

## **ANALYTICAL TABLE**

**TABLE 1**  
**DEEPE 34C-27HZ**  
**SOIL SAMPLE RESULTS SUMMARY TABLE**  
**KERR-McGEE OIL AND GAS ONSHORE LP**

Sample Location	Date	Depth (ft. bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TVPH-GRO (mg/kg)	TEPH-DRO (mg/kg)	TEPH-ORO (mg/kg)	EC (mmhos/cm)	pH (units)
<b>COGCC standards for soil (mg/kg) <sup>(1)</sup></b>			<b>0.17</b>	<b>85</b>	<b>100</b>	<b>175</b>	<b>500</b>			<b>4 mmhos/cm or 2x BG</b>	<b>6-9</b>
E01@3'	04/15/16	3.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0281	7.94
E02@3'	04/15/16	3.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0191	7.67
E03@3'	04/15/16	3.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0159	7.35
N01@3'	04/15/16	3.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0144	7.67
N02@3'	04/15/16	3.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0182	7.35
S01@3'	04/15/16	3.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0178	7.24
S02@3'	04/15/16	3.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0199	7.39
S03@3'	04/15/16	3.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0446	7.02
S04@3'	04/15/16	3.0	<0.002	<0.002	<0.002	<0.002	<0.20	<50	<200	0.0273	7.17
W01@3'	04/15/16	3.0	<0.002	<0.002	<0.002	<0.002	<0.20	<50	<200	0.0269	7.12
W02@3'	04/15/16	3.0	<0.002	<0.002	<0.002	<0.002	<0.20	<50	<200	0.0132	7.39
W03@3'	04/15/16	3.0	<0.002	<0.002	<0.002	<0.002	<0.20	<50	<200	0.0235	7.25
W04@3'	04/15/16	3.0	<0.002	<0.002	<0.002	<0.002	<0.20	<50	<200	0.0123	7.36
B01@4.5'	04/15/16	4.5	<0.002	<0.002	<0.002	<0.002	<0.20	<50	<200	0.0238	7.36
B02@4.5'	04/15/16	4.5	<0.002	<0.002	<0.002	<0.002	<0.20	<50	<200	0.0166	7.61
B03@4.5'	04/15/16	4.5	<0.002	<0.002	<0.002	<0.002	<0.20	<50	<200	0.0210	7.22
B04@4.5'	04/15/16	4.5	<0.002	<0.002	<0.002	<0.002	<0.20	<50	<200	0.0242	7.23
E-S01@10'	04/28/16	10.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0210	7.99
E-E01@10'	04/28/16	10.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0507	8.02
E-E02@10'	04/28/16	10.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0233	8.00
E-B01@11'	04/28/16	11.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0850	7.99
E-B02@11'	04/28/16	11.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0379	8.34
E-N01@10'	04/28/16	10.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0272	8.08
E-S02@14'	05/03/16	14.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0499	8.58
E-B03@15'	05/03/16	15.0	<0.05	<0.05	<0.05	<0.05	11	51	<200	1.18	7.51
E-W01@14'	05/03/16	14.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0473	8.65
E-W02@14'	05/03/16	14.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0456	8.80
E-B04@15'	05/03/16	15.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.518	7.65
E-N02@14'	05/03/16	14.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0488	8.66
E-E03@13'	05/03/16	13.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0567	8.5
E-E04@13'	05/03/16	13.0	<0.05	<0.05	<0.05	<0.05	<5.0	<50	<200	0.0480	8.78

**Notes:**

1. Standards for soil are taken from 2 CCR 404-1, Table 910-1, effective January 1, 2015.

COGCC = Colorado Oil and Gas Conservation Commission

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

TVPH - GRO = Total volatile petroleum hydrocarbons - gasoline range organics

TEPH - DRO = Total extractable petroleum hydrocarbons - diesel range organics

TEPH - ORO = Total extractable petroleum hydrocarbons - oil range organics

EC = Electrical conductivity

BG = Background

mmhos/cm = Millimhos per centimeter

mg/kg = Milligrams per kilogram.

ft. bgs = Feet below ground surface.

**BOLD** = Analytical result is in exceedance of COGCC Table 910-1 soil standards.

## **LABORATORY ANALYTICAL REPORTS**



April 18, 2016

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver

CO 80211

**Project Name - KMG - Deepe 34C-27Hz**

**Project Number - 89047176**

Attached are your analytical results for KMG - Deepe 34C-27Hz received by Origins Laboratory, Inc. April 15, 2016. This project is associated with Origins project number X604185-01.

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: 89047176

Project: KMG - Deepe 34C-27Hz

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
E01 @ 3	X604185-01	Soil	April 15, 2016 16:07	04/15/2016 17:50
E02 @ 3	X604185-02	Soil	April 15, 2016 16:09	04/15/2016 17:50
E03 @ 3	X604185-03	Soil	April 15, 2016 16:11	04/15/2016 17:50
N01 @ 3	X604185-04	Soil	April 15, 2016 16:03	04/15/2016 17:50
N02 @ 3	X604185-05	Soil	April 15, 2016 16:05	04/15/2016 17:50
S01 @ 3	X604185-06	Soil	April 15, 2016 15:34	04/15/2016 17:50
S02 @ 3	X604185-07	Soil	April 15, 2016 15:39	04/15/2016 17:50
S03 @ 3	X604185-08	Soil	April 15, 2016 15:51	04/15/2016 17:50
S04 @ 3	X604185-09	Soil	April 15, 2016 15:55	04/15/2016 17:50
W01 @ 3	X604185-10	Soil	April 15, 2016 15:43	04/15/2016 17:50

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: 89047176  
Project: KMG - Deepe 34C-27Hz

### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W02 @ 3	X604185-11	Soil	April 15, 2016 15:48	04/15/2016 17:50
W03 @ 3	X604185-12	Soil	April 15, 2016 15:59	04/15/2016 17:50
W04 @ 3	X604185-13	Soil	April 15, 2016 16:09	04/15/2016 17:50
B01 @ 4.5	X604185-14	Soil	April 15, 2016 16:15	04/15/2016 17:50
B02 @ 4.5	X604185-15	Soil	April 15, 2016 16:17	04/15/2016 17:50
B03 @ 4.5	X604185-16	Soil	April 15, 2016 16:19	04/15/2016 17:50
B04 @ 4.5	X604185-17	Soil	April 15, 2016 16:21	04/15/2016 17:50

