



April 04, 2019

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Coughlin Red VV 22-1

Project Number - 88636316

Attached are your analytical results for KMG - Coughlin Red VV 22-1 received by Origins Laboratory, Inc. March 28, 2019. This project is associated with Origins project number Y903447-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 88636316
Project: KMG - Coughlin Red VV 22-1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH02R - 032819	Y903447-01	Water	March 28, 2019 10:51	03/28/2019 17:07
BH08 - 032819	Y903447-02	Water	March 28, 2019 12:24	03/28/2019 17:07
BH09 - 032819	Y903447-03	Water	March 28, 2019 11:57	03/28/2019 17:07
BH10 - 032819	Y903447-04	Water	March 28, 2019 11:20	03/28/2019 17:07
BH11 - 032819	Y903447-05	Water	March 28, 2019 11:37	03/28/2019 17:07

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

www.originslaboratory.com
 page 1 of 1

ORIGINS
 LABORATORY, INC

9903447

Client: At Tasman Project Manager/Send Report To: Robert Cornez
 Address: 6899 Pecos St Email Address: rcornez@tasman-geo.com
Denver, CO 80221 Project Name/Number: Coughlin Red VV 22-1 88636316
 Telephone Number: _____ Samples Collected By: Chris A

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

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis/Method	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Sample #		
BH08-032819	3/28/19	10:51	3	X				X			BTEX	1
BH08-032819		12:24	1	X				X				2
BH09-032819		11:57	1	X				X				3
BH10-032819		11:20	1	X				X				4
BH11-032819		11:37	1	X				X				5
												6
												7
												8
												9
												10
Relinquished By: _____	Date: <u>03/28/19</u>	Time: _____	Received By: _____	Date: <u>07/15/19</u>	Time: <u>17:07</u>	Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input checked="" type="checkbox"/> Standard						
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	Date: _____	Time: _____							

Origins Laboratory, Inc.

Jefe Pellegrini

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y903447

Client: Tasman

Client Project ID: KMG - Coughlin Red

Checklist Completed by: JD

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

Date/time completed: 3/28/19

Airbill #: NA

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

Cooler Number/Temperature: 1 / 9.7 °c _____ / _____ °c _____ / _____ °c

Thermometer ID: FOB

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)	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 HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with Na ₂ SO ₂ +NaOH, ZnAc+NaOH)			X	
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: 4-1-19

Origins Laboratory, Inc.

Jefe Pellegrini

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

BH02R - 032819

3/28/2019 10:51:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y903447-01 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B9D0108	JTD	04/01/2019	04/02/2019	U
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	96.7 %	84-121			"	"	"		
Surrogate: Toluene-d8	101 %	85-115			"	"	"		
Surrogate: 4-Bromofluorobenzene	97.6 %	84-114			"	"	"		

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

BH08 - 032819

3/28/2019 12:24:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y903447-02 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B9D0108	JTD	04/01/2019	04/02/2019	U
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	95.2 %	84-121			"	"	"	"	
Surrogate: Toluene-d8	102 %	85-115			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	98.4 %	84-114			"	"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

BH09 - 032819

3/28/2019 11:57:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y903447-03 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B9D0108	JTD	04/01/2019	04/02/2019	U
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	99.4 %	84-121			"	"	"		
Surrogate: Toluene-d8	101 %	85-115			"	"	"		
Surrogate: 4-Bromofluorobenzene	96.6 %	84-114			"	"	"		

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

BH10 - 032819
3/28/2019 11:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y903447-04 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B9D0108	JTD	04/01/2019	04/02/2019	U
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	98.0 %	84-121			"	"	"		
Surrogate: Toluene-d8	100 %	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: 88636316
 Project: KMG - Coughlin Red VV 22-1

BH11 - 032819
3/28/2019 11:37:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y903447-05 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B9D0108	JTD	04/01/2019	04/02/2019	U
Toluene	ND	1.00	"	"	"	JTD	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	95.2 %	84-121			"	"	"	"	
Surrogate: Toluene-d8	109 %	85-115			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	98.9 %	84-114			"	"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

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 B9D0108 - EPA 5030B (Water)

Blank (B9D0108-BLK1)

Prepared: 04/01/2019 Analyzed: 04/01/2019

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		102	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		102	84-114			

Origins Laboratory, Inc.



