



June 11, 2019

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver

CO 80211

Project Name - KMG - DFMF #1 - OBM Release

Project Number - 40050540

Attached are your analytical results for KMG - DFMF #1 - OBM Release received by Origins Laboratory, Inc. June 10, 2019. This project is associated with Origins project number Y906167-01.

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: 40050540

Project: KMG - DFMF #1 - OBM Release

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@6"	Y906167-01	Soil	June 10, 2019 15:10	06/10/2019 17:56
SS02@6"	Y906167-02	Soil	June 10, 2019 15:12	06/10/2019 17:56
SS03@6"	Y906167-03	Soil	June 10, 2019 15:14	06/10/2019 17:56
SS04@6"	Y906167-04	Soil	June 10, 2019 15:15	06/10/2019 17:56
SS05@6"	Y906167-05	Soil	June 10, 2019 15:17	06/10/2019 17:56
SS06@6"	Y906167-06	Soil	June 10, 2019 15:18	06/10/2019 17:56
SS07@6"	Y906167-07	Soil	June 10, 2019 15:19	06/10/2019 17:56
SS08@6"	Y906167-08	Soil	June 10, 2019 15:20	06/10/2019 17:56

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

www.originslaboratory.com

9006167

ORIGINS
LABORATORY, INC

Client: APC / Tasman
Address:
Telephone Number:
Email Address: rcornez@tasman-geo.com

Project Manager: Robert Cornez
Project Name: DFMF #1 - OBM Release
Project Number: 40050540
Samples Collected By: *EC*

page 1 of 1

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative					Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #	Other		
5501e6"	6/10/14	15:10	2	X					X			8260 5 BTEX 8015 DRO/LOD	1
5502e6"	↓	15:12	2	X					X				2
5503e6"		15:14	2	X					X				3
5504e6"		15:15	2	X					X				4
5505e6"		15:17	2	X					X				5
5506e6"	↓	15:18	2	X					X				6
5507e6"		15:14	2	X					X				7
5508e6"	↓	15:20	2	X					X				8
													9
													10
Relinquished By: <i>G.A. Pellegrini</i>	Date: 6/10/14	Time: 1756		Received By: <i>EC</i>	Date: 6/10/14	Time: 1756		Turnaround Time: <input checked="" type="checkbox"/> Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr					
Relinquished By:	Date:	Time:		Received By:	Date:	Time:		Standards: <i>EC</i>					

Date Results Needed

4.3

Origins Laboratory, Inc.

Jefe Pellegrini

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y906167

Client: Tasman

Client Project ID: DFMF #1 OBM Release

Checklist Completed by: JG

Shipped Via: HD

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

Date/time completed: 6/10/2019

Airbill #: N/A

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

(Describe)

Cooler Number/Temperature: 1 / 4.3 °C / °C / °C / °C

Thermometer ID: T003

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

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

Reviewed by (Project Manager) [Signature]

Date/Time Reviewed 6/10/19

Origins Laboratory, Inc.

Jefe Pellegrini

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

SS01@6"
6/10/2019 3:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906167-01 (Soil)

BTEX/TVPH by EPA 8260D

Benzene	ND	0.0500	mg/kg	25	B9F1004	KDK	06/10/2019	06/10/2019	U
Toluene	ND	0.0500	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.0500	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.0500	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	5.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	104 %	70-130			"	"	"
Surrogate: Toluene-d8	98.0 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	94.4 %	70-130			"	"	"

DRO/ORO by EPA 8015D

Diesel (C10-C28)	128	25.0	mg/kg	1	B9F1005	KDK	"	06/11/2019
Residual Range Organics (C28-C40)	134	100	"	"	"	KDK	"	"

Surrogate: o-Terphenyl	86.7 %	50-150			"	"	"
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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: 40050540
Project: KMG - DFMF #1 - OBM Release

SS02@6"
6/10/2019 3:12:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906167-02 (Soil)