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

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page 1 of 2

**ORIGINS** LABORATORY, INC

Client: APC

Address: \_\_\_\_\_

Telephone Number: 303-889-9525

Email Address: semin@origins-lab.com

Project Manager: Robert Cornez

Project Name: Deepe 34C-27Hz

Project Number: 89047176

Samples Collected By: Zachary Mathis

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa Canister #	Other	TPH-Brook	PH	EC	
E0103	4/15/16	1607	2	X					X			X	X	X	1
E0203		1609													2
E0303		1611													3
N0103		1603													4
N0203		1605													5
S0103		1534													6
S0203		1539													7
S0303		1551													8
S0403		1555													9
N0103	4/15/16	1543	4												10

Relinquished By: Zachary Mathis

Relinquished By: \_\_\_\_\_

Date: 4/15/16

Date: \_\_\_\_\_

Time: 1750

Time: \_\_\_\_\_

Received By: APC

Received By: \_\_\_\_\_

Date: 4/15/16

Date: \_\_\_\_\_

Time: 1750

Time: \_\_\_\_\_

Turnaround Time: ☒ Same Day ☐ 24 Hr ☐ 48 Hr ☐ 72 Hr ☐ Standard

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: 89047176  
Project: KMG - Deepe 34C-27Hz

ORIGINS  
LABORATORY, INC

www.originslaboratory.com

X604185

page 2 of 2

Client: ATC

Address:

Project Manager: Robert Cornez

Project Name: Deepe 34C-27Hz

Project Number: 89047176

Samples Collected By: Zachary Mahaffey

Telephone Number: 303-884-9525

Email Address: Cornez@tasman-geo.com

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summation	Other	TPH-1016/20	TPH-1016/20	TPH-1016/20	
W0103	4/15/16	1543	2	X				X				X	X	X	1
W0203		1548													2
W0303		1559													3
W0403		1609													4
B01045		1615													5
B02045		1617													6
B03045		1619													7
B04045		1621													8
															9
															10

  

Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Turnaround Time:
<u>Zachary Mahaffey</u>	4/15/16	1750	<u>AMK</u>	6/15/16	1750	Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>

Date Results Needed

Temp Received: 59

Origins Laboratory, Inc.

*Jefe Pellegrini*

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: X604185

Client: Tasman

Client Project ID: Deepe 34C-27Hz

Checklist Completed by: Jeff Smith

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

Date/time completed: 4/15/12

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 55 °C 1 / \_\_\_\_\_ °C 1 / \_\_\_\_\_ °C (Describe) \_\_\_\_\_ °C

Thermometer ID: T603

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): <u>Confirmed with Zachary M. by phone conversation that Project only contained 12 samples, W063 was a repeat.</u>				

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

Jeff Smith  
Reviewed by (Project Manager)

4/15/12  
Date/Time Reviewed

Origins Laboratory, Inc.

*Jeff Pellegrini*

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

E01 @ 3  
4/15/2016 4:07:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604185-01 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D1503	04/15/2016	04/15/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 81.2 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6D1505	04/15/2016	04/16/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 104 % 70-130 " " "  
Surrogate: Toluene-d8 98.6 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 96.8 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.94		pH Units	1	B6D1506	04/15/2016	04/15/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0281		mmhos/cm	"	B6D1507	04/15/2016	04/15/2016	
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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

E02 @ 3  
4/15/2016 4:09:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604185-02 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D1503	04/15/2016	04/15/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 91.3 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6D1505	04/15/2016	04/16/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 105 % 70-130 " " "  
Surrogate: Toluene-d8 98.9 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 97.3 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.67		pH Units	1	B6D1506	04/15/2016	04/15/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0191		mmhos/cm	"	B6D1507	04/15/2016	04/15/2016	
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Origins Laboratory, Inc.



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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

E03 @ 3  
4/15/2016 4:11:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604185-03 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D1503	04/15/2016	04/15/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 83.0 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6D1505	04/15/2016	04/16/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 103 % 70-130 " " "  
Surrogate: Toluene-d8 101 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 97.1 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.35		pH Units	1	B6D1506	04/15/2016	04/15/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0159		mmhos/cm	"	B6D1507	04/15/2016	04/15/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

N01 @ 3  
4/15/2016 4:03:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604185-04 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D1503	04/15/2016	04/15/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

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

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6D1505	04/15/2016	04/16/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 104 % 70-130 " " "  
Surrogate: Toluene-d8 99.1 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 97.1 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.67		pH Units	1	B6D1506	04/15/2016	04/15/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0144		mmhos/cm	"	B6D1507	04/15/2016	04/15/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

N02 @ 3  
4/15/2016 4:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604185-05 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D1503	04/15/2016	04/15/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 91.3 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6D1505	04/15/2016	04/16/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 103 % 70-130 " " "  
Surrogate: Toluene-d8 98.4 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 96.9 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.35		pH Units	1	B6D1506	04/15/2016	04/15/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0182		mmhos/cm	"	B6D1507	04/15/2016	04/15/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

S01 @ 3  
4/15/2016 3:34:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604185-06 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D1503	04/15/2016	04/15/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 75.2 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6D1505	04/15/2016	04/16/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 104 % 70-130 " " "  
Surrogate: Toluene-d8 99.2 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 96.7 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.24		pH Units	1	B6D1506	04/15/2016	04/15/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0178		mmhos/cm	"	B6D1507	04/15/2016	04/15/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

S02 @ 3  
4/15/2016 3:39:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604185-07 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D1503	04/15/2016	04/15/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 84.3 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6D1505	04/15/2016	04/16/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 103 % 70-130 " " "  
Surrogate: Toluene-d8 98.5 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 96.7 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.39		pH Units	1	B6D1506	04/15/2016	04/15/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0199		mmhos/cm	"	B6D1507	04/15/2016	04/15/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

S03 @ 3  
4/15/2016 3:51:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604185-08 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D1503	04/15/2016	04/15/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

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

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6D1505	04/15/2016	04/16/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 103 % 70-130 " " "  
Surrogate: Toluene-d8 99.2 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 97.5 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.02		pH Units	1	B6D1506	04/15/2016	04/15/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0446		mmhos/cm	"	B6D1507	04/15/2016	04/15/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

S04 @ 3  
4/15/2016 3:55:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604185-09 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D1503	04/15/2016	04/15/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

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

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	0.20	mg/kg	1	B6D1505	04/15/2016	04/16/2016	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 98.1 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 98.6 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.17	pH Units	1	B6D1506	04/15/2016	04/15/2016
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0273	mmhos/cm	"	B6D1507	04/15/2016	04/15/2016
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

