

## **ANALYTICAL TABLE**

**TABLE 1**  
**ST. VRAIN ASSOCIATION #1**  
**GROUNDWATER SAMPLE RESULTS SUMMARY TABLE**  
**KERR-McGEE OIL AND GAS ONSHORE LP**

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water (ft bgs)
<b>COGCC Table 910-1 Groundwater Standard (µg/L) <sup>(1)</sup></b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1,400</b>	
GW01	9/2/2015	<b>112</b>	19.0	10.0	285	~4

**Notes:**

1. Groundwater standards referenced from 2 CCR 404-1, Table 910-1, effective February 1, 2014.

COGCC = Colorado Oil and Gas Conservation Commission

µg/L = Micrograms per liter

(<) = Analytical result is less than the indicated laboratory reporting limit.

ft bgs = Feet below ground surface

**BOLD**= Analytical result is in exceedance of COGCC groundwater standards.

# **LABORATORY ANALYTICAL REPORT**



September 02, 2015

Tasman Geosciences

Christine Wasko

6899 Pecos Street, Unit C

Denver

CO 80211

**Project Name - KMG - St. Vrain Association #1**

**Project Number - [none]**

Attached are your analytical results for KMG - St. Vrain Association #1 received by Origins Laboratory, Inc. September 01, 2015. This project is associated with Origins project number X509013-01.

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

Christine Wasko

Project Number: [none]

Project: KMG - St. Vrain Association #1

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W01 @ 3'	X509013-01	Soil	September 1, 2015 12:56	09/01/2015 15:40
E01 @ 3'	X509013-02	Soil	September 1, 2015 12:58	09/01/2015 15:40
N01 @ 3'	X509013-03	Soil	September 1, 2015 13:00	09/01/2015 15:40
GW01	X509013-04	Water	September 1, 2015 12:51	09/01/2015 15:40

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - St. Vrain Association #1

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**ORIGINS**  
LABORATORY, INC

**X509013**

Client: Tasman Geosciences  
Address: [blank]  
Telephone Number: (352) 262-9910  
Email Address: Cwasko@tasman-geo.com

Project Manager: Christine Wasko  
Project Name: St. Vrain Association #1  
Project Number: [blank]  
Samples Collected By: Kate Forsmark

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix				Analysis	Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	As Sampled	Other		
W0123'	9/1/15	1256	2	X					X		GIBTEX 8260 TPH-DK1020 8015 PH, EC, SAR (H <sub>2</sub> PO <sub>4</sub> > 4.0)	1	
E0123'	↓	1258	2	X					X			2	
N0123'	↓	1300	2	X					X			3	
E1001	↓	1251	3	X					X		BTEX 8260	4	
												5	
												6	
												7	
												8	
												9	
												10	
Relinquished By: 	Date: 9/1/15	Time: 1540							Received By: 	Date: 9/1/15	Time: 1540	Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/> 7.1	
Relinquished By: 	Date: 9/1/15	Time: 1540							Received By: 	Date: 9/1/15	Time: 1540		

Date Results Needed

Origins Laboratory, Inc.

*Jefe Pellegrini*

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - St. Vrain Association #1

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: X509013

Client: Tasman

Client Project ID: St. Vrain Association #1

Checklist Completed by: Jeff Smith

Shipped Via: H/D

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

Date/time completed: 9/1/13

Airbill #: N/A

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☒ Water ☐ Other: \_\_\_\_\_

Cooler Number/Temperature: 1 / 7 °C \_\_\_\_\_ °C \_\_\_\_\_ °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 <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		<u>Sampled Same Day</u>
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			<u>PH</u>
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<u>9/1/13</u>
Additional Comments (if any): <u>Sample Containers for GW01 are marked as Preserved with HCL</u>				

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

Jeff Smith  
Reviewed by (Project Manager)

9/1/13  
Date/Time Reviewed

Origins Laboratory, Inc.

*Jeff Pellegrini*

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - St. Vrain Association #1

W01 @ 3'  
9/1/2015 12:56:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X509013-01 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	210	50	mg/kg	1	5101014	09/01/2015	09/02/2015
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"

Surrogate: o-Terphenyl	100 %	59-131			"	"	"
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**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	11.6	0.200	mg/kg	1	5101013	09/01/2015	09/01/2015
Benzene	0.002	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	0.037	0.002	"	"	"	"	"
Xylenes, total	0.433	0.002	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	118 %	70-130			"	"	"
Surrogate: Toluene-d8	107 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	110 %	70-130			"	"	"

**pH in Soil by EPA 9045D**

pH	8.03		pH Units	1	5101015	09/01/2015	09/01/2015
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.260		mmhos/cm	"	5101016	09/01/2015	09/01/2015
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Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - St. Vrain Association #1