BTEX/TVPH by EPA 8260D

Benzene	ND	0.0500	mg/kg	25	B9F1004	KDK	06/10/2019	06/10/2019	U
Toluene	ND	0.0500	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.0500	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.0500	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	5.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	104 %	70-130			"	"	"
Surrogate: Toluene-d8	99.3 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	93.5 %	70-130			"	"	"

DRO/ORO by EPA 8015D

Diesel (C10-C28)	57.3	25.0	mg/kg	1	B9F1005	KDK	"	06/11/2019	
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: o-Terphenyl	81.3 %	50-150			"	"	"
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Origins Laboratory, Inc.



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6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

SS03@6"
6/10/2019 3:14:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906167-03 (Soil)

BTEX/TVPH by EPA 8260D

Benzene	ND	0.0500	mg/kg	25	B9F1004	KDK	06/10/2019	06/10/2019	U
Toluene	ND	0.0500	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.0500	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.0500	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	5.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	105 %	70-130			"	"	"
Surrogate: Toluene-d8	98.4 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	93.9 %	70-130			"	"	"

DRO/ORO by EPA 8015D

Diesel (C10-C28)	30.1	25.0	mg/kg	1	B9F1005	KDK	"	06/11/2019	
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: o-Terphenyl	70.9 %	50-150			"	"	"
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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

SS04@6"
6/10/2019 3:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906167-04 (Soil)

BTEX/TVPH by EPA 8260D

Benzene	ND	0.0500	mg/kg	25	B9F1004	KDK	06/10/2019	06/10/2019	U
Toluene	ND	0.0500	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.0500	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.0500	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	5.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	104 %	70-130			"	"	"
Surrogate: Toluene-d8	100 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	94.8 %	70-130			"	"	"

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B9F1005	KDK	"	06/11/2019	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: o-Terphenyl	73.6 %	50-150			"	"	"
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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFME #1 - OBM Release

SS05@6"
6/10/2019 3:17:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906167-05 (Soil)

BTEX/TVPH by EPA 8260D

Benzene	ND	0.0500	mg/kg	25	B9F1004	KDK	06/10/2019	06/10/2019	U
Toluene	ND	0.0500	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.0500	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.0500	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	5.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	105 %	70-130			"	"	"
Surrogate: Toluene-d8	98.9 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	93.2 %	70-130			"	"	"

DRO/ORO by EPA 8015D

Diesel (C10-C28)	596	25.0	mg/kg	1	B9F1005	KDK	"	06/11/2019	
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: o-Terphenyl	118 %	50-150			"	"	"
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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

SS06@6"

6/10/2019 3:18:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906167-06 (Soil)

BTEX/TVPH by EPA 8260D

Benzene	ND	0.0500	mg/kg	25	B9F1004	KDK	06/10/2019	06/10/2019	U
Toluene	ND	0.0500	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.0500	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.0500	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	5.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	105 %	70-130			"	"	"
Surrogate: Toluene-d8	97.5 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	94.3 %	70-130			"	"	"

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B9F1005	KDK	"	06/11/2019	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: o-Terphenyl	66.5 %	50-150			"	"	"
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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: 40050540
Project: KMG - DFME #1 - OBM Release

SS07@6"

6/10/2019 3:19:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906167-07 (Soil)

BTEX/TVPH by EPA 8260D

Benzene	ND	0.0500	mg/kg	25	B9F1004	KDK	06/10/2019	06/11/2019	U
Toluene	ND	0.0500	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.0500	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.0500	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	5.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	104 %	70-130			"	"	"
Surrogate: Toluene-d8	99.0 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	93.1 %	70-130			"	"	"

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B9F1005	KDK	"	06/11/2019	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: o-Terphenyl	84.5 %	50-150			"	"	"
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6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

SS08@6"
6/10/2019 3:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906167-08 (Soil)