W01 @ 3  
4/15/2016 3:43:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604185-10 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D1503	04/15/2016	04/16/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 85.8 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	0.20	mg/kg	1	B6D1505	04/15/2016	04/16/2016	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 111 % 70-130 " " "  
Surrogate: Toluene-d8 97.5 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 97.9 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.12		pH Units	1	B6D1506	04/15/2016	04/15/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0269		mmhos/cm	"	B6D1507	04/15/2016	04/15/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

W02 @ 3  
4/15/2016 3:48:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604185-11 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D1503	04/15/2016	04/16/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 89.0 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	0.20	mg/kg	1	B6D1505	04/15/2016	04/16/2016	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 112 % 70-130 " " "  
Surrogate: Toluene-d8 96.4 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 98.1 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.39		pH Units	1	B6D1506	04/15/2016	04/15/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0132		mmhos/cm	"	B6D1507	04/15/2016	04/15/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

W03 @ 3  
4/15/2016 3:59:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604185-12 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D1503	04/15/2016	04/16/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 92.3 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	0.20	mg/kg	1	B6D1505	04/15/2016	04/16/2016	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 112 % 70-130 " " "  
Surrogate: Toluene-d8 96.8 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 98.7 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.25	pH Units	1	B6D1506	04/15/2016	04/15/2016
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0235	mmhos/cm	"	B6D1507	04/15/2016	04/15/2016
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

W04 @ 3  
4/15/2016 4:09:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604185-13 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D1503	04/15/2016	04/16/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 99.6 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	0.20	mg/kg	1	B6D1505	04/15/2016	04/16/2016	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 112 % 70-130 " " "  
Surrogate: Toluene-d8 97.3 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 99.3 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.36	pH Units	1	B6D1506	04/15/2016	04/15/2016
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0123	mmhos/cm	"	B6D1507	04/15/2016	04/15/2016
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

**B01 @ 4.5**  
**4/15/2016 4:15:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604185-14 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D1503	04/15/2016	04/16/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

*Surrogate: o-Terphenyl* 87.6 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	0.20	mg/kg	1	B6D1505	04/15/2016	04/16/2016	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* 114 % 70-130 " " "  
*Surrogate: Toluene-d8* 96.4 % 70-130 " " "  
*Surrogate: 4-Bromofluorobenzene* 98.7 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.36		pH Units	1	B6D1506	04/15/2016	04/15/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0238		mmhos/cm	"	B6D1507	04/15/2016	04/15/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

**B02 @ 4.5**  
**4/15/2016 4:17:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604185-15 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D1503	04/15/2016	04/16/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 85.4 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	0.20	mg/kg	1	B6D1505	04/15/2016	04/16/2016	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 111 % 70-130 " " "  
Surrogate: Toluene-d8 97.2 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 99.8 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.61		pH Units	1	B6D1506	04/15/2016	04/15/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0166		mmhos/cm	"	B6D1507	04/15/2016	04/15/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

**B03 @ 4.5**  
**4/15/2016 4:19:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604185-16 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D1503	04/15/2016	04/16/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

*Surrogate: o-Terphenyl* 73.6 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	0.20	mg/kg	1	B6D1505	04/15/2016	04/16/2016	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* 96.0 % 70-130 " " "  
*Surrogate: 4-Bromofluorobenzene* 97.6 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.22		pH Units	1	B6D1506	04/15/2016	04/15/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0210		mmhos/cm	"	B6D1507	04/15/2016	04/15/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

**B04 @ 4.5**  
**4/15/2016 4:21:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604185-17 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D1503	04/15/2016	04/16/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 91.9 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	0.20	mg/kg	1	B6D1505	04/15/2016	04/16/2016	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 96.0 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 98.5 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.23		pH Units	1	B6D1506	04/15/2016	04/15/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0242		mmhos/cm	"	B6D1507	04/15/2016	04/15/2016	
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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6D1505 - EPA 5030 (soil)</b>										
<b>Blank (B6D1505-BLK1)</b>					Prepared: 04/15/2016 Analyzed: 04/15/2016					
Gasoline Range Hydrocarbons	ND	0.20	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	70		ug/kg	62.5		113	70-130			
Surrogate: Toluene-d8	61		"	62.5		96.8	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.2	70-130			

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Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6D1505 - EPA 5030 (soil)</b>										
<b>Blank (B6D1505-BLK2)</b>					Prepared: 04/15/2016 Analyzed: 04/15/2016					
Gasoline Range Hydrocarbons	ND	0.20	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	69		ug/kg	62.5		111	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.9	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.1	70-130			

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Project: KMG - Deepe 34C-27Hz

**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 B6D1505 - EPA 5030 (soil)</b>										
<b>LCS (B6D1505-BS1)</b>					Prepared: 04/15/2016 Analyzed: 04/15/2016					
Benzene	0.11	0.002	mg/kg	0.100		106	77.1-124			
Toluene	0.11	0.002	"	0.100		110	74.5-128			
Ethylbenzene	0.12	0.002	"	0.100		115	66.4-127			
m,p-Xylene	0.24	0.004	"	0.200		119	76.6-124			
o-Xylene	0.11	0.002	"	0.100		114	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.4	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.1	70-130			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6D1505 - EPA 5030 (soil)</b>										
<b>LCS (B6D1505-BS2)</b>					Prepared: 04/15/2016 Analyzed: 04/15/2016					
Benzene	0.11	0.002	mg/kg	0.100		110	77.1-124			
Toluene	0.11	0.002	"	0.100		112	74.5-128			
Ethylbenzene	0.12	0.002	"	0.100		118	66.4-127			
m,p-Xylene	0.24	0.004	"	0.200		122	76.6-124			
o-Xylene	0.12	0.002	"	0.100		116	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.1	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.0	70-130			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6D1505 - EPA 5030 (soil)**

Matrix Spike (B6D1505-MS1)		Source: X604166-01			Prepared: 04/15/2016 Analyzed: 04/15/2016					
Benzene	0.10	0.002	mg/kg	0.100	ND	101	71.8-126			
Toluene	0.10	0.002	"	0.100	ND	104	65.1-130			
Ethylbenzene	0.11	0.002	"	0.100	ND	105	62.2-130			
m,p-Xylene	0.22	0.004	"	0.200	ND	110	46.5-137			
o-Xylene	0.11	0.002	"	0.100	ND	105	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	69		ug/kg	62.5		110	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.1	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6D1505 - EPA 5030 (soil)**