E01 @ 3'  
9/1/2015 12:58:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X509013-02 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	5101014	09/01/2015	09/02/2015
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"

Surrogate: o-Terphenyl	104 %	59-131			"	"	"
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**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5101013	09/01/2015	09/01/2015
Benzene	ND	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	116 %	70-130			"	"	"
Surrogate: Toluene-d8	97.0 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	107 %	70-130			"	"	"

**pH in Soil by EPA 9045D**

pH	7.78		pH Units	1	5101015	09/01/2015	09/01/2015
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.268		mmhos/cm	"	5101016	09/01/2015	09/01/2015
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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - St. Vrain Association #1

N01 @ 3'  
9/1/2015 1:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X509013-03 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	5101014	09/01/2015	09/02/2015
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"

Surrogate: o-Terphenyl 136 % 59-131 " " " S-07

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5101013	09/01/2015	09/01/2015
Benzene	ND	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4 115 % 70-130 " " "

Surrogate: Toluene-d8 97.7 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 102 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.81		pH Units	1	5101015	09/01/2015	09/01/2015
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.172		mmhos/cm	"	5101016	09/01/2015	09/01/2015
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6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - St. Vrain Association #1

GW01  
9/1/2015 12:51:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X509013-04 (Water)

**BTEX by EPA 8260C**

Benzene	112	4.0	ug/L	4	5101012	09/01/2015	09/01/2015
Toluene	19.0	4.0	"	"	"	"	"
Ethylbenzene	10.0	4.0	"	"	"	"	"
Xylenes, total	285	4.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	99.0 %	84-121			"	"	"
Surrogate: Toluene-d8	99.5 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	84-114			"	"	"

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - St. Vrain Association #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 5101012 - EPA 5030B (Water)**

**Blank (5101012-BLK1)**

Prepared: 09/01/2015 Analyzed: 09/01/2015

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.4	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.2	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.0	84-114			

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Project Number: [none]  
Project: KMG - St. Vrain Association #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 5101012 - EPA 5030B (Water)**

**LCS (5101012-BS1)**

Prepared: 09/01/2015 Analyzed: 09/01/2015

Benzene	52.7	1.0	ug/L	50.0		105	75-126			
Toluene	51.1	1.0	"	50.0		102	78.7-126			
Ethylbenzene	51.1	1.0	"	50.0		102	80-130			
m,p-Xylene	102	2.0	"	100		102	77.2-133			
o-Xylene	52.8	1.0	"	50.0		106	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.0	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.1	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

Origins Laboratory, Inc.



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6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - St. Vrain Association #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 5101012 - EPA 5030B (Water)**

Matrix Spike (5101012-MS1)		Source: X508364-01			Prepared: 09/01/2015 Analyzed: 09/01/2015					
Benzene	79.4	1.0	ug/L	50.0	32.1	94.6	74-130			
Toluene	41.4	1.0	"	50.0	0.8	81.3	73-131			
Ethylbenzene	46.0	1.0	"	50.0	4.1	83.8	76-132			
m,p-Xylene	84.8	2.0	"	100	1.9	82.9	69-139			
o-Xylene	41.9	1.0	"	50.0	ND	83.8	74-131			
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		104	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.1	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	84-114			

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Christine Wasko  
Project Number: [none]  
Project: KMG - St. Vrain Association #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 5101012 - EPA 5030B (Water)**

Matrix Spike Dup (5101012-MSD1)		Source: X508364-01			Prepared: 09/01/2015 Analyzed: 09/01/2015					
Benzene	78.6	1.0	ug/L	50.0	32.1	93.0	74-130	1.06	20	
Toluene	41.7	1.0	"	50.0	0.8	81.9	73-131	0.794	20	
Ethylbenzene	47.7	1.0	"	50.0	4.1	87.1	76-132	3.52	20	
m,p-Xylene	87.3	2.0	"	100	1.9	85.4	69-139	2.88	20	
o-Xylene	43.8	1.0	"	50.0	ND	87.7	74-131	4.57	20	
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.7	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

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Christine Wasko  
Project Number: [none]  
Project: KMG - St. Vrain Association #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 5101013 - EPA 5030 (soil)**

**Blank (5101013-BLK1)**

Prepared: 09/01/2015 Analyzed: 09/01/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	71.1		ug/kg	62.5		114	70-130			
Surrogate: Toluene-d8	62.1		"	62.5		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	65.4		"	62.5		105	70-130			

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6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - St. Vrain Association #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
<b>Batch 5101013 - EPA 5030 (soil)</b>										
<b>LCS (5101013-BS1)</b>					Prepared: 09/01/2015 Analyzed: 09/01/2015					
Benzene	0.107	0.002	mg/kg	0.100		107	77.1-124			
Toluene	0.106	0.002	"	0.100		106	74.5-128			
Ethylbenzene	0.100	0.002	"	0.100		99.7	66.4-127			
m,p-Xylene	0.199	0.004	"	0.200		99.5	76.6-124			
o-Xylene	0.102	0.002	"	0.100		102	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	69.9		ug/kg	62.5		112	70-130			
Surrogate: Toluene-d8	62.6		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	64.0		"	62.5		102	70-130			

