

July 10, 2018

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Rocky Mountain Fuel CO E1 Project Number - 89611890

Attached are your analytical results for KMG - Rocky Mountain Fuel CO E1 received by Origins Laboratory, Inc. July 09, 2018. This project is associated with Origins project number Y807104-01.

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: 89611890
Project: KMG - Rocky Mountain Fuel CO E1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01@11'	Y807104-01	Soil	July 9, 2018 15:37	07/09/2018 17:11
B02@11'	Y807104-02	Soil	July 9, 2018 15:38	07/09/2018 17:11
N01@10'	Y807104-03	Soil	July 9, 2018 15:39	07/09/2018 17:11
N02@10'	Y807104-04	Soil	July 9, 2018 15:40	07/09/2018 17:11
S01@8'	Y807104-05	Soil	July 9, 2018 15:42	07/09/2018 17:11
S02@8'	Y807104-06	Soil	July 9, 2018 15:43	07/09/2018 17:11
E01@10'	Y807104-07	Soil	July 9, 2018 15:45	07/09/2018 17:11
W01@10'	Y807104-08	Soil	July 9, 2018 15:44	07/09/2018 17:11

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

www.originslaboratory.com
 page ___ of ___

1/807104

ORIGINS
 LABORATORY, INC

Client: APC Project Manager/Send Report To: Robert Cornez
 Address: _____ Email Address: cornez@tasman-geo.com
 Project Name/Number: Rocky Mountain Fuel CO E1 / 89611890
 Telephone Number: _____ Samples Collected By: BL

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 Summa #	Other	Other	Other	Other		Other	
B01S11'	7-9-18	1537	2	X				X				X	X	X			
B02S11'		1538										X	X	X			
N01S10'		1539										X	X	X			
N02S10'		1540										X	X	X			
S01S8'		1541										X	X	X			
S02S8'		1545										X	X	X			
E01S10'		1544										X	X	X			
N01S10'		1544	1									X	X	X			
B501S8''		1546	1									X	X	X			On hold
Relinquished By: <u>BL</u>	Date: <u>7-9-18</u>	Time: _____	Time: _____	Received By: _____	Date: <u>7/9/18</u>	Time: _____	Time: _____	Received By: <u>[Signature]</u>	Date: <u>7/9/18</u>	Time: <u>17:11</u>	Turnaround Time: <input checked="" type="checkbox"/> Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard						

Origins Laboratory, Inc.

Jefe Pellegrini

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y807104

Client: Tasman

Client Project ID: KMG - Rocky Mtn Fuel CO E1

Checklist Completed by: JG

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

Date/time completed: 7/9 / 2018

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 5.6 °C / _____ °C / _____ °C / _____ °C

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ^{(1)?}	/			
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.

[Signature]
 Reviewed by (Project Manager)

7/9/18
 Date/Time Reviewed

Origins Laboratory, Inc.

Jefe Pellegrini

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

B01@11'
7/9/2018 3:37:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y807104-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8G0907	07/09/2018	07/09/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: *o*-Terphenyl 83.9 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	1.64	0.200	mg/kg	1	B8G0904	07/09/2018	07/09/2018	
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 112 % 70-130 " " "
 Surrogate: Toluene-d8 95.5 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 103 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.86		pH Units	1	B8G0909	07/09/2018	07/09/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.185		mmhos/cm	"	B8G0910	"	"	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

B02@11'
7/9/2018 3:38:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y807104-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8G0907	07/09/2018	07/09/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl 84.2 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8G0904	07/09/2018	07/09/2018	U
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 109 % 70-130 " " "
Surrogate: Toluene-d8 97.6 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 102 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.73		pH Units	1	B8G0909	07/09/2018	07/09/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.253		mmhos/cm	"	B8G0910	"	"	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

N01@10'
7/9/2018 3:39:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y807104-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	1790	25.0	mg/kg	1	B8G0907	07/09/2018	07/09/2018	
Residual Range Organics (C28-C40)	669	100	"	"	"	"	"	