BTEX/TVPH by EPA 8260D

Benzene	ND	0.0500	mg/kg	25	B9F1004	KDK	06/10/2019	06/11/2019	U
Toluene	ND	0.0500	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.0500	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.0500	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	ND	5.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	105 %	70-130			"	"	"
Surrogate: Toluene-d8	98.5 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	93.7 %	70-130			"	"	"

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B9F1005	KDK	"	06/11/2019	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: o-Terphenyl	69.9 %	50-150			"	"	"
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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

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
Batch B9F1004 - EPA 5030 (soil)										
Blank (B9F1004-BLK1)					Prepared: 06/10/2019 Analyzed: 06/10/2019					
Benzene	ND	0.00200	mg/kg							U
Toluene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.0	70-130			

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6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

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
Batch B9F1004 - EPA 5030 (soil)										
Blank (B9F1004-BLK2)					Prepared: 06/10/2019 Analyzed: 06/10/2019					
Benzene	ND	0.00200	mg/kg							U
Toluene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		97.6	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.8	70-130			

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Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

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 B9F1004 - EPA 5030 (soil)

LCS (B9F1004-BS1)

Prepared: 06/10/2019 Analyzed: 06/10/2019

Benzene	0.112	0.00200	mg/kg	0.100	112	70-130
Toluene	0.101	0.00200	"	0.100	101	70-130
Ethylbenzene	0.102	0.00200	"	0.100	102	70-130
m,p-Xylene	0.208	0.00400	"	0.200	104	70-130
o-Xylene	0.108	0.00200	"	0.100	108	70-130
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125	104	70-130
Surrogate: Toluene-d8	0.12		"	0.125	94.1	70-130
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	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: 40050540
Project: KMG - DFMF #1 - OBM Release

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
Batch B9F1004 - EPA 5030 (soil)										
LCS (B9F1004-BS2)					Prepared: 06/10/2019 Analyzed: 06/10/2019					
Benzene	0.103	0.00200	mg/kg	0.100		103	70-130			
Toluene	0.0949	0.00200	"	0.100		94.9	70-130			
Ethylbenzene	0.0972	0.00200	"	0.100		97.2	70-130			
m,p-Xylene	0.199	0.00400	"	0.200		99.6	70-130			
o-Xylene	0.103	0.00200	"	0.100		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		97.7	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

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 B9F1004 - EPA 5030 (soil)

Matrix Spike (B9F1004-MS1)		Source: Y906141-04			Prepared: 06/10/2019 Analyzed: 06/10/2019					
Benzene	0.0982	0.00200	mg/kg	0.100	ND	98.2	70-130			
Toluene	0.0891	0.00200	"	0.100	ND	89.1	70-130			
Ethylbenzene	0.0906	0.00200	"	0.100	ND	90.6	70-130			
m,p-Xylene	0.186	0.00400	"	0.200	ND	93.0	70-130			
o-Xylene	0.0970	0.00200	"	0.100	ND	97.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		97.7	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

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 B9F1004 - EPA 5030 (soil)

Matrix Spike (B9F1004-MS2)		Source: Y906162-04			Prepared: 06/10/2019 Analyzed: 06/10/2019					
Benzene	0.0856	0.00200	mg/kg	0.100	ND	85.6	70-130			
Toluene	0.0773	0.00200	"	0.100	ND	77.3	70-130			
Ethylbenzene	0.0790	0.00200	"	0.100	ND	79.0	70-130			
m,p-Xylene	0.162	0.00400	"	0.200	ND	81.2	70-130			
o-Xylene	0.0831	0.00200	"	0.100	ND	83.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		95.4	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		100	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

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 B9F1004 - EPA 5030 (soil)