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 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

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 B9D0108 - EPA 5030B (Water)

LCS (B9D0108-BS1)

Prepared: 04/01/2019 Analyzed: 04/01/2019

Benzene	43.4	1.00	ug/L	50.0		86.8	73.3-129			
Toluene	43.4	1.00	"	50.0		86.7	76.2-123			
Ethylbenzene	43.6	1.00	"	50.0		87.2	73.6-130			
m,p-Xylene	87.9	2.00	"	100		87.9	76.1-126			
o-Xylene	44.4	1.00	"	50.0		88.7	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.6	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	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: 88636316
 Project: KMG - Coughlin Red VV 22-1

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 B9D0108 - EPA 5030B (Water)

Matrix Spike (B9D0108-MS1)	Source: Y903448-02			Prepared: 04/01/2019 Analyzed: 04/01/2019						
Benzene	42.7	1.00	ug/L	50.0	ND	85.4	74-130			
Toluene	41.5	1.00	"	50.0	ND	83.0	73-131			
Ethylbenzene	41.5	1.00	"	50.0	0.080	82.8	76-132			
m,p-Xylene	83.6	2.00	"	100	ND	83.6	69-139			
o-Xylene	43.4	1.00	"	50.0	ND	86.8	74-131			
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.2	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.9	85-115			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

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 B9D0108 - EPA 5030B (Water)

Matrix Spike Dup (B9D0108-MSD1)	Source: Y903448-02			Prepared: 04/01/2019 Analyzed: 04/01/2019						
Benzene	41.8	1.00	ug/L	50.0	ND	83.7	74-130	2.08	20	
Toluene	41.0	1.00	"	50.0	ND	81.9	73-131	1.31	20	
Ethylbenzene	40.8	1.00	"	50.0	0.080	81.5	76-132	1.55	20	
m,p-Xylene	82.8	2.00	"	100	ND	82.8	69-139	0.973	20	
o-Xylene	43.6	1.00	"	50.0	ND	87.2	74-131	0.529	20	
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		98.0	84-121			
Surrogate: Toluene-d8	62		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 88636316
Project: KMG - Coughlin Red VV 22-1

Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jen Pellegrini For Noelle Doyle Mathis, President

June 25, 2019

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Coughlin Red VV 22-1

Project Number - 88636316

Attached are your analytical results for KMG - Coughlin Red VV 22-1 received by Origins Laboratory, Inc. June 17, 2019. This project is associated with Origins project number Y906305-01.

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: 88636316
Project: KMG - Coughlin Red VV 22-1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH02R - 061719	Y906305-01	Water	June 17, 2019 12:47	06/17/2019 17:05
BH08 - 061719	Y906305-02	Water	June 17, 2019 11:57	06/17/2019 17:05
BH09 - 061719	Y906305-03	Water	June 17, 2019 11:35	06/17/2019 17:05
BH10 - 061719	Y906305-04	Water	June 17, 2019 13:31	06/17/2019 17:05
BH11 - 061719	Y906305-05	Water	June 17, 2019 11:23	06/17/2019 17:05

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 1906305

Client: Tasman
 Client Project ID: Coughlin Red VV 22-1

Checklist Completed by: JG
 Date/time completed: 6/18/2019

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

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

Cooler Number/Temperature: 1 / 5.1 °C _____ / _____ °C _____ / _____ °C

Thermometer ID: T003

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

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

Reviewed by (Project Manager) JG

Date/Time Reviewed 6/19/19

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

BH02R - 061719

6/17/2019 12:47:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906305-01 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9F1811	KDK	06/18/2019	06/19/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	134 %	70-130			"	"		"	S-07
Surrogate: Toluene-d8	103 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	108 %	70-130			"	"		"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

BH08 - 061719
6/17/2019 11:57:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906305-02 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9F1811	KDK	06/18/2019	06/19/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	128 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	107 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

BH09 - 061719
6/17/2019 11:35:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906305-03 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9F1811	KDK	06/18/2019	06/19/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	130 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	102 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	109 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

BH10 - 061719
6/17/2019 1:31:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906305-04 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9F1811	KDK	06/18/2019	06/19/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	128 %	70-130			"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	107 %	70-130			"	"	"	

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

BH11 - 061719
6/17/2019 11:23:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906305-05 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9F1811	KDK	06/18/2019	06/19/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	130 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	106 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	107 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9F1811 - EPA 5030B (Water)

Blank (B9F1811-BLK1)

Prepared: 06/18/2019 Analyzed: 06/19/2019

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	76		"	62.5		122	70-130			
Surrogate: Toluene-d8	63		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		103	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9F1811 - EPA 5030B (Water)

Blank (B9F1811-BLK2)

Prepared: 06/18/2019 Analyzed: 06/19/2019

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	72		"	62.5	116		70-130			
Surrogate: Toluene-d8	63		"	62.5	101		70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5	103		70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9F1811 - EPA 5030B (Water)

LCS (B9F1811-BS1)

Prepared: 06/18/2019 Analyzed: 06/19/2019

Benzene	43.5	1.00	ug/L	50.0		87.0	70-130			
Toluene	41.7	1.00	"	50.0		83.5	70-130			
Ethylbenzene	41.5	1.00	"	50.0		83.0	70-130			
m,p-Xylene	83.5	2.00	"	100		83.5	70-130			
o-Xylene	44.6	1.00	"	50.0		89.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	73		"	62.5		117	70-130			
Surrogate: Toluene-d8	65		"	62.5		104	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		105	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9F1811 - EPA 5030B (Water)