Surrogate: *o*-Terphenyl 111 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	700	50.0	mg/kg	250	B8G0904	07/09/2018	07/09/2018	
Benzene	ND	0.050	"	25	"	"	07/10/2018	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	0.759	0.050	"	"	"	"	"	
Xylenes, total	ND	0.050	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 103 % 70-130 " " 07/09/2018
 Surrogate: Toluene-d8 96.8 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 105 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.06		pH Units	1	B8G0909	07/09/2018	07/09/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.163		mmhos/cm	"	B8G0910	"	"	
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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

N02@10'
7/9/2018 3:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y807104-04 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8G0907	07/09/2018	07/09/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: *o*-Terphenyl 91.6 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8G0904	07/09/2018	07/09/2018	U
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 108 % 70-130 " " "
 Surrogate: Toluene-d8 98.0 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 100 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.94		pH Units	1	B8G0909	07/09/2018	07/09/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.276		mmhos/cm	"	B8G0910	"	"	
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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

S01@8'
 7/9/2018 3:42:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 Y807104-05 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8G0907	07/09/2018	07/09/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: *o*-Terphenyl 92.0 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8G0904	07/09/2018	07/09/2018	U
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 110 % 70-130 " " "
 Surrogate: Toluene-d8 97.3 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 100 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.09		pH Units	1	B8G0909	07/09/2018	07/09/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.220		mmhos/cm	"	B8G0910	"	"	
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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

S02@8'
7/9/2018 3:43:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y807104-06 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8G0907	07/09/2018	07/09/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl 91.0 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8G0904	07/09/2018	07/09/2018	U
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 109 % 70-130 " " "
Surrogate: Toluene-d8 98.4 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.40		pH Units	1	B8G0909	07/09/2018	07/09/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.251		mmhos/cm	"	B8G0910	"	"	
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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

E01@10'
7/9/2018 3:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y807104-07 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8G0907	07/09/2018	07/09/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl 88.9 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	2.63	0.200	mg/kg	1	B8G0904	07/09/2018	07/09/2018	
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	0.004	0.002	"	"	"	"	"	
Xylenes, total	0.015	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 108 % 70-130 " " "
Surrogate: Toluene-d8 95.4 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 103 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.46		pH Units	1	B8G0909	07/09/2018	07/09/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.192		mmhos/cm	"	B8G0910	"	"	
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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

W01@10'
7/9/2018 3:44:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y807104-08 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	2070	25.0	mg/kg	1	B8G0907	07/09/2018	07/09/2018	
Residual Range Organics (C28-C40)	818	100	"	"	"	"	"	

Surrogate: *o*-Terphenyl 104 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	1180	50.0	mg/kg	250	B8G0904	07/09/2018	07/09/2018	
Benzene	0.885	0.050	"	25	"	"	07/10/2018	
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	4.14	0.050	"	"	"	"	"	
Xylenes, total	14.4	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 102 % 70-130 " " 07/09/2018

Surrogate: Toluene-d8 93.8 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 104 % 70-130 " " "

pH in Soil by EPA 9045D

pH	9.06		pH Units	1	B8G0909	07/09/2018	07/09/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.106		mmhos/cm	"	B8G0910	"	"	
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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

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 B8G0904 - EPA 5030 (soil)

Blank (B8G0904-BLK1)

Prepared: 07/09/2018 Analyzed: 07/09/2018

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

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 B8G0904 - EPA 5030 (soil)

LCS (B8G0904-BS1)

Prepared: 07/09/2018 Analyzed: 07/09/2018

Benzene	0.106	0.002	mg/kg	0.100		106	77.1-124			
Toluene	0.102	0.002	"	0.100		102	74.5-128			
Ethylbenzene	0.111	0.002	"	0.100		111	66.4-127			
m,p-Xylene	0.196	0.004	"	0.200		98.0	76.6-124			
o-Xylene	0.106	0.002	"	0.100		106	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		98.8	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.6	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

Origins Laboratory, Inc.