Matrix Spike Dup (B9F1004-MSD1)		Source: Y906141-04			Prepared: 06/10/2019 Analyzed: 06/10/2019					
Benzene	0.0942	0.00200	mg/kg	0.100	ND	94.2	70-130	4.18	20	
Toluene	0.0847	0.00200	"	0.100	ND	84.7	70-130	5.11	20	
Ethylbenzene	0.0854	0.00200	"	0.100	ND	85.4	70-130	5.89	20	
m,p-Xylene	0.175	0.00400	"	0.200	ND	87.7	70-130	5.90	20	
o-Xylene	0.0916	0.00200	"	0.100	ND	91.6	70-130	5.71	20	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		94.1	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

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 B9F1004 - EPA 5030 (soil)

Matrix Spike Dup (B9F1004-MSD2)		Source: Y906162-04			Prepared: 06/10/2019 Analyzed: 06/10/2019					
Benzene	0.0752	0.00200	mg/kg	0.100	ND	75.2	70-130	12.9	20	
Toluene	0.0669	0.00200	"	0.100	ND	66.9	70-130	14.3	20	QM-07
Ethylbenzene	0.0673	0.00200	"	0.100	ND	67.3	70-130	15.9	20	QM-07
m,p-Xylene	0.139	0.00400	"	0.200	ND	69.4	70-130	15.7	20	QM-07
o-Xylene	0.0712	0.00200	"	0.100	ND	71.2	70-130	15.4	20	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		95.1	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

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
Batch B9F1005 - EPA 3580										
Blank (B9F1005-BLK1)					Prepared: 06/10/2019 Analyzed: 06/10/2019					
Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	40		"	50.0		80.5	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9F1005 - EPA 3580										
Blank (B9F1005-BLK2)					Prepared: 06/10/2019 Analyzed: 06/10/2019					
Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	40		"	50.0		79.3	50-150			

Origins Laboratory, Inc.



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6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9F1005 - EPA 3580										
LCS (B9F1005-BS1)					Prepared: 06/10/2019 Analyzed: 06/10/2019					
Diesel (C10-C28)	955	50.0	mg/kg	1000		95.5	70-130			
Residual Range Organics (C28-C40)	931	200	"	1000		93.1	70-130			
Surrogate: o-Terphenyl	39		"	50.0		77.2	50-150			

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6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

Extractable Petroleum Hydrocarbons by 8015D - 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 B9F1005 - EPA 3580

LCS (B9F1005-BS2)

Prepared: 06/10/2019 Analyzed: 06/10/2019

Diesel (C10-C28)	977	50.0	mg/kg	1000		97.7	70-130			
Residual Range Organics (C28-C40)	970	200	"	1000		97.0	70-130			
Surrogate: o-Terphenyl	47		"	50.0		93.6	50-150			

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Jen Pellegrini For Noelle Doyle Mathis, President

Tasman Geosciences
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Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9F1005 - EPA 3580										
Matrix Spike (B9F1005-MS1)		Source: Y906141-04			Prepared: 06/10/2019 Analyzed: 06/10/2019					
Diesel (C10-C28)	1050	50.0	mg/kg	1000	78.4	97.4	70-130			
Residual Range Organics (C28-C40)	816	200	"	1000	ND	81.6	70-130			
Surrogate: o-Terphenyl	41		"	50.0		82.4	50-150			

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

Extractable Petroleum Hydrocarbons by 8015D - 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 B9F1005 - EPA 3580

Matrix Spike (B9F1005-MS2)		Source: Y906162-04			Prepared: 06/10/2019 Analyzed: 06/10/2019					
Diesel (C10-C28)	1030	50.0	mg/kg	1000	ND	103	70-130			
Residual Range Organics (C28-C40)	999	200	"	1000	ND	99.9	70-130			
Surrogate: o-Terphenyl	44		"	50.0		88.9	50-150			

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

Extractable Petroleum Hydrocarbons by 8015D - 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 B9F1005 - EPA 3580

