

TABLE 1
MAYER Et Al - 62N65W33NESE
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)
COGCC standards for soil (mg/kg) ⁽¹⁾			0.17	85	100	175	500			4 mmhos/cm or 2x BG	6-9
B01@14	09/10/15	14	3.00	22.5	2.08	38.3	327	<50	<200	0.881	8.40
B01@19	09/11/15	19	<0.050	<0.050	<0.050	<0.050	<5.00	<50	<200	0.677	7.62
E01@17	09/14/15	17	<0.050	<0.050	<0.050	<0.050	6.33	<50	<200	0.365	8.40
B02@19	09/15/15	19	<0.050	<0.050	<0.050	<0.050	<5.00	<50	<200	0.284	7.94
W01@17	09/17/15	17	0.226	1.93	0.320	3.99	54.2	<50	<200	0.396	8.40
W02@17	09/17/15	17	0.304	2.48	0.413	5.37	86.9	<50	<200	0.915	8.68
N01@17	09/17/15	17	<0.002	<0.002	<0.002	<0.002	<0.200	<50	<200	0.106	9.14
N02@17	09/18/15	17	<0.002	<0.002	<0.002	<0.002	<0.200	<50	<200	0.307	9.10
B03@19	09/18/15	17	<0.050	<0.050	<0.050	<0.050	<5.00	<50	<200	0.789	8.05
N03@17	09/18/15	17	<0.002	<0.002	<0.002	<0.002	<0.200	<50	<200	0.459	8.30
W03@17	09/21/15	17	<0.050	<0.050	<0.050	<0.050	17.4	<50	<200	0.376	8.47
W04@17	09/21/15	17	<0.050	<0.050	<0.050	<0.050	0.660	<50	<200	0.501	8.61
E02@17	09/21/15	17	<0.050	<0.050	<0.050	<0.050	27.0	<50	410	0.424	8.83
S01@17	09/22/15	17	<0.050	<0.050	<0.050	0.114	6.19	<50	<200	0.511	8.69
B04@19	09/22/15	19	<0.002	<0.002	<0.002	<0.002	<0.200	<50	<200	0.530	8.36
S02@17	09/23/15	17	<0.050	<0.050	<0.050	<0.050	14.0	<50	<200	0.227	8.48
B05@19	09/24/15	19	<0.025	<0.025	<0.025	<0.025	<2.50	<50	<200	0.570	7.99
S03@17	09/24/15	17	<0.050	<0.050	<0.050	<0.050	6.12	<50	<200	0.391	8.42
Back Fill	09/24/15	NA	<0.002	<0.002	<0.002	<0.002	<0.200	<50	<200	0.0595	6.12

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.

NA = Not applicable

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

September 11, 2015

Tasman Geosciences

Jim Dawe

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Mayer X33-15JI

Project Number - [none]

Attached are your analytical results for KMG - Mayer X33-15JI received by Origins Laboratory, Inc. September 10, 2015. This project is associated with Origins project number X509133-01.

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

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01 @ 14	X509133-01	Soil	September 10, 2015 14:45	09/10/2015 17:00

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15J1

www.originslaboratory.com
 page 1 of 1

ORIGINS
 LABORATORY, INC
 X509133

Client: APC Project Manager/Send Report To: Jim Dawe
 Address: _____ Email Address: jimdawe@tasman-geo.com
Jim Dawe Project Name/Number: Mayer X33-15J1
 Telephone Number: 303 584 1255 Samples Collected By: JD

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis/Method	Sample Instructions			
				Unpreserved	HCl	HNO ₃	Other	Ground	Other	Air			Summa	Canister #	
B01014	9-10-15	14:45	1	X					X			X	XXXXXX	1	
														2	same day
														3	early AM
														4	
														5	
														6	
														7	
														8	
														9	
														10	
Relinquished By: _____	Date: 9-10-15	Time: 17:00													Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/>
Relinquished By: _____	Date: _____	Time: _____													48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/> 7-8

Comments: _____
 Date Results Needed: _____

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X509133

Client: Tasman

Client Project ID: Mayer X33-15JI

Checklist Completed by: Jose Smith

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

Date/time completed: 9/10/13

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 7.8 °C 1 / _____ °C 1 / _____ °C 1 / _____ °C

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ^{(1)?}		X		Sampled Same Day
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		1		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		1		
Were all samples received intact ^{(1)?}	1			
Was adequate sample volume provided ^{(1)?}	1			
Are short holding time analytes or samples