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 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

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 B8G0904 - EPA 5030 (soil)

Matrix Spike (B8G0904-MS1)	Source: Y807026-04			Prepared: 07/09/2018 Analyzed: 07/09/2018						
Benzene	0.078	0.002	mg/kg	0.100	ND	77.9	71.8-126			
Toluene	0.082	0.002	"	0.100	ND	81.8	65.1-130			
Ethylbenzene	0.089	0.002	"	0.100	ND	88.7	62.2-130			
m,p-Xylene	0.157	0.004	"	0.200	ND	78.4	46.5-137			
o-Xylene	0.087	0.002	"	0.100	ND	86.7	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		99.0	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.5	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

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 B8G0904 - EPA 5030 (soil)

Matrix Spike Dup (B8G0904-MSD1)	Source: Y807026-04			Prepared: 07/09/2018 Analyzed: 07/09/2018						
Benzene	0.086	0.002	mg/kg	0.100	ND	86.1	71.8-126	9.93	11.3	
Toluene	0.089	0.002	"	0.100	ND	88.9	65.1-130	8.29	15.4	
Ethylbenzene	0.097	0.002	"	0.100	ND	97.4	62.2-130	9.42	19.6	
m,p-Xylene	0.172	0.004	"	0.200	ND	85.9	46.5-137	9.19	19.2	
o-Xylene	0.094	0.002	"	0.100	ND	94.4	54.2-134	8.57	17.9	
Surrogate: 1,2-Dichloroethane-d4	61		ug/kg	62.5		97.6	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.4	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.6	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

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 B8G0907 - EPA 3550B

Blank (B8G0907-BLK1)

Prepared: 07/09/2018 Analyzed: 07/09/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	69		"	50.0		137	59-131			

LCS (B8G0907-BS1)

Prepared: 07/09/2018 Analyzed: 07/09/2018

Diesel (C10-C28)	952	50.0	mg/kg	1000		95.2	64-121			
Residual Range Organics (C28-C40)	966	200	"	1000		96.6	58-124			
Surrogate: o-Terphenyl	50		"	50.0		99.0	59-131			

Matrix Spike (B8G0907-MS1)

Source: Y807098-01

Prepared: 07/09/2018 Analyzed: 07/09/2018

Diesel (C10-C28)	975	50.0	mg/kg	1000	19.7	95.6	53-125			
Residual Range Organics (C28-C40)	968	200	"	1000	30.9	93.7	47-133			
Surrogate: o-Terphenyl	50		"	50.0		99.2	59-131			

Matrix Spike Dup (B8G0907-MSD1)

Source: Y807098-01

Prepared: 07/09/2018 Analyzed: 07/09/2018

Diesel (C10-C28)	933	50.0	mg/kg	1000	19.7	91.3	53-125	4.51	20	
Residual Range Organics (C28-C40)	944	200	"	1000	30.9	91.3	47-133	2.55	20	
Surrogate: o-Terphenyl	49		"	50.0		98.3	59-131			

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B8G0909 - NO PREP										
Duplicate (B8G0909-DUP1)		Source: Y807102-02			Prepared: 07/09/2018 Analyzed: 07/09/2018					
pH	7.60		pH Units		7.99			5.00	25	
Batch B8G0910 - NO PREP										
Blank (B8G0910-BLK1)		Prepared: 07/09/2018 Analyzed: 07/09/2018								
Specific Conductance (EC)	0.00320		mmhos/cm							
Duplicate (B8G0910-DUP1)		Source: Y807102-02			Prepared: 07/09/2018 Analyzed: 07/09/2018					
Specific Conductance (EC)	0.446		mmhos/cm		0.427			4.36	25	

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 89611890
Project: KMG - Rocky Mountain Fuel CO E1

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

July 12, 2018

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Rocky Mountain Fuel CO E1 Project Number - 89611890

Attached are your analytical results for KMG - Rocky Mountain Fuel CO E1 received by Origins Laboratory, Inc. July 11, 2018. This project is associated with Origins project number Y807137-01.