Matrix Spike (B6D1505-MS2)		Source: X604157-03			Prepared: 04/15/2016 Analyzed: 04/15/2016					
Benzene	0.10	0.002	mg/kg	0.100	ND	102	71.8-126			
Toluene	0.10	0.002	"	0.100	ND	100	65.1-130			
Ethylbenzene	0.10	0.002	"	0.100	ND	103	62.2-130			
m,p-Xylene	0.21	0.004	"	0.200	ND	106	46.5-137			
o-Xylene	0.10	0.002	"	0.100	ND	104	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	70		ug/kg	62.5		112	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.6	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.0	70-130			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6D1505 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B6D1505-MSD1)</b>					<b>Source: X604166-01</b>					Prepared: 04/15/2016 Analyzed: 04/15/2016
Benzene	0.10	0.002	mg/kg	0.100	ND	98.7	71.8-126	2.11	11.3	
Toluene	0.10	0.002	"	0.100	ND	101	65.1-130	2.44	15.4	
Ethylbenzene	0.11	0.002	"	0.100	ND	105	62.2-130	0.247	19.6	
m,p-Xylene	0.22	0.004	"	0.200	ND	109	46.5-137	0.971	19.2	
o-Xylene	0.11	0.002	"	0.100	ND	105	54.2-134	0.0190	17.9	
Surrogate: 1,2-Dichloroethane-d4	67		ug/kg	62.5		108	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.4	70-130			

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6D1505 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B6D1505-MSD2)</b>					<b>Source: X604157-03</b>					Prepared: 04/15/2016 Analyzed: 04/15/2016
Benzene	0.09	0.002	mg/kg	0.100	ND	94.4	71.8-126	7.72	11.3	
Toluene	0.09	0.002	"	0.100	ND	93.7	65.1-130	6.75	15.4	
Ethylbenzene	0.10	0.002	"	0.100	ND	96.8	62.2-130	6.63	19.6	
m,p-Xylene	0.20	0.004	"	0.200	ND	99.2	46.5-137	6.82	19.2	
o-Xylene	0.10	0.002	"	0.100	ND	96.3	54.2-134	7.23	17.9	
Surrogate: 1,2-Dichloroethane-d4	68		ug/kg	62.5		109	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.6	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.3	70-130			

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

## 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 B6D1503 - EPA 3580

#### Blank (B6D1503-BLK1)

Prepared: 04/15/2016 Analyzed: 04/15/2016

Diesel (C10-C28)	ND	50	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	41		"	50.0		82.6	59-131			

#### Blank (B6D1503-BLK2)

Prepared: 04/15/2016 Analyzed: 04/15/2016

Diesel (C10-C28)	ND	50	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	54		"	50.0		108	59-131			

#### LCS (B6D1503-BS1)

Prepared: 04/15/2016 Analyzed: 04/15/2016

Diesel (C10-C28)	1000	50	mg/kg	1000		99.9	64-121			
Residual Range Organics (C28-C40)	1000	200	"	1000		104	58-124			
Surrogate: o-Terphenyl	50		"	50.0		100	59-131			

#### LCS (B6D1503-BS2)

Prepared: 04/15/2016 Analyzed: 04/15/2016

Diesel (C10-C28)	980	50	mg/kg	1000		97.5	64-121			
Residual Range Organics (C28-C40)	870	200	"	1000		86.6	58-124			
Surrogate: o-Terphenyl	47		"	50.0		94.8	59-131			

#### LCS Dup (B6D1503-BSD1)

Prepared: 04/15/2016 Analyzed: 04/15/2016

Diesel (C10-C28)	1100	50	mg/kg	1000		112	64-121	11.8	20	
Residual Range Organics (C28-C40)	990	200	"	1000		98.5	58-124	5.83	20	

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

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 B6D1503 - EPA 3580										
LCS Dup (B6D1503-BSD1)					Prepared: 04/15/2016 Analyzed: 04/15/2016					
Surrogate: o-Terphenyl	52		mg/kg	50.0		103	59-131			

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

## 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 B6D1506 - NO PREP</b>										
<b>Duplicate (B6D1506-DUP1)</b>	<b>Source: X604182-01</b>				Prepared: 04/15/2016 Analyzed: 04/15/2016					
pH	7.55		pH Units		7.61			0.792	25	
<b>Duplicate (B6D1506-DUP2)</b>	<b>Source: X604183-01</b>				Prepared: 04/15/2016 Analyzed: 04/15/2016					
pH	8.33		pH Units		8.27			0.723	25	
<b>Batch B6D1507 - NO PREP</b>										
<b>Blank (B6D1507-BLK1)</b>	Prepared: 04/15/2016 Analyzed: 04/15/2016									
Specific Conductance (EC)	0.00300		mmhos/cm							
<b>Blank (B6D1507-BLK2)</b>	Prepared: 04/15/2016 Analyzed: 04/15/2016									
Specific Conductance (EC)	0.00350		mmhos/cm							
<b>Duplicate (B6D1507-DUP1)</b>	<b>Source: X604182-01</b>				Prepared: 04/15/2016 Analyzed: 04/15/2016					
Specific Conductance (EC)	0.834		mmhos/cm		0.841			0.836	25	
<b>Duplicate (B6D1507-DUP2)</b>	<b>Source: X604183-01</b>				Prepared: 04/15/2016 Analyzed: 04/15/2016					
Specific Conductance (EC)	0.0602		mmhos/cm		0.0625			3.75	25	

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Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: 89047176

Project: KMG - Deepe 34C-27Hz

### 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.



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Jen Pellegrini For Noelle Doyle Mathis, President



April 29, 2016

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver

CO 80211

**Project Name - KMG - Deepe 34C-27Hz**

**Project Number - 89047176**

Attached are your analytical results for KMG - Deepe 34C-27Hz received by Origins Laboratory, Inc. April 28, 2016. This project is associated with Origins project number X604317-01.