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Christine Wasko  
Project Number: [none]  
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**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 5101013 - EPA 5030 (soil)**

Matrix Spike (5101013-MS1)		Source: X509005-01			Prepared: 09/01/2015 Analyzed: 09/01/2015					
Benzene	0.091	0.002	mg/kg	0.100	ND	91.4	71.8-126			
Toluene	0.086	0.002	"	0.100	ND	86.5	65.1-130			
Ethylbenzene	0.081	0.002	"	0.100	ND	81.5	62.2-130			
m,p-Xylene	0.164	0.004	"	0.200	ND	81.8	46.5-137			
o-Xylene	0.081	0.002	"	0.100	ND	81.2	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	76.2		ug/kg	62.5		122	70-130			
Surrogate: Toluene-d8	63.4		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	62.5		"	62.5		100	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - St. Vrain Association #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 5101013 - EPA 5030 (soil)**

Matrix Spike Dup (5101013-MSD1)		Source: X509005-01			Prepared: 09/01/2015 Analyzed: 09/01/2015					
Benzene	0.086	0.002	mg/kg	0.100	ND	86.2	71.8-126	5.85	11.3	
Toluene	0.081	0.002	"	0.100	ND	81.0	65.1-130	6.54	15.4	
Ethylbenzene	0.079	0.002	"	0.100	ND	79.1	62.2-130	2.96	19.6	
m,p-Xylene	0.155	0.004	"	0.200	ND	77.3	46.5-137	5.67	19.2	
o-Xylene	0.078	0.002	"	0.100	ND	78.4	54.2-134	3.53	17.9	
Surrogate: 1,2-Dichloroethane-d4	74.1		ug/kg	62.5		118	70-130			
Surrogate: Toluene-d8	61.8		"	62.5		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	63.9		"	62.5		102	70-130			

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Denver CO 80211

Christine Wasko  
Project Number: [none]  
Project: KMG - St. Vrain Association #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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## Extractable Petroleum Hydrocarbons by 8015C - 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 5101014 - EPA 3580

#### Blank (5101014-BLK1)

Prepared: 09/01/2015 Analyzed: 09/01/2015

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
Surrogate: o-Terphenyl	63		"	50.0		125	59-131			

#### LCS (5101014-BS1)

Prepared: 09/01/2015 Analyzed: 09/01/2015

Diesel (C10-C28)	1100	50	mg/kg				64-121			
Residual Range Organics (C28-C36)	880	200	"	1000		87.8	58-124			
Surrogate: o-Terphenyl	60		"	50.0		119	59-131			

#### Matrix Spike (5101014-MS1)

Source: X509005-01

Prepared: 09/01/2015 Analyzed: 09/01/2015

Diesel (C10-C28)	910	50	mg/kg		36		53-125			
Residual Range Organics (C28-C36)	770	200	"	1000	81	68.7	47-133			
Surrogate: o-Terphenyl	49		"	50.0		98.9	59-131			

#### Matrix Spike Dup (5101014-MSD1)

Source: X509005-01

Prepared: 09/01/2015 Analyzed: 09/01/2015

Diesel (C10-C28)	860	50	mg/kg		36		53-125	5.24	20	
Residual Range Organics (C28-C36)	720	200	"	1000	81	63.9	47-133	6.46	20	
Surrogate: o-Terphenyl	44		"	50.0		89.0	59-131			

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Christine Wasko  
Project Number: [none]  
Project: KMG - St. Vrain Association #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 5I01015 - NO PREP</b>										
<b>Duplicate (5I01015-DUP1)</b>		<b>Source: X509012-01</b>			Prepared: 09/01/2015 Analyzed: 09/01/2015					
pH	7.92		pH Units		8.00			1.01	25	
<b>Batch 5I01016 - NO PREP</b>										
<b>Blank (5I01016-BLK1)</b>		Prepared: 09/01/2015 Analyzed: 09/01/2015								
Specific Conductance (EC)	0.00260		mmhos/cm							
<b>Duplicate (5I01016-DUP1)</b>		<b>Source: X509012-01</b>			Prepared: 09/01/2015 Analyzed: 09/01/2015					
Specific Conductance (EC)	0.393		mmhos/cm		0.412			4.72	25	

Origins Laboratory, Inc.



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Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Christine Wasko

Project Number: [none]

Project: KMG - St. Vrain Association #1

### Notes and Definitions

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.



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Jen Pellegrini For Noelle Doyle Mathis, President