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: 89611890
Project: KMG - Rocky Mountain Fuel CO E1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N03@10'	Y807137-01	Soil	July 11, 2018 15:23	07/11/2018 17:17
S03@10'	Y807137-02	Soil	July 11, 2018 15:24	07/11/2018 17:17
W02@10'	Y807137-03	Soil	July 11, 2018 15:25	07/11/2018 17:17
W03@10'	Y807137-04	Soil	July 11, 2018 15:26	07/11/2018 17:17
E02@10'	Y807137-05	Soil	July 11, 2018 15:27	07/11/2018 17:17

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: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y807137

Client: Tasman

Client Project ID: KMG - Rocky Mtn Fuel CO E1

Checklist Completed by: JG

Shipped Via: HD

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

Date/time completed: 7/11/2018

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 5.0 °c / _____ °c / _____ °c / _____ °c

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ^{(1)?}	<input checked="" type="checkbox"/>			
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.

[Signature]
 Reviewed by (Project Manager)

7/11/18
 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: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

N03@10'
7/11/2018 3:23:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y807137-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8G1104	07/11/2018	07/11/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl 89.9 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8G1103	07/11/2018	07/12/2018	U
Benzene	ND	0.002	"	"	"	"	07/11/2018	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 111 % 70-130 " " "
Surrogate: Toluene-d8 97.9 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 100 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.41		pH Units	1	B8G1105	07/11/2018	07/11/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0875		mmhos/cm	"	B8G1106	07/11/2018	"	
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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: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

S03@10'
7/11/2018 3:24:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y807137-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	31.0	25.0	mg/kg	1	B8G1104	07/11/2018	07/11/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: *o*-Terphenyl 86.9 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8G1103	07/11/2018	07/11/2018	U
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 106 % 70-130 " " "
 Surrogate: Toluene-d8 96.8 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.03		pH Units	1	B8G1105	07/11/2018	07/11/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.110		mmhos/cm	"	B8G1106	07/11/2018	"	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

W02@10'
7/11/2018 3:25:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y807137-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	34.1	25.0	mg/kg	1	B8G1104	07/11/2018	07/11/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: *o*-Terphenyl 87.2 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8G1103	07/11/2018	07/11/2018	U
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 108 % 70-130 " " "
 Surrogate: Toluene-d8 97.8 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 100 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.83		pH Units	1	B8G1105	07/11/2018	07/11/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.127		mmhos/cm	"	B8G1106	07/11/2018	"	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

W03@10'
7/11/2018 3:26:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y807137-04 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8G1104	07/11/2018	07/11/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl 80.1 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8G1103	07/11/2018	07/11/2018	U
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 108 % 70-130 " " "
Surrogate: Toluene-d8 97.0 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.24		pH Units	1	B8G1105	07/11/2018	07/11/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.167		mmhos/cm	"	B8G1106	07/11/2018	"	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

E02@10'
7/11/2018 3:27:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y807137-05 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	46.8	25.0	mg/kg	1	B8G1104	07/11/2018	07/11/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: *o*-Terphenyl 85.6 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	5.18	5.00	mg/kg	25	B8G1103	07/11/2018	07/11/2018	
Benzene	ND	0.050	"	"	"	"	"	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	ND	0.050	"	"	"	"	"	U
Xylenes, total	ND	0.050	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 101 % 70-130 " " "
 Surrogate: Toluene-d8 99.7 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 99.9 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.76		pH Units	1	B8G1105	07/11/2018	07/11/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.178		mmhos/cm	"	B8G1106	07/11/2018	"	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B8G1103 - EPA 5030 (soil)										
Blank (B8G1103-BLK1)										
					Prepared: 07/11/2018 Analyzed: 07/11/2018					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.4	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		102	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

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 B8G1103 - EPA 5030 (soil)

LCS (B8G1103-BS1)