Matrix Spike Dup (B9F1005-MSD1)		Source: Y906141-04			Prepared: 06/10/2019 Analyzed: 06/10/2019					
Diesel (C10-C28)	989	50.0	mg/kg	1000	78.4	91.0	70-130	6.81	35	
Residual Range Organics (C28-C40)	848	200	"	1000	ND	84.8	70-130	3.78	35	
Surrogate: o-Terphenyl	43		"	50.0		85.7	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

Extractable Petroleum Hydrocarbons by 8015D - 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 B9F1005 - EPA 3580

Matrix Spike Dup (B9F1005-MSD2)		Source: Y906162-04			Prepared: 06/10/2019 Analyzed: 06/10/2019					
Diesel (C10-C28)	894	50.0	mg/kg	1000	ND	89.4	70-130	14.1	35	
Residual Range Organics (C28-C40)	850	200	"	1000	ND	85.0	70-130	16.1	35	
Surrogate: o-Terphenyl	40		"	50.0		80.1	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: 40050540

Project: KMG - DFMF #1 - OBM Release

Notes and Definitions

U Sample is Non-Detect.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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June 14, 2019

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver

CO 80211

Project Name - KMG - DFMF #1 - OBM Release

Project Number - 40050540

Attached are your analytical results for KMG - DFMF #1 - OBM Release received by Origins Laboratory, Inc. June 13, 2019. This project is associated with Origins project number Y906251-01.

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: 40050540

Project: KMG - DFMF #1 - OBM Release

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS09@1'	Y906251-01	Soil	June 13, 2019 14:40	06/13/2019 17:20

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

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

[illegible]

Origins Laboratory, Inc.

Jeff Pellipini

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y906251

Client: Tasman

Client Project ID: DFMF #1 OBM Release

Checklist Completed by: JG

Shipped Via: HD

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

Date/time completed: 6 / 13 / 2019

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

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

Reviewed by (Project Manager)

Date/Time Reviewed 6/13/19

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
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

SS09@1'

6/13/2019 2:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y906251-01 (Soil)

BTEX/TVPH by EPA 8260D

Benzene	ND	0.0500	mg/kg	25	B9F1305	JTD	06/13/2019	06/14/2019	U
Toluene	ND	0.0500	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.0500	"	"	"	JTD	"	"	U
Xylenes, total	ND	0.0500	"	"	"	JTD	"	"	U
Gasoline Range Hydrocarbons	ND	5.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	131 %	70-130			"	"	"	S-07
Surrogate: Toluene-d8	104 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	110 %	70-130			"	"	"	

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B9F1306	JTD	06/13/2019	06/13/2019	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl	63.0 %	50-150			"	"	"	
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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

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
Batch B9F1305 - EPA 5030 (soil)										
Blank (B9F1305-BLK1)					Prepared: 06/13/2019 Analyzed: 06/13/2019					
Benzene	ND	0.00200	mg/kg							U
Toluene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.17		"	0.125		132	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		105	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

Origins Laboratory, Inc.



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6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

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
Batch B9F1305 - EPA 5030 (soil)										
Blank (B9F1305-BLK2)					Prepared: 06/13/2019 Analyzed: 06/13/2019					
Benzene	ND	0.00200	mg/kg							U
Toluene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.14		"	0.125		115	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9F1305 - EPA 5030 (soil)										
LCS (B9F1305-BS1)					Prepared: 06/13/2019 Analyzed: 06/13/2019					
Benzene	0.0997	0.00200	mg/kg	0.100		99.7	70-130			
Toluene	0.105	0.00200	"	0.100		105	70-130			
Ethylbenzene	0.0907	0.00200	"	0.100		90.7	70-130			
m,p-Xylene	0.181	0.00400	"	0.200		90.6	70-130			
o-Xylene	0.0930	0.00200	"	0.100		93.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.5	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		104	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		105	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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Batch B9F1305 - EPA 5030 (soil)

LCS (B9F1305-BS2)