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: 89047176

Project: KMG - Deepe 34C-27Hz

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
E-S01 @ 10'	X604317-01	Soil	April 28, 2016 14:41	04/28/2016 16:38
E-E01 @ 10'	X604317-02	Soil	April 28, 2016 14:45	04/28/2016 16:38
E-E02 @ 10'	X604317-03	Soil	April 28, 2016 14:53	04/28/2016 16:38
E-B01 @ 11'	X604317-04	Soil	April 28, 2016 14:47	04/28/2016 16:38
E-B02 @ 11'	X604317-05	Soil	April 28, 2016 14:58	04/28/2016 16:38
E-N01 @ 10'	X604317-06	Soil	April 28, 2016 15:01	04/28/2016 16:38

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**ORIGINS**  
LABORATORY, INC

www.originslaboratory.com

X604317

page 1 of 1

Client: APC  
Address: \_\_\_\_\_  
Telephone Number: 303-881-9525  
Email Address: rcornez@tasman-geo.com

Project Manager: Robert Cornez  
Project Name: Deepe 34C-27Hz  
Project Number: 89047176  
Samples Collected By: Zachary Mathis

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa Canister #	Other	GC/MS 8240	TPH-Dioxin	PH	
E-501010'	4/28/16	1441	2	X					X			X	X	X	1
E-501010'	4/28/16	1445	2												2
E-501010'	4/28/16	1453	2												3
E-501011'	4/28/16	1447	2												4
E-501011'	4/28/16	1458	2												5
E-501010'	4/28/16	1501	2												6
															7
															8
															9
															10

Relinquished By: Zachary Mathis Date: 4/28/16 Time: 1438  
Relinquished By: [Signature] Date: 4/28/16 Time: 1438

Turnaround Time: Same Day ☒ 24 Hr ☐ 48 Hr ☐ 72 Hr ☐ Standard ☐

Temp Received: 4.1° Date Results Needed: 4/28/16

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: 89047176  
Project: KMG - Deepe 34C-27Hz

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: X604317

Client: Tasman

Client Project ID: Deepe 34C-27Hz

Checklist Completed by: Jeff Smith

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

Date/time completed: 4/28/12

Airbill #: NA

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

Cooler Number/Temperature: 1 / 4.1 °C 1 / \_\_\_\_\_ °C 1 / \_\_\_\_\_ °C (Describe)

Thermometer ID: T203

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"/>			PH
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.

Reviewed by (Project Manager) Jeff Smith

Date/Time Reviewed 4/28/12

Origins Laboratory, Inc.

*Jeff 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: 89047176  
Project: KMG - Deepe 34C-27Hz

**E-S01 @ 10'**  
**4/28/2016 2:41:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604317-01 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D2801	04/28/2016	04/28/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

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

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6D2803	04/28/2016	04/29/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 93.7 % 70-130 " " "  
Surrogate: Toluene-d8 102 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 90.2 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.99		pH Units	1	B6D2804	04/28/2016	04/28/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0210		mmhos/cm	"	B6D2805	"	04/28/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

**E-E01 @ 10'**  
**4/28/2016 2:45:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604317-02 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D2801	04/28/2016	04/28/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 70.5 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6D2803	04/28/2016	04/29/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 95.0 % 70-130 " " "  
Surrogate: Toluene-d8 102 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 91.6 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	8.02		pH Units	1	B6D2804	04/28/2016	04/28/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0507		mmhos/cm	"	B6D2805	"	04/28/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

E-E02 @ 10'  
4/28/2016 2:53:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604317-03 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D2801	04/28/2016	04/28/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 74.4 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6D2803	04/28/2016	04/29/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	1	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 93.6 % 70-130 " " "  
Surrogate: Toluene-d8 102 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 91.1 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	8.00		pH Units	1	B6D2804	04/28/2016	04/28/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0233		mmhos/cm	"	B6D2805	"	04/28/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

**E-B01 @ 11'**  
**4/28/2016 2:47:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604317-04 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D2801	04/28/2016	04/28/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 79.9 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6D2803	04/28/2016	04/29/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 94.3 % 70-130 " " "  
Surrogate: Toluene-d8 104 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 91.0 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.99		pH Units	1	B6D2804	04/28/2016	04/28/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0850		mmhos/cm	"	B6D2805	"	04/28/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

**E-B02 @ 11'**  
**4/28/2016 2:58:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604317-05 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D2801	04/28/2016	04/28/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 67.4 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6D2803	04/28/2016	04/29/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 94.0 % 70-130 " " "  
Surrogate: Toluene-d8 102 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 91.3 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	8.34		pH Units	1	B6D2804	04/28/2016	04/28/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0379		mmhos/cm	"	B6D2805	"	04/28/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

E-N01 @ 10'  
4/28/2016 3:01:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X604317-06 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6D2801	04/28/2016	04/29/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 77.3 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6D2803	04/28/2016	04/29/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 93.6 % 70-130 " " "  
Surrogate: Toluene-d8 100 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 91.6 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	8.08		pH Units	1	B6D2804	04/28/2016	04/28/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0272		mmhos/cm	"	B6D2805	"	04/28/2016	
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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6D2803 - EPA 5030 (soil)</b>										
<b>Blank (B6D2803-BLK1)</b>					Prepared: 04/28/2016 Analyzed: 04/28/2016					
Gasoline Range Hydrocarbons	ND	0.20	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	61		ug/kg	62.5		96.8	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	58		"	62.5		93.2	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6D2803 - EPA 5030 (soil)</b>										
<b>Blank (B6D2803-BLK2)</b>					Prepared: 04/28/2016 Analyzed: 04/28/2016					
Gasoline Range Hydrocarbons	ND	0.20	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	60		ug/kg	62.5		95.7	70-130			
Surrogate: Toluene-d8	65		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	58		"	62.5		92.6	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6D2803 - EPA 5030 (soil)</b>										
<b>LCS (B6D2803-BS1)</b>					Prepared: 04/28/2016 Analyzed: 04/28/2016					
Benzene	0.09	0.002	mg/kg	0.100		85.2	77.1-124			
Toluene	0.08	0.002	"	0.100		84.0	74.5-128			
Ethylbenzene	0.09	0.002	"	0.100		85.4	66.4-127			
m,p-Xylene	0.17	0.004	"	0.200		84.2	76.6-124			
o-Xylene	0.08	0.002	"	0.100		81.6	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	56		ug/kg	62.5		89.3	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		94.3	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6D2803 - EPA 5030 (soil)</b>										
<b>LCS (B6D2803-BS2)</b>					Prepared: 04/28/2016 Analyzed: 04/28/2016					
Benzene	0.09	0.002	mg/kg	0.100		92.9	77.1-124			
Toluene	0.09	0.002	"	0.100		92.7	74.5-128			
Ethylbenzene	0.09	0.002	"	0.100		93.3	66.4-127			
m,p-Xylene	0.19	0.004	"	0.200		92.5	76.6-124			
o-Xylene	0.09	0.002	"	0.100		89.7	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	55		ug/kg	62.5		88.4	70-130			
Surrogate: Toluene-d8	65		"	62.5		104	70-130			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		94.5	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6D2803 - EPA 5030 (soil)**