LCS (B9F1811-BS2)

Prepared: 06/18/2019 Analyzed: 06/19/2019

Benzene	49.0	1.00	ug/L	50.0		98.0	70-130			
Toluene	47.5	1.00	"	50.0		95.1	70-130			
Ethylbenzene	50.2	1.00	"	50.0		100	70-130			
m,p-Xylene	99.9	2.00	"	100		99.9	70-130			
o-Xylene	49.3	1.00	"	50.0		98.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	75		"	62.5		120	70-130			
Surrogate: Toluene-d8	64		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	68		"	62.5		109	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9F1811 - EPA 5030B (Water)

Matrix Spike (B9F1811-MS1)	Source: Y906305-01			Prepared: 06/18/2019 Analyzed: 06/19/2019						
Benzene	42.3	1.00	ug/L	50.0	ND	84.7	70-130			
Toluene	39.3	1.00	"	50.0	ND	78.7	70-130			
Ethylbenzene	39.3	1.00	"	50.0	ND	78.5	70-130			
m,p-Xylene	79.0	2.00	"	100	ND	79.0	70-130			
o-Xylene	42.9	1.00	"	50.0	ND	85.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	73		"	62.5		116	70-130			
Surrogate: Toluene-d8	65		"	62.5		104	70-130			
Surrogate: 4-Bromofluorobenzene	68		"	62.5		109	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9F1811 - EPA 5030B (Water)

Matrix Spike (B9F1811-MS2)	Source: Y906305-02			Prepared: 06/18/2019 Analyzed: 06/19/2019						
Benzene	99.2	1.00	ug/L	100	ND	99.2	70-130			
Toluene	98.5	1.00	"	100	ND	98.5	70-130			
Ethylbenzene	101	1.00	"	100	ND	101	70-130			
m,p-Xylene	202	2.00	"	200	ND	101	70-130			
o-Xylene	101	1.00	"	100	ND	101	70-130			
Surrogate: 1,2-Dichloroethane-d4	75		"	62.5		120	70-130			
Surrogate: Toluene-d8	66		"	62.5		105	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9F1811 - EPA 5030B (Water)

Matrix Spike Dup (B9F1811-MSD1)	Source: Y906305-01			Prepared: 06/18/2019 Analyzed: 06/19/2019						
Benzene	43.1	1.00	ug/L	50.0	ND	86.2	70-130	1.80	20	
Toluene	41.4	1.00	"	50.0	ND	82.8	70-130	5.18	20	
Ethylbenzene	39.8	1.00	"	50.0	ND	79.5	70-130	1.29	20	
m,p-Xylene	78.6	2.00	"	100	ND	78.6	70-130	0.596	20	
o-Xylene	43.4	1.00	"	50.0	ND	86.7	70-130	1.16	20	
Surrogate: 1,2-Dichloroethane-d4	76		"	62.5		122	70-130			
Surrogate: Toluene-d8	65		"	62.5		104	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		107	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9F1811 - EPA 5030B (Water)

Matrix Spike Dup (B9F1811-MSD2)	Source: Y906305-02			Prepared: 06/18/2019 Analyzed: 06/19/2019						
Benzene	96.0	1.00	ug/L	100	ND	96.0	70-130	3.20	20	
Toluene	96.0	1.00	"	100	ND	96.0	70-130	2.56	20	
Ethylbenzene	101	1.00	"	100	ND	101	70-130	0.119	20	
m,p-Xylene	204	2.00	"	200	ND	102	70-130	0.730	20	
o-Xylene	105	1.00	"	100	ND	105	70-130	3.09	20	
Surrogate: 1,2-Dichloroethane-d4	76		"	62.5		122	70-130			
Surrogate: Toluene-d8	65		"	62.5		104	70-130			
Surrogate: 4-Bromofluorobenzene	68		"	62.5		108	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 88636316
Project: KMG - Coughlin Red VV 22-1

Notes and Definitions

U Sample is Non-Detect.

S-07 High surrogate in sample, however sample is non-detect. High surrogate indicates result values are biased high.