Prepared: 06/13/2019 Analyzed: 06/13/2019

Benzene	0.100	0.00200	mg/kg	0.100		100	70-130			
Toluene	0.106	0.00200	"	0.100		106	70-130			
Ethylbenzene	0.103	0.00200	"	0.100		103	70-130			
m,p-Xylene	0.207	0.00400	"	0.200		104	70-130			
o-Xylene	0.102	0.00200	"	0.100		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.15		"	0.125		116	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		105	70-130			
Surrogate: 4-Bromofluorobenzene	0.14		"	0.125		110	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 B9F1305 - EPA 5030 (soil)

Matrix Spike (B9F1305-MS1)		Source: Y906232-01			Prepared: 06/13/2019 Analyzed: 06/13/2019					
Benzene	2.39	0.0500	mg/kg	2.50	ND	95.7	70-130			
Toluene	2.59	0.0500	"	2.50	ND	104	70-130			
Ethylbenzene	2.50	0.0500	"	2.50	ND	99.9	70-130			
m,p-Xylene	4.98	0.100	"	5.00	ND	99.7	70-130			
o-Xylene	2.54	0.0500	"	2.50	ND	102	70-130			
Surrogate: 1,2-Dichloroethane-d4	3.6		"	3.12		117	70-130			
Surrogate: Toluene-d8	3.3		"	3.12		106	70-130			
Surrogate: 4-Bromofluorobenzene	3.4		"	3.12		108	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 B9F1305 - EPA 5030 (soil)

Matrix Spike (B9F1305-MS2)		Source: Y906232-07			Prepared: 06/13/2019 Analyzed: 06/13/2019					
Benzene	2.38	0.0500	mg/kg	2.50	ND	95.0	70-130			
Toluene	2.62	0.0500	"	2.50	ND	105	70-130			
Ethylbenzene	2.40	0.0500	"	2.50	ND	95.9	70-130			
m,p-Xylene	4.73	0.100	"	5.00	ND	94.6	70-130			
o-Xylene	2.25	0.0500	"	2.50	ND	90.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	3.4		"	3.12		108	70-130			
Surrogate: Toluene-d8	3.3		"	3.12		107	70-130			
Surrogate: 4-Bromofluorobenzene	2.9		"	3.12		94.3	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 B9F1305 - EPA 5030 (soil)

Matrix Spike Dup (B9F1305-MSD1)		Source: Y906232-01			Prepared: 06/13/2019 Analyzed: 06/13/2019					
Benzene	2.48	0.0500	mg/kg	2.50	ND	99.1	70-130	3.49	20	
Toluene	2.61	0.0500	"	2.50	ND	105	70-130	1.00	20	
Ethylbenzene	2.46	0.0500	"	2.50	ND	98.6	70-130	1.31	20	
m,p-Xylene	4.94	0.100	"	5.00	ND	98.8	70-130	0.957	20	
o-Xylene	2.51	0.0500	"	2.50	ND	100	70-130	1.05	20	
Surrogate: 1,2-Dichloroethane-d4	3.5		"	3.12		111	70-130			
Surrogate: Toluene-d8	3.3		"	3.12		106	70-130			
Surrogate: 4-Bromofluorobenzene	3.3		"	3.12		106	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 B9F1305 - EPA 5030 (soil)

Matrix Spike Dup (B9F1305-MSD2)		Source: Y906232-07			Prepared: 06/13/2019 Analyzed: 06/13/2019					
Benzene	2.45	0.0500	mg/kg	2.50	ND	97.8	70-130	2.88	20	
Toluene	2.64	0.0500	"	2.50	ND	106	70-130	0.912	20	
Ethylbenzene	2.43	0.0500	"	2.50	ND	97.4	70-130	1.47	20	
m,p-Xylene	4.97	0.100	"	5.00	ND	99.3	70-130	4.85	20	
o-Xylene	2.49	0.0500	"	2.50	ND	99.5	70-130	9.83	20	
Surrogate: 1,2-Dichloroethane-d4	3.6		"	3.12		115	70-130			
Surrogate: Toluene-d8	3.4		"	3.12		109	70-130			
Surrogate: 4-Bromofluorobenzene	3.3		"	3.12		107	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
Batch B9F1306 - EPA 3580										
Blank (B9F1306-BLK1)					Prepared: 06/13/2019 Analyzed: 06/13/2019					
Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	42		"	50.0		84.8	50-150			