Matrix Spike (B6D2803-MS1)		Source: X604309-02			Prepared: 04/28/2016 Analyzed: 04/28/2016					
Benzene	0.10	0.002	mg/kg	0.100	ND	95.8	71.8-126			
Toluene	0.09	0.002	"	0.100	ND	94.3	65.1-130			
Ethylbenzene	0.10	0.002	"	0.100	ND	95.4	62.2-130			
m,p-Xylene	0.19	0.004	"	0.200	ND	89.1	46.5-137			
o-Xylene	0.09	0.002	"	0.100	ND	92.6	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	54		ug/kg	62.5		86.5	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	58		"	62.5		93.4	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6D2803 - EPA 5030 (soil)**

Matrix Spike (B6D2803-MS2)		Source: X604309-05			Prepared: 04/28/2016 Analyzed: 04/28/2016					
Benzene	0.10	0.002	mg/kg	0.100	ND	102	71.8-126			
Toluene	0.10	0.002	"	0.100	ND	101	65.1-130			
Ethylbenzene	0.10	0.002	"	0.100	ND	103	62.2-130			
m,p-Xylene	0.20	0.004	"	0.200	ND	101	46.5-137			
o-Xylene	0.10	0.002	"	0.100	ND	99.8	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	55		ug/kg	62.5		87.3	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		94.5	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6D2803 - EPA 5030 (soil)**

Matrix Spike Dup (B6D2803-MSD1)		Source: X604309-02			Prepared: 04/28/2016 Analyzed: 04/28/2016					
Benzene	0.09	0.002	mg/kg	0.100	ND	90.4	71.8-126	5.82	11.3	
Toluene	0.09	0.002	"	0.100	ND	88.2	65.1-130	6.64	15.4	
Ethylbenzene	0.09	0.002	"	0.100	ND	88.6	62.2-130	7.41	19.6	
m,p-Xylene	0.18	0.004	"	0.200	ND	83.1	46.5-137	6.50	19.2	
o-Xylene	0.09	0.002	"	0.100	ND	87.5	54.2-134	5.73	17.9	
Surrogate: 1,2-Dichloroethane-d4	55		ug/kg	62.5		88.0	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		95.8	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6D2803 - EPA 5030 (soil)**

Matrix Spike Dup (B6D2803-MSD2)		Source: X604309-05			Prepared: 04/28/2016 Analyzed: 04/28/2016					
Benzene	0.08	0.002	mg/kg	0.100	ND	80.9	71.8-126	23.4	11.3	QR-02
Toluene	0.08	0.002	"	0.100	ND	80.5	65.1-130	22.2	15.4	QR-02
Ethylbenzene	0.08	0.002	"	0.100	ND	81.1	62.2-130	23.5	19.6	QR-02
m,p-Xylene	0.16	0.004	"	0.200	ND	80.8	46.5-137	22.6	19.2	QR-02
o-Xylene	0.08	0.002	"	0.100	ND	79.7	54.2-134	22.4	17.9	QR-02
Surrogate: 1,2-Dichloroethane-d4	55		ug/kg	62.5		88.7	70-130			
Surrogate: Toluene-d8	64		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		94.7	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6D2801 - EPA 3580**

**Blank (B6D2801-BLK1)**

Prepared: 04/28/2016 Analyzed: 04/28/2016

Diesel (C10-C28)	ND	50	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	42		"	50.0		83.5	59-131			

**Blank (B6D2801-BLK2)**

Prepared: 04/28/2016 Analyzed: 04/28/2016

Diesel (C10-C28)	ND	50	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	45		"	50.0		90.1	59-131			

**LCS (B6D2801-BS1)**

Prepared: 04/28/2016 Analyzed: 04/28/2016

Diesel (C10-C28)	820	50	mg/kg	1000		82.5	64-121			
Residual Range Organics (C28-C40)	990	200	"	1000		99.4	58-124			
Surrogate: o-Terphenyl	40		"	50.0		80.6	59-131			

**LCS (B6D2801-BS2)**

Prepared: 04/28/2016 Analyzed: 04/28/2016

Diesel (C10-C28)	980	50	mg/kg	1000		97.7	64-121			
Residual Range Organics (C28-C40)	1100	200	"	1000		113	58-124			
Surrogate: o-Terphenyl	51		"	50.0		102	59-131			

**Matrix Spike (B6D2801-MS1)**

**Source: X604292-02**

Prepared: 04/28/2016 Analyzed: 04/28/2016

Diesel (C10-C28)	710	50	mg/kg	1000	ND	71.2	53-125			
Residual Range Organics (C28-C40)	830	200	"	1000	53	77.9	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: 89047176  
Project: KMG - Deepe 34C-27Hz

## 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 B6D2801 - EPA 3580</b>										
<b>Matrix Spike (B6D2801-MS1)</b>		<b>Source: X604292-02</b>			Prepared: 04/28/2016 Analyzed: 04/28/2016					
Surrogate: o-Terphenyl	37		mg/kg	50.0		74.6	59-131			
<b>Matrix Spike (B6D2801-MS2)</b>		<b>Source: X604317-01</b>			Prepared: 04/28/2016 Analyzed: 04/28/2016					
Diesel (C10-C28)	830	50	mg/kg	1000	ND	82.8	53-125			
Residual Range Organics (C28-C40)	920	200	"	1000	65	85.5	47-133			
Surrogate: o-Terphenyl	40		"	50.0		79.6	59-131			
<b>Matrix Spike Dup (B6D2801-MSD1)</b>		<b>Source: X604292-02</b>			Prepared: 04/28/2016 Analyzed: 04/28/2016					
Diesel (C10-C28)	780	50	mg/kg	1000	ND	77.6	53-125	8.63	20	
Residual Range Organics (C28-C40)	920	200	"	1000	53	86.5	47-133	10.5	20	
Surrogate: o-Terphenyl	41		"	50.0		81.2	59-131			
<b>Matrix Spike Dup (B6D2801-MSD2)</b>		<b>Source: X604317-01</b>			Prepared: 04/28/2016 Analyzed: 04/28/2016					
Diesel (C10-C28)	920	50	mg/kg	1000	ND	92.4	53-125	11.0	20	
Residual Range Organics (C28-C40)	1100	200	"	1000	65	98.7	47-133	14.4	20	
Surrogate: o-Terphenyl	50		"	50.0		99.3	59-131			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