Prepared: 07/11/2018 Analyzed: 07/11/2018

Benzene	0.094	0.002	mg/kg	0.100		93.8	77.1-124			
Toluene	0.094	0.002	"	0.100		93.7	74.5-128			
Ethylbenzene	0.100	0.002	"	0.100		100	66.4-127			
m,p-Xylene	0.178	0.004	"	0.200		88.8	76.6-124			
o-Xylene	0.098	0.002	"	0.100		97.9	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		98.5	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.8	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.3	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

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 B8G1103 - EPA 5030 (soil)

Matrix Spike (B8G1103-MS1)	Source: Y807126-02			Prepared: 07/11/2018 Analyzed: 07/11/2018						
Benzene	0.091	0.002	mg/kg	0.100	ND	91.1	71.8-126			
Toluene	0.092	0.002	"	0.100	ND	91.8	65.1-130			
Ethylbenzene	0.097	0.002	"	0.100	ND	96.9	62.2-130			
m,p-Xylene	0.171	0.004	"	0.200	ND	85.3	46.5-137			
o-Xylene	0.095	0.002	"	0.100	ND	94.7	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.5	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.9	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

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 B8G1103 - EPA 5030 (soil)

Matrix Spike Dup (B8G1103-MSD1)	Source: Y807126-02			Prepared: 07/11/2018 Analyzed: 07/11/2018						
Benzene	0.095	0.002	mg/kg	0.100	ND	94.7	71.8-126	3.88	11.3	
Toluene	0.095	0.002	"	0.100	ND	94.9	65.1-130	3.26	15.4	
Ethylbenzene	0.099	0.002	"	0.100	ND	99.1	62.2-130	2.31	19.6	
m,p-Xylene	0.175	0.004	"	0.200	ND	87.4	46.5-137	2.39	19.2	
o-Xylene	0.097	0.002	"	0.100	ND	96.7	54.2-134	2.07	17.9	
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.3	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

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 B8G1104 - EPA 3550B

Blank (B8G1104-BLK1)

Prepared: 07/11/2018 Analyzed: 07/11/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	46		"	50.0		92.9	59-131			

LCS (B8G1104-BS1)

Prepared: 07/11/2018 Analyzed: 07/11/2018

Diesel (C10-C28)	856	50.0	mg/kg	1000		85.6	64-121			
Residual Range Organics (C28-C40)	981	200	"	1000		98.1	58-124			
Surrogate: o-Terphenyl	51		"	50.0		101	59-131			

Matrix Spike (B8G1104-MS1)

Source: Y807126-02

Prepared: 07/11/2018 Analyzed: 07/11/2018

Diesel (C10-C28)	875	50.0	mg/kg	1000	ND	87.5	53-125			
Residual Range Organics (C28-C40)	1020	200	"	1000	16.2	101	47-133			
Surrogate: o-Terphenyl	50		"	50.0		101	59-131			

Matrix Spike Dup (B8G1104-MSD1)

Source: Y807126-02

Prepared: 07/11/2018 Analyzed: 07/11/2018

Diesel (C10-C28)	876	50.0	mg/kg	1000	ND	87.6	53-125	0.113	20	
Residual Range Organics (C28-C40)	1080	200	"	1000	16.2	107	47-133	5.74	20	
Surrogate: o-Terphenyl	52		"	50.0		104	59-131			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B8G1105 - NO PREP										
Duplicate (B8G1105-DUP1)		Source: Y807126-01			Prepared: 07/11/2018 Analyzed: 07/11/2018					
pH	7.45		pH Units		7.63			2.39	25	
Batch B8G1106 - NO PREP										
Blank (B8G1106-BLK1)		Prepared: 07/11/2018 Analyzed: 07/11/2018								
Specific Conductance (EC)	0.00300		mmhos/cm							
Duplicate (B8G1106-DUP1)		Source: Y807126-01			Prepared: 07/11/2018 Analyzed: 07/11/2018					
Specific Conductance (EC)	0.0158		mmhos/cm		0.0202			24.4	25	

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 89611890
Project: KMG - Rocky Mountain Fuel CO E1

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

July 13, 2018

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Rocky Mountain Fuel CO E1 Project Number - 89611890

Attached are your analytical results for KMG - Rocky Mountain Fuel CO E1 received by Origins Laboratory, Inc. July 12, 2018. This project is associated with Origins project number Y807155-01.

