y712083-02			Prepared: 12/08/2017 Analyzed: 12/11/2017						
Benzene	41.6	1.00	ug/L	50.0	ND	83.2	74-130			
Toluene	41.3	1.00	"	50.0	ND	82.6	73-131			
Ethylbenzene	43.6	1.00	"	50.0	ND	87.1	76-132			
m,p-Xylene	88.1	2.00	"	100	ND	88.1	69-139			
o-Xylene	47.7	1.00	"	50.0	ND	95.3	74-131			
Surrogate: 1,2-Dichloroethane-d4	68		"	62.5		108	84-121			
Surrogate: Toluene-d8	64		"	62.5		103	85-115			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		107	84-114			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B7L0810 - EPA 5030B (Water)

Matrix Spike Dup (B7L0810-MSD1)	Source: Y712083-02			Prepared: 12/08/2017 Analyzed: 12/11/2017						
Benzene	46.0	1.00	ug/L	50.0	ND	91.9	74-130	9.93	20	
Toluene	46.9	1.00	"	50.0	ND	93.8	73-131	12.8	20	
Ethylbenzene	50.3	1.00	"	50.0	ND	101	76-132	14.3	20	
m,p-Xylene	101	2.00	"	100	ND	101	69-139	13.9	20	
o-Xylene	52.2	1.00	"	50.0	ND	104	74-131	9.13	20	
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.8	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	84-114			

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Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

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Jen Pellegrini For Noelle Doyle Mathis, President