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 26, 2019

Tasman Geosciences

Bob Cornez

6855 Wet 119th Avenue

Broomfield CO 80020

Project Name - KMG - Coughlin Red VV 22-1, 22-2 Project Number - 88636316

Attached are your analytical results for KMG - Coughlin Red VV 22-1, 22-2 received by Origins Laboratory, Inc. September 20, 2019. This project is associated with Origins project number Y909341-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



Tasman Geosciences
6855 Wet 119th Avenue
Broomfield CO 80020

Bob Cornez
Project Number: 88636316
Project: KMG - Coughlin Red VV 22-1, 22-2

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH02R - 092019	Y909341-01	Water	September 20, 2019 15:03	09/20/2019 17:00
BH08 - 092019	Y909341-02	Water	September 20, 2019 13:41	09/20/2019 17:00
BH09 - 092019	Y909341-03	Water	September 20, 2019 14:00	09/20/2019 17:00
BH10 - 092019	Y909341-04	Water	September 20, 2019 14:45	09/20/2019 17:00
BH11 - 092019	Y909341-05	Water	September 20, 2019 14:20	09/20/2019 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
 6855 Wet 119th Avenue
 Broomfield CO 80020

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1, 22-2

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 9909341

Client: Tasman

Client Project ID: Coughlin Red VV

Checklist Completed by: JG

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

Date/time completed: 9/23/2019

Airbill #: N/A

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

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

Thermometer ID: T003

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

Date/Time Reviewed: 9-23-19

Origins Laboratory, Inc.

Jefe Pellegrini

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
 6855 Wet 119th Avenue
 Broomfield CO 80020

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1, 22-2

BH02R - 092019

9/20/2019 3:03:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909341-01 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B912405	KDK	09/24/2019	09/24/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	104 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	97.7 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
 6855 Wet 119th Avenue
 Broomfield CO 80020

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1, 22-2

BH08 - 092019
9/20/2019 1:41:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909341-02 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B912405	KDK	09/24/2019	09/24/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	107 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	98.5 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	99.3 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
 6855 Wet 119th Avenue
 Broomfield CO 80020

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1, 22-2

BH09 - 092019
9/20/2019 2:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909341-03 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B912405	KDK	09/24/2019	09/24/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	109 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	97.9 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6855 Wet 119th Avenue
 Broomfield CO 80020

Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1, 22-2

BH10 - 092019
9/20/2019 2:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909341-04 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B912405	KDK	09/24/2019	09/24/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	109 %	70-130				"	"	"	
Surrogate: Toluene-d8	94.0 %	70-130				"	"	"	
Surrogate: 4-Bromofluorobenzene	104 %	70-130				"	"	"	

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Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1, 22-2

BH11 - 092019
9/20/2019 2:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y909341-05 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B912405	KDK	09/24/2019	09/24/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	110 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	92.4 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	107 %	70-130			"	"	"	"	

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B912405 - EPA 5030B (Water)

Blank (B912405-BLK1)

Prepared: 09/24/2019 Analyzed: 09/24/2019

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		104	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.4	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.8	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B912405 - EPA 5030B (Water)

LCS (B912405-BS1)

Prepared: 09/24/2019 Analyzed: 09/24/2019

Benzene	49.2	1.00	ug/L	50.0		98.4	70-130			
Toluene	49.4	1.00	"	50.0		98.7	70-130			
Ethylbenzene	50.1	1.00	"	50.0		100	70-130			
m,p-Xylene	97.6	2.00	"	100		97.6	70-130			
o-Xylene	51.2	1.00	"	50.0		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		103	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B912405 - EPA 5030B (Water)

Matrix Spike (B912405-MS1)	Source: Y909352-02			Prepared: 09/24/2019 Analyzed: 09/24/2019						
Benzene	49.7	1.00	ug/L	50.0	ND	99.4	70-130			
Toluene	49.5	1.00	"	50.0	ND	98.9	70-130			
Ethylbenzene	47.8	1.00	"	50.0	0.060	95.4	70-130			
m,p-Xylene	91.9	2.00	"	100	0.600	91.3	70-130			
o-Xylene	49.2	1.00	"	50.0	ND	98.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		107	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.5	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.1	70-130			

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Bob Cornez
 Project Number: 88636316
 Project: KMG - Coughlin Red VV 22-1, 22-2

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B912405 - EPA 5030B (Water)

Matrix Spike Dup (B912405-MSD1)	Source: Y909352-02			Prepared: 09/24/2019 Analyzed: 09/24/2019						
Benzene	49.5	1.00	ug/L	50.0	ND	99.1	70-130	0.323	20	
Toluene	48.5	1.00	"	50.0	ND	97.1	70-130	1.90	20	
Ethylbenzene	49.8	1.00	"	50.0	0.060	99.5	70-130	4.24	20	
m,p-Xylene	96.7	2.00	"	100	0.600	96.1	70-130	5.11	20	
o-Xylene	50.7	1.00	"	50.0	ND	101	70-130	3.12	20	
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		104	70-130			
Surrogate: Toluene-d8	61		"	62.5		98.0	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

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Broomfield CO 80020

Bob Cornez
Project Number: 88636316
Project: KMG - Coughlin Red VV 22-1, 22-2

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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