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: 89611890
Project: KMG - Rocky Mountain Fuel CO E1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B03@11'	Y807155-01	Soil	July 12, 2018 10:24	07/12/2018 16:36
B04@6'	Y807155-02	Soil	July 12, 2018 10:25	07/12/2018 16:36
N04@5'	Y807155-03	Soil	July 12, 2018 10:26	07/12/2018 16:36
S04@5'	Y807155-04	Soil	July 12, 2018 10:27	07/12/2018 16:36
E03@5'	Y807155-05	Soil	July 12, 2018 10:28	07/12/2018 16:36

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y907155

Client: Tasman

Client Project ID: KMG - Rocky Mtn Fuel CO E1

Checklist Completed by: JG

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

Date/time completed: 7/12/2018

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 5.2 °C / _____ °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 ^{(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.

[Signature]
 Reviewed by (Project Manager)

7/12/18
 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: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

B03@11'
7/12/2018 10:24:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y807155-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	184	25.0	mg/kg	1	B8G1202	07/12/2018	07/12/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	86.5 %	59-131			"	"	"	
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	19.0	5.00	mg/kg	25	B8G1201	"	07/12/2018	
Benzene	ND	0.050	"	"	"	"	"	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	ND	0.050	"	"	"	"	"	U
Xylenes, total	ND	0.050	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	99.0 %	70-130			"	"	"	
Surrogate: Toluene-d8	96.0 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	8.95		pH Units	1	B8G1205	07/12/2018	07/12/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.131	0.00500	mmhos/cm	"	B8G1206	07/12/2018	"	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

B04@6'
7/12/2018 10:25:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y807155-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8G1202	07/12/2018	07/12/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl 82.3 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8G1201	"	07/12/2018	U
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 108 % 70-130 " " "
Surrogate: Toluene-d8 96.9 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 103 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.56		pH Units	1	B8G1205	07/12/2018	07/12/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.181	0.00509	mmhos/cm	"	B8G1206	07/12/2018	"	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

N04@5'

7/12/2018 10:26:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y807155-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8G1202	07/12/2018	07/12/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl 80.5 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8G1201	"	07/12/2018	U
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 109 % 70-130 " " "

Surrogate: Toluene-d8 97.2 % 70-130 " " "

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

pH in Soil by EPA 9045D

pH	8.41		pH Units	1	B8G1205	07/12/2018	07/12/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.249	0.00500	mmhos/cm	"	B8G1206	07/12/2018	"	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

S04@5'

7/12/2018 10:27:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y807155-04 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8G1202	07/12/2018	07/12/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl 83.6 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8G1201	"	07/12/2018	U
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 107 % 70-130 " " "
Surrogate: Toluene-d8 97.5 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.41		pH Units	1	B8G1205	07/12/2018	07/12/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.283	0.00509	mmhos/cm	"	B8G1206	07/12/2018	"	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

E03@5'
7/12/2018 10:28:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y807155-05 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8G1202	07/12/2018	07/12/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl 79.1 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8G1201	"	07/12/2018	U
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 110 % 70-130 " " "
Surrogate: Toluene-d8 97.6 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.39		pH Units	1	B8G1205	07/12/2018	07/12/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.266	0.00500	mmhos/cm	"	B8G1206	07/12/2018	"	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

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 B8G1201 - EPA 5030 (soil)

Blank (B8G1201-BLK1)

Prepared: 07/12/2018 Analyzed: 07/12/2018

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

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 B8G1201 - EPA 5030 (soil)

Blank (B8G1201-BLK2)

Prepared: 07/12/2018 Analyzed: 07/12/2018

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

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 B8G1201 - EPA 5030 (soil)

LCS (B8G1201-BS1)