## 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 B6D2804 - NO PREP</b>										
<b>Duplicate (B6D2804-DUP1)</b>	<b>Source: X604313-01</b>				Prepared: 04/28/2016 Analyzed: 04/28/2016					
pH	8.39		pH Units		8.36			0.358	25	
<b>Duplicate (B6D2804-DUP2)</b>	<b>Source: X604315-01</b>				Prepared: 04/28/2016 Analyzed: 04/28/2016					
pH	8.15		pH Units		8.06			1.11	25	
<b>Batch B6D2805 - NO PREP</b>										
<b>Blank (B6D2805-BLK1)</b>	Prepared: 04/28/2016 Analyzed: 04/28/2016									
Specific Conductance (EC)	0.00260		mmhos/cm							
<b>Blank (B6D2805-BLK2)</b>	Prepared: 04/28/2016 Analyzed: 04/28/2016									
Specific Conductance (EC)	0.00290		mmhos/cm							
<b>Duplicate (B6D2805-DUP1)</b>	<b>Source: X604313-01</b>				Prepared: 04/28/2016 Analyzed: 04/28/2016					
Specific Conductance (EC)	0.194		mmhos/cm		0.194			0.103	25	
<b>Duplicate (B6D2805-DUP2)</b>	<b>Source: X604315-01</b>				Prepared: 04/28/2016 Analyzed: 04/28/2016					
Specific Conductance (EC)	0.0667		mmhos/cm		0.0664			0.451	25	

Origins Laboratory, Inc.



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Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: 89047176

Project: KMG - Deepe 34C-27Hz

### Notes and Definitions

U Sample is Non-Detect.

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

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 04, 2016

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver

CO 80211

**Project Name - KMG - Deepe 34C-27Hz**

**Project Number - 89047176**

Attached are your analytical results for KMG - Deepe 34C-27Hz received by Origins Laboratory, Inc. May 03, 2016. This project is associated with Origins project number X605041-01.

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: 89047176

Project: KMG - Deepe 34C-27Hz

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
E-S02 @ 14'	X605041-01	Soil	May 3, 2016 15:43	05/03/2016 17:50
E-B03 @ 15'	X605041-02	Soil	May 3, 2016 15:47	05/03/2016 17:50
E-W01 @ 14'	X605041-03	Soil	May 3, 2016 15:50	05/03/2016 17:50
E-W02 @ 14'	X605041-04	Soil	May 3, 2016 15:54	05/03/2016 17:50
E-B04 @ 15'	X605041-05	Soil	May 3, 2016 15:58	05/03/2016 17:50
E-N02 @ 14'	X605041-06	Soil	May 3, 2016 16:01	05/03/2016 17:50
E-E03 @ 13'	X605041-07	Soil	May 3, 2016 16:09	05/03/2016 17:50
E-E04 @ 13'	X605041-08	Soil	May 3, 2016 16:07	05/03/2016 17:50

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: 89047176  
Project: KMG - Deepe 34C-27Hz

www.originslaboratory.com

page 1 of 1

**ORIGINS** LABORATORY, INC

Client: APL

Address: \_\_\_\_\_

Telephone Number: 303-889-9525

Email Address: LOAN@tasman-geo.com

Project Manager: Robert Cornez

Project Name: Deepe 34C-27Hz

Project Number: 89047176

Samples Collected By: Zachary Mathis

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa		
E-502014'	5/3/16	1543	2	X				X			X	1
E-502015'		1547									X	2
E-502014'		1550									X	3
E-502014'		1554									X	4
E-502015'		1558									X	5
E-502014'		1601									X	6
E-502013'		1609									X	7
E-502013'		1607									X	8
												9
												10

Relinquished By: Zachary Mathis Date: 5/3/16 Time: 1750

Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received By: MA Date: 5/3/16 Time: 1750

Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Turnaround Time: Same Day ☒ 24 Hr ☐ 48 Hr ☐ 72 Hr ☐ Standard ☐

Temp Received: 15.9 Date Results Needed: \_\_\_\_\_



Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: X605041

Client: Tasman

Client Project ID: Deepe 34C-27Hz

Checklist Completed by: Jeff Smith

Shipped Via: H/D

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

Date/time completed: 5/3/16

Airbill #: NA

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

Cooler Number/Temperature: 1 / 15.9 °C 1 / \_\_\_\_\_ °C 1 / \_\_\_\_\_ °C (Describe)

Thermometer ID: 1003

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"/>			PH
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.

Reviewed by (Project Manager) Jeff Smith

Date/Time Reviewed 5/3/16

Origins Laboratory, Inc.

*Jeff 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: 89047176  
Project: KMG - Deepe 34C-27Hz

**E-S02 @ 14'**  
**5/3/2016 3:43:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X605041-01 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6E0303	05/03/2016	05/03/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 83.7 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6E0310	05/03/2016	05/03/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 111 % 70-130 " " "  
Surrogate: Toluene-d8 94.9 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 100 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	8.58		pH Units	1	B6E0301	05/03/2016	05/03/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0499		mmhos/cm	"	B6E0302	05/03/2016	05/03/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

E-B03 @ 15'  
5/3/2016 3:47:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X605041-02 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	51	50	mg/kg	1	B6E0303	05/03/2016	05/03/2016	
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 75.1 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	11	5.0	mg/kg	25	B6E0310	05/03/2016	05/04/2016	
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 105 % 70-130 " " "  
Surrogate: Toluene-d8 94.1 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 99.2 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.51		pH Units	1	B6E0301	05/03/2016	05/03/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	1.18		mmhos/cm	"	B6E0302	05/03/2016	05/03/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

E-W01 @ 14'  
5/3/2016 3:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X605041-03 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6E0303	05/03/2016	05/03/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 76.2 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6E0310	05/03/2016	05/03/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 107 % 70-130 " " "  
Surrogate: Toluene-d8 95.2 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 102 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	8.65		pH Units	1	B6E0301	05/03/2016	05/03/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0473		mmhos/cm	"	B6E0302	05/03/2016	05/03/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

E-W02 @ 14'  
5/3/2016 3:54:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X605041-04 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6E0303	05/03/2016	05/03/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 78.4 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6E0310	05/03/2016	05/03/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 105 % 70-130 " " "  
Surrogate: Toluene-d8 95.6 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 99.1 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	8.80		pH Units	1	B6E0301	05/03/2016	05/03/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0456		mmhos/cm	"	B6E0302	05/03/2016	05/03/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

**E-B04 @ 15'**  
**5/3/2016 3:58:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X605041-05 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6E0303	05/03/2016	05/03/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 83.0 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6E0310	05/03/2016	05/03/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 105 % 70-130 " " "  
Surrogate: Toluene-d8 97.8 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 98.7 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.65	pH Units	1	B6E0301	05/03/2016	05/03/2016
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.518	mmhos/cm	"	B6E0302	05/03/2016	05/03/2016
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