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Bob Cornez
Project Number: 40050540
Project: KMG - DFMF #1 - OBM Release

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9F1306 - EPA 3580										
Blank (B9F1306-BLK2)					Prepared: 06/13/2019 Analyzed: 06/13/2019					
Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	38		"	50.0		76.4	50-150			

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Project: KMG - DFMF #1 - OBM Release

Extractable Petroleum Hydrocarbons by 8015D - 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 B9F1306 - EPA 3580

LCS (B9F1306-BS1)

Prepared: 06/13/2019 Analyzed: 06/13/2019

Diesel (C10-C28)	951	50.0	mg/kg	1000		95.1	70-130			
Residual Range Organics (C28-C40)	963	200	"	1000		96.3	70-130			
Surrogate: o-Terphenyl	46		"	50.0		92.9	50-150			

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Bob Cornez
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Project: KMG - DFMF #1 - OBM Release

Extractable Petroleum Hydrocarbons by 8015D - 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 B9F1306 - EPA 3580

LCS (B9F1306-BS2)

Prepared: 06/13/2019 Analyzed: 06/13/2019

Diesel (C10-C28)	966	50.0	mg/kg	1000		96.6	70-130			
Residual Range Organics (C28-C40)	990	200	"	1000		99.0	70-130			
Surrogate: o-Terphenyl	47		"	50.0		93.9	50-150			

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Extractable Petroleum Hydrocarbons by 8015D - 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 B9F1306 - EPA 3580

Matrix Spike (B9F1306-MS1)		Source: Y906232-01			Prepared: 06/13/2019 Analyzed: 06/13/2019					
Diesel (C10-C28)	898	50.0	mg/kg	1000	ND	89.8	70-130			
Residual Range Organics (C28-C40)	890	200	"	1000	ND	89.0	70-130			
Surrogate: o-Terphenyl	44		"	50.0		87.5	50-150			

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Extractable Petroleum Hydrocarbons by 8015D - 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 B9F1306 - EPA 3580

Matrix Spike (B9F1306-MS2)		Source: Y906232-07			Prepared: 06/13/2019 Analyzed: 06/13/2019					
Diesel (C10-C28)	929	50.0	mg/kg	1000	ND	92.9	70-130			
Residual Range Organics (C28-C40)	913	200	"	1000	ND	91.3	70-130			
Surrogate: o-Terphenyl	48		"	50.0		96.8	50-150			

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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 B9F1306 - EPA 3580

Matrix Spike Dup (B9F1306-MSD1)		Source: Y906232-01			Prepared: 06/13/2019 Analyzed: 06/13/2019					
Diesel (C10-C28)	832	50.0	mg/kg	1000	ND	83.2	70-130	7.70	35	
Residual Range Organics (C28-C40)	794	200	"	1000	ND	79.4	70-130	11.5	35	
Surrogate: o-Terphenyl	41		"	50.0		81.2	50-150			

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Extractable Petroleum Hydrocarbons by 8015D - 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 B9F1306 - EPA 3580

Matrix Spike Dup (B9F1306-MSD2)		Source: Y906232-07			Prepared: 06/13/2019 Analyzed: 06/13/2019					
Diesel (C10-C28)	890	50.0	mg/kg	1000	ND	89.0	70-130	4.29	35	
Residual Range Organics (C28-C40)	906	200	"	1000	ND	90.6	70-130	0.764	35	
Surrogate: o-Terphenyl	45		"	50.0		89.7	50-150			

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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.

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