Prepared: 07/12/2018 Analyzed: 07/12/2018

Benzene	0.103	0.002	mg/kg	0.100		103	77.1-124			
Toluene	0.106	0.002	"	0.100		106	74.5-128			
Ethylbenzene	0.116	0.002	"	0.100		116	66.4-127			
m,p-Xylene	0.206	0.004	"	0.200		103	76.6-124			
o-Xylene	0.110	0.002	"	0.100		110	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	59		ug/kg	62.5		94.6	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

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 B8G1201 - EPA 5030 (soil)

LCS (B8G1201-BS2)

Prepared: 07/12/2018 Analyzed: 07/12/2018

Benzene	0.090	0.002	mg/kg	0.100		89.6	77.1-124			
Toluene	0.092	0.002	"	0.100		91.8	74.5-128			
Ethylbenzene	0.099	0.002	"	0.100		98.7	66.4-127			
m,p-Xylene	0.173	0.004	"	0.200		86.6	76.6-124			
o-Xylene	0.094	0.002	"	0.100		94.3	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	60		ug/kg	62.5		95.8	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.9	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.7	70-130			

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Bob Cornez
 Project Number: 89611890
 Project: KMG - Rocky Mountain Fuel CO E1

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 B8G1201 - EPA 5030 (soil)

Matrix Spike (B8G1201-MS1)	Source: Y807140-02			Prepared: 07/12/2018 Analyzed: 07/12/2018						
Benzene	0.086	0.002	mg/kg	0.100	ND	85.9	71.8-126			
Toluene	0.086	0.002	"	0.100	ND	86.4	65.1-130			
Ethylbenzene	0.093	0.002	"	0.100	ND	92.8	62.2-130			
m,p-Xylene	0.162	0.004	"	0.200	ND	81.2	46.5-137			
o-Xylene	0.089	0.002	"	0.100	ND	88.9	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		100	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.6	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	70-130			

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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 B8G1201 - EPA 5030 (soil)

Matrix Spike (B8G1201-MS2)	Source: Y807144-03			Prepared: 07/12/2018 Analyzed: 07/12/2018						
Benzene	0.104	0.002	mg/kg	0.100	ND	104	71.8-126			
Toluene	0.096	0.002	"	0.100	ND	96.0	65.1-130			
Ethylbenzene	0.101	0.002	"	0.100	ND	101	62.2-130			
m,p-Xylene	0.179	0.004	"	0.200	ND	89.6	46.5-137			
o-Xylene	0.099	0.002	"	0.100	ND	99.0	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.8	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.9	70-130			

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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 B8G1201 - EPA 5030 (soil)

Matrix Spike Dup (B8G1201-MSD1)	Source: Y807140-02			Prepared: 07/12/2018 Analyzed: 07/12/2018						
Benzene	0.092	0.002	mg/kg	0.100	ND	92.2	71.8-126	7.07	11.3	
Toluene	0.093	0.002	"	0.100	ND	93.4	65.1-130	7.81	15.4	
Ethylbenzene	0.100	0.002	"	0.100	ND	100	62.2-130	7.77	19.6	
m,p-Xylene	0.176	0.004	"	0.200	ND	87.8	46.5-137	7.89	19.2	
o-Xylene	0.097	0.002	"	0.100	ND	97.2	54.2-134	8.92	17.9	
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	61		"	62.5		98.0	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.5	70-130			

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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 B8G1201 - EPA 5030 (soil)

Matrix Spike Dup (B8G1201-MSD2)	Source: Y807144-03			Prepared: 07/12/2018 Analyzed: 07/12/2018						
Benzene	0.103	0.002	mg/kg	0.100	ND	103	71.8-126	0.829	11.3	
Toluene	0.094	0.002	"	0.100	ND	94.0	65.1-130	2.11	15.4	
Ethylbenzene	0.099	0.002	"	0.100	ND	98.6	62.2-130	2.68	19.6	
m,p-Xylene	0.174	0.004	"	0.200	ND	86.8	46.5-137	3.15	19.2	
o-Xylene	0.097	0.002	"	0.100	ND	97.2	54.2-134	1.79	17.9	
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		104	70-130			
Surrogate: Toluene-d8	61		"	62.5		96.9	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.0	70-130			

