

May 21, 2018

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

**Project Name - KMG - Ale Partnership Federal  
W24-9J1**

**Project Number - [none]**

Attached are your analytical results for KMG - Ale Partnership Federal W24-9J1 received by Origins Laboratory, Inc. May 18, 2018. This project is associated with Origins project number Y805290-01.

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

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

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

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

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

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



Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Ale Partnership Federal W24-9J1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@2-3"	Y805290-01	Soil	May 18, 2018 13:45	05/18/2018 16:55

Origins Laboratory, Inc.



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



Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Ale Partnership Federal W24-9J1

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: Y805290

Client: Tasman

Client Project ID: KMG-Ale Partnership Federal

Checklist Completed by: JG

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

Date/time completed: 5/18/2018

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 4.9 °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 <sup>(1)</sup> ?	<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 <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)		<input checked="" type="checkbox"/>		
Additional Comments (if any):				

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

JG  
 Reviewed by (Project Manager)

5/18/18  
 Date/Time Reviewed

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Ale Partnership Federal W24-9J1

**SS01@2-3"**  
**5/18/2018 1:45:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	-------

**Origins Laboratory, Inc.**  
**Y805290-01 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8E1802	05/18/2018	05/19/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

*Surrogate: o-Terphenyl* 88.4 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8E1805	05/18/2018	05/19/2018	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* 116 % 70-130 " " "  
*Surrogate: Toluene-d8* 98.4 % 70-130 " " "  
*Surrogate: 4-Bromofluorobenzene* 102 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	9.18		pH Units	1	B8E1806	05/18/2018	05/18/2018	
----	------	--	----------	---	---------	------------	------------	--

**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.105		mmhos/cm	"	B8E1807	05/18/2018	"	
---------------------------	-------	--	----------	---	---------	------------	---	--

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Ale Partnership Federal W24-9J1

**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 B8E1805 - EPA 5030 (soil)**

**Blank (B8E1805-BLK1)**

Prepared: 05/18/2018 Analyzed: 05/18/2018

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	66		ug/kg	62.5		106	70-130			
Surrogate: Toluene-d8	61		"	62.5		98.0	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: [none]  
 Project: KMG - Ale Partnership Federal W24-9J1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B8E1805 - EPA 5030 (soil)</b>										
<b>Blank (B8E1805-BLK2)</b>										
					Prepared: 05/18/2018 Analyzed: 05/18/2018					
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	67		ug/kg	62.5		107	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.7	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: [none]  
 Project: KMG - Ale Partnership Federal W24-9J1

**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 B8E1805 - EPA 5030 (soil)

**LCS (B8E1805-BS1)**

Prepared: 05/18/2018 Analyzed: 05/18/2018

Benzene	0.109	0.002	mg/kg	0.100		109	77.1-124			
Toluene	0.103	0.002	"	0.100		103	74.5-128			
Ethylbenzene	0.106	0.002	"	0.100		106	66.4-127			
m,p-Xylene	0.214	0.004	"	0.200		107	76.6-124			
o-Xylene	0.104	0.002	"	0.100		104	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	66		ug/kg	62.5		106	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.5	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	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: [none]  
 Project: KMG - Ale Partnership Federal W24-9J1

**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 B8E1805 - EPA 5030 (soil)**

**LCS (B8E1805-BS2)**

Prepared: 05/18/2018 Analyzed: 05/18/2018

Benzene	0.107	0.002	mg/kg	0.100		107	77.1-124			
Toluene	0.101	0.002	"	0.100		101	74.5-128			
Ethylbenzene	0.104	0.002	"	0.100		104	66.4-127			
m,p-Xylene	0.205	0.004	"	0.200		103	76.6-124			
o-Xylene	0.102	0.002	"	0.100		102	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.9	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: [none]  
 Project: KMG - Ale Partnership Federal W24-9J1

**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 B8E1805 - EPA 5030 (soil)

Matrix Spike (B8E1805-MS1)	Source: Y805245-01			Prepared: 05/18/2018 Analyzed: 05/18/2018						
Benzene	0.106	0.002	mg/kg	0.100	ND	106	71.8-126			
Toluene	0.098	0.002	"	0.100	ND	98.0	65.1-130			
Ethylbenzene	0.095	0.002	"	0.100	ND	95.4	62.2-130			
m,p-Xylene	0.197	0.004	"	0.200	ND	98.4	46.5-137			
o-Xylene	0.096	0.002	"	0.100	ND	96.1	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	79		ug/kg	62.5		127	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.8	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Ale Partnership Federal W24-9J1

**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 B8E1805 - EPA 5030 (soil)

Matrix Spike (B8E1805-MS2)	Source: Y805282-01			Prepared: 05/18/2018 Analyzed: 05/18/2018						
Benzene	0.097	0.002	mg/kg	0.100	0.001	95.6	71.8-126			
Toluene	0.088	0.002	"	0.100	0.001	86.9	65.1-130			
Ethylbenzene	0.091	0.002	"	0.100	0.0006	90.7	62.2-130			
m,p-Xylene	0.183	0.004	"	0.200	0.003	90.2	46.5-137			
o-Xylene	0.090	0.002	"	0.100	0.0006	89.3	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	68		ug/kg	62.5		109	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.4	70-130			
Surrogate: 4-Bromofluorobenzene	85		"	62.5		136	70-130			S-DUP

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Ale Partnership Federal W24-9J1

**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 B8E1805 - EPA 5030 (soil)

Matrix Spike Dup (B8E1805-MSD1)	Source: Y805245-01			Prepared: 05/18/2018 Analyzed: 05/20/2018						
Benzene	0.104	0.002	mg/kg	0.100	ND	104	71.8-126	1.89	11.3	
Toluene	0.097	0.002	"	0.100	ND	96.7	65.1-130	1.34	15.4	
Ethylbenzene	0.101	0.002	"	0.100	ND	101	62.2-130	6.11	19.6	
m,p-Xylene	0.203	0.004	"	0.200	ND	101	46.5-137	2.95	19.2	
o-Xylene	0.101	0.002	"	0.100	ND	101	54.2-134	4.85	17.9	
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		104	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.5	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Ale Partnership Federal W24-9J1

**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 B8E1805 - EPA 5030 (soil)

Matrix Spike Dup (B8E1805-MSD2)	Source: Y805282-01			Prepared: 05/18/2018 Analyzed: 05/18/2018						
Benzene	0.091	0.002	mg/kg	0.100	0.001	89.6	71.8-126	6.40	11.3	
Toluene	0.083	0.002	"	0.100	0.001	82.0	65.1-130	5.68	15.4	
Ethylbenzene	0.084	0.002	"	0.100	0.0006	83.7	62.2-130	7.92	19.6	
m,p-Xylene	0.170	0.004	"	0.200	0.003	83.6	46.5-137	7.46	19.2	
o-Xylene	0.083	0.002	"	0.100	0.0006	82.7	54.2-134	7.64	17.9	
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.0	70-130			
Surrogate: 4-Bromofluorobenzene	72		"	62.5		116	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: [none]  
 Project: KMG - Ale Partnership Federal W24-9J1

**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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**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 B8E1802 - EPA 3550B**

**Blank (B8E1802-BLK1)**

Prepared: 05/18/2018 Analyzed: 05/18/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	43		"	50.0		85.8	59-131			

**Blank (B8E1802-BLK2)**

Prepared: 05/18/2018 Analyzed: 05/18/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	46		"	50.0		92.1	59-131			

**LCS (B8E1802-BS1)**

Prepared: 05/18/2018 Analyzed: 05/18/2018

Diesel (C10-C28)	1180	50.0	mg/kg	1000		118	64-121			
Residual Range Organics (C28-C40)	1060	200	"	1000		106	58-124			
Surrogate: o-Terphenyl	56		"	50.0		112	59-131			

**LCS (B8E1802-BS2)**

Prepared: 05/18/2018 Analyzed: 05/18/2018

Diesel (C10-C28)	1170	50.0	mg/kg	1000		117	64-121			
Residual Range Organics (C28-C40)	1010	200	"	1000		101	58-124			
Surrogate: o-Terphenyl	57		"	50.0		113	59-131			

**Matrix Spike (B8E1802-MS1)**

Source: Y805255-03

Prepared: 05/18/2018 Analyzed: 05/18/2018

Diesel (C10-C28)	1100	50.0	mg/kg	1000	ND	110	53-125			
Residual Range Organics (C28-C40)	970	200	"	1000	8.26	96.2	47-133			

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Ale Partnership Federal W24-9J1

**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
<b>Batch B8E1802 - EPA 3550B</b>										
<b>Matrix Spike (B8E1802-MS1)</b>			<b>Source: Y805255-03</b>		Prepared: 05/18/2018 Analyzed: 05/18/2018					
Surrogate: o-Terphenyl	49		mg/kg	50.0		97.5	59-131			
<b>Matrix Spike (B8E1802-MS2)</b>			<b>Source: Y805282-01</b>		Prepared: 05/18/2018 Analyzed: 05/18/2018					
Diesel (C10-C28)	1260	50.0	mg/kg	1000	ND	126	53-125			QM-07
Residual Range Organics (C28-C40)	1050	200	"	1000	8.42	104	47-133			
Surrogate: o-Terphenyl	58		"	50.0		115	59-131			
<b>Matrix Spike Dup (B8E1802-MSD1)</b>			<b>Source: Y805255-03</b>		Prepared: 05/18/2018 Analyzed: 05/18/2018					
Diesel (C10-C28)	1070	50.0	mg/kg	1000	ND	107	53-125	2.68	20	
Residual Range Organics (C28-C40)	949	200	"	1000	8.26	94.1	47-133	2.26	20	
Surrogate: o-Terphenyl	50		"	50.0		99.5	59-131			
<b>Matrix Spike Dup (B8E1802-MSD2)</b>			<b>Source: Y805282-01</b>		Prepared: 05/18/2018 Analyzed: 05/18/2018					
Diesel (C10-C28)	1190	50.0	mg/kg	1000	ND	119	53-125	5.79	20	
Residual Range Organics (C28-C40)	1020	200	"	1000	8.42	101	47-133	3.10	20	
Surrogate: o-Terphenyl	57		"	50.0		114	59-131			

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Ale Partnership Federal W24-9J1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B8E1806 - EPA 1311</b>										
<b>Duplicate (B8E1806-DUP1)</b>		<b>Source: Y805245-01</b>			Prepared: 05/18/2018 Analyzed: 05/18/2018					
pH	7.95		pH Units		8.91			11.4	25	
<b>Batch B8E1807 - EPA 1311</b>										
<b>Blank (B8E1807-BLK1)</b>		Prepared: 05/18/2018 Analyzed: 05/18/2018								
Specific Conductance (EC)	0.00270		mmhos/cm							
<b>Duplicate (B8E1807-DUP1)</b>		<b>Source: Y805245-01</b>			Prepared: 05/18/2018 Analyzed: 05/18/2018					
Specific Conductance (EC)	0.0659		mmhos/cm		0.0540			19.8	25	

Origins Laboratory, Inc.



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

Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Ale Partnership Federal W24-9J1

---

### Notes and Definitions

U Sample is Non-Detect.

S-DUP Duplicate analysis confirmed surrogate failure due to matrix effects.

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

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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

May 24, 2018

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver CO 80211

**Project Name - KMG - Ale Partnership Federal  
W29-9JI**

**Project Number - [none]**

Attached are your analytical results for KMG - Ale Partnership Federal W29-9JI received by Origins Laboratory, Inc. May 23, 2018. This project is associated with Origins project number Y805359-01.

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

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

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

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

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

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



Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Ale Partnership Federal W29-9JI

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS02@3-6"	Y805359-01	Soil	May 23, 2018 15:01	05/23/2018 17:00

Origins Laboratory, Inc.



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



Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Ale Partnership Federal W29-9JI

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: Y405359

Client: Tasman

Client Project ID: KMG - Ale Partnership Federal W29

Checklist Completed by: JG

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

Date/time completed: 5/23/2018

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 1.3 °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 <sup>(1)</sup> ?	<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 <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? <b>if yes, contact client and note in narrative.</b>			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCL, H2SO4) / ( pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)		<input checked="" type="checkbox"/>		
Additional Comments (if any):				

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

Reviewed by (Project Manager) [Signature] Date/Time Reviewed 5/23/18

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: [none]  
Project: KMG - Ale Partnership Federal W29-9JI

**SS02@3-6"**

**5/23/2018 3:01:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	-------

**Origins Laboratory, Inc.**  
Y805359-01 (Soil)

**pH in Soil by EPA 9045D**

pH	8.28		pH Units	1	B8E2304	05/23/2018	05/23/2018	
----	------	--	----------	---	---------	------------	------------	--

Origins Laboratory, Inc.



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

Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Bob Cornez  
 Project Number: [none]  
 Project: KMG - Ale Partnership Federal W29-9JI

**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 B8E2304 - EPA 1311

Duplicate (B8E2304-DUP1)

Source: Y805334-01

Prepared: 05/23/2018 Analyzed: 05/23/2018

pH	6.98		pH Units		8.26			16.8	25	
----	------	--	----------	--	------	--	--	------	----	--

Origins Laboratory, Inc.



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

Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Ale Partnership Federal W29-9JI

---

### Notes and Definitions

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.*