E-N02 @ 14'  
5/3/2016 4:01:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X605041-06 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6E0303	05/03/2016	05/03/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 82.6 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6E0310	05/03/2016	05/03/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 104 % 70-130 " " "  
Surrogate: Toluene-d8 95.7 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 100 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	8.66		pH Units	1	B6E0301	05/03/2016	05/03/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0488		mmhos/cm	"	B6E0302	05/03/2016	05/03/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

E-E03 @ 13'  
5/3/2016 4:09:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X605041-07 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6E0303	05/03/2016	05/03/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 82.9 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6E0310	05/03/2016	05/03/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 105 % 70-130 " " "  
Surrogate: Toluene-d8 96.8 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 98.1 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	8.50		pH Units	1	B6E0301	05/03/2016	05/03/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0567		mmhos/cm	"	B6E0302	05/03/2016	05/03/2016	
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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: 89047176  
Project: KMG - Deepe 34C-27Hz

E-E04 @ 13'  
5/3/2016 4:07:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X605041-08 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	50	mg/kg	1	B6E0303	05/03/2016	05/03/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 81.1 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	B6E0310	05/03/2016	05/03/2016	U
Benzene	ND	0.05	"	"	"	"	"	U
Toluene	ND	0.05	"	"	"	"	"	U
Ethylbenzene	ND	0.05	"	"	"	"	"	U
Xylenes, total	ND	0.05	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 106 % 70-130 " " "  
Surrogate: Toluene-d8 96.1 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 99.3 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	8.78	pH Units	1	B6E0301	05/03/2016	05/03/2016
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0480	mmhos/cm	"	B6E0302	05/03/2016	05/03/2016
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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6E0310 - EPA 5030 (soil)</b>										
<b>Blank (B6E0310-BLK1)</b>					Prepared: 05/03/2016 Analyzed: 05/03/2016					
Gasoline Range Hydrocarbons	ND	0.20	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		99.6	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6E0310 - EPA 5030 (soil)</b>										
<b>LCS (B6E0310-BS1)</b>					Prepared: 05/03/2016 Analyzed: 05/03/2016					
Benzene	0.11	0.002	mg/kg	0.100		106	77.1-124			
Toluene	0.11	0.002	"	0.100		114	74.5-128			
Ethylbenzene	0.10	0.002	"	0.100		102	66.4-127			
m,p-Xylene	0.21	0.004	"	0.200		105	76.6-124			
o-Xylene	0.11	0.002	"	0.100		113	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	68		ug/kg	62.5		109	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.1	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.5	70-130			

Origins Laboratory, Inc.



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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6E0310 - EPA 5030 (soil)**

Matrix Spike (B6E0310-MS1)		Source: X605006-01			Prepared: 05/03/2016 Analyzed: 05/03/2016					
Benzene	0.10	0.002	mg/kg	0.100	ND	105	71.8-126			
Toluene	0.11	0.002	"	0.100	ND	111	65.1-130			
Ethylbenzene	0.10	0.002	"	0.100	ND	98.7	62.2-130			
m,p-Xylene	0.20	0.004	"	0.200	ND	100	46.5-137			
o-Xylene	0.11	0.002	"	0.100	ND	109	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	67		ug/kg	62.5		107	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.3	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: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6E0310 - EPA 5030 (soil)**

Matrix Spike Dup (B6E0310-MSD1)		Source: X605006-01			Prepared: 05/03/2016 Analyzed: 05/03/2016					
Benzene	0.10	0.002	mg/kg	0.100	ND	102	71.8-126	2.47	11.3	
Toluene	0.11	0.002	"	0.100	ND	108	65.1-130	3.11	15.4	
Ethylbenzene	0.10	0.002	"	0.100	ND	97.4	62.2-130	1.28	19.6	
m,p-Xylene	0.20	0.004	"	0.200	ND	98.0	46.5-137	2.52	19.2	
o-Xylene	0.11	0.002	"	0.100	ND	107	54.2-134	1.37	17.9	
Surrogate: 1,2-Dichloroethane-d4	67		ug/kg	62.5		107	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.4	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	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: 89047176  
Project: KMG - Deepe 34C-27Hz

**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 B6E0303 - EPA 3580**

**Blank (B6E0303-BLK1)**

Prepared: 05/03/2016 Analyzed: 05/03/2016

Diesel (C10-C28)	ND	50	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	43		"	50.0		85.2	59-131			

**LCS (B6E0303-BS1)**

Prepared: 05/03/2016 Analyzed: 05/03/2016

Diesel (C10-C28)	810	50	mg/kg	1000		80.8	64-121			
Residual Range Organics (C28-C40)	910	200	"	1000		90.7	58-124			
Surrogate: o-Terphenyl	44		"	50.0		87.5	59-131			

**Matrix Spike (B6E0303-MS1)**

**Source: X605025-04**

Prepared: 05/03/2016 Analyzed: 05/03/2016

Diesel (C10-C28)	910	50	mg/kg	1000	ND	91.4	53-125			
Residual Range Organics (C28-C40)	1100	200	"	1000	38	108	47-133			
Surrogate: o-Terphenyl	46		"	50.0		92.4	59-131			

**Matrix Spike Dup (B6E0303-MSD1)**

**Source: X605025-04**

Prepared: 05/03/2016 Analyzed: 05/03/2016

Diesel (C10-C28)	800	50	mg/kg	1000	ND	80.0	53-125	13.2	20	
Residual Range Organics (C28-C40)	870	200	"	1000	38	83.5	47-133	25.3	20	QR-02
Surrogate: o-Terphenyl	39		"	50.0		77.3	59-131			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: 89047176  
Project: KMG - Deepe 34C-27Hz

## 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 B6E0301 - NO PREP</b>										
<b>Duplicate (B6E0301-DUP1)</b>		<b>Source: X605025-04</b>			Prepared: 05/03/2016 Analyzed: 05/03/2016					
pH	8.41		pH Units		8.42			0.119	25	
<b>Batch B6E0302 - NO PREP</b>										
<b>Blank (B6E0302-BLK1)</b>		Prepared: 05/03/2016 Analyzed: 05/03/2016								
Specific Conductance (EC)	0.00270		mmhos/cm							
<b>Duplicate (B6E0302-DUP1)</b>		<b>Source: X605025-04</b>			Prepared: 05/03/2016 Analyzed: 05/03/2016					
Specific Conductance (EC)	0.107		mmhos/cm		0.106			1.03	25	

Origins Laboratory, Inc.



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Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: 89047176

Project: KMG - Deepe 34C-27Hz

### Notes and Definitions

U Sample is Non-Detect.

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

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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