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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 B8G1202 - EPA 3580

Blank (B8G1202-BLK1)

Prepared: 07/12/2018 Analyzed: 07/12/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	41		"	50.0		81.9	59-131			

Blank (B8G1202-BLK2)

Prepared: 07/12/2018 Analyzed: 07/12/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	41		"	50.0		82.1	59-131			

LCS (B8G1202-BS1)

Prepared: 07/12/2018 Analyzed: 07/12/2018

Diesel (C10-C28)	921	50.0	mg/kg	1000		92.1	64-121			
Residual Range Organics (C28-C40)	1100	200	"	1000		110	58-124			
Surrogate: o-Terphenyl	53		"	50.0		106	59-131			

LCS (B8G1202-BS2)

Prepared: 07/12/2018 Analyzed: 07/12/2018

Diesel (C10-C28)	874	50.0	mg/kg	1000		87.4	64-121			
Residual Range Organics (C28-C40)	1010	200	"	1000		101	58-124			
Surrogate: o-Terphenyl	48		"	50.0		96.6	59-131			

Matrix Spike (B8G1202-MS1)

Source: Y807140-02

Prepared: 07/12/2018 Analyzed: 07/12/2018

Diesel (C10-C28)	876	50.0	mg/kg	1000	24.5	85.2	53-125			
Residual Range Organics (C28-C40)	1050	200	"	1000	61.2	99.0	47-133			

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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
Batch B8G1202 - EPA 3580										
Matrix Spike (B8G1202-MS1)			Source: Y807140-02		Prepared: 07/12/2018 Analyzed: 07/12/2018					
Surrogate: o-Terphenyl	49		mg/kg	50.0		97.5	59-131			
Matrix Spike (B8G1202-MS2)			Source: Y807152-01		Prepared: 07/12/2018 Analyzed: 07/12/2018					
Diesel (C10-C28)	857	50.0	mg/kg	1000	ND	85.7	53-125			
Residual Range Organics (C28-C40)	986	200	"	1000	9.46	97.6	47-133			
Surrogate: o-Terphenyl	49		"	50.0		97.2	59-131			
Matrix Spike Dup (B8G1202-MSD1)			Source: Y807140-02		Prepared: 07/12/2018 Analyzed: 07/12/2018					
Diesel (C10-C28)	887	50.0	mg/kg	1000	24.5	86.2	53-125	1.26	20	
Residual Range Organics (C28-C40)	1020	200	"	1000	61.2	96.2	47-133	2.90	20	
Surrogate: o-Terphenyl	48		"	50.0		96.5	59-131			
Matrix Spike Dup (B8G1202-MSD2)			Source: Y807152-01		Prepared: 07/12/2018 Analyzed: 07/12/2018					
Diesel (C10-C28)	855	50.0	mg/kg	1000	ND	85.5	53-125	0.203	20	
Residual Range Organics (C28-C40)	1010	200	"	1000	9.46	100	47-133	2.54	20	
Surrogate: o-Terphenyl	49		"	50.0		98.8	59-131			

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 Project: KMG - Rocky Mountain Fuel CO E1

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B8G1205 - NO PREP										
Duplicate (B8G1205-DUP1)		Source: Y807151-01			Prepared: 07/12/2018 Analyzed: 07/12/2018					
pH	7.55		pH Units		8.56			12.5	25	
Batch B8G1206 - NO PREP										
Blank (B8G1206-BLK1)		Prepared: 07/12/2018 Analyzed: 07/12/2018								
Specific Conductance (EC)	0.00310	0.00500	mmhos/cm							
Duplicate (B8G1206-DUP1)		Source: Y807151-01			Prepared: 07/12/2018 Analyzed: 07/12/2018					
Specific Conductance (EC)	0.713	0.00505	mmhos/cm		0.674			5.61	25	

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 89611890
Project: KMG - Rocky Mountain Fuel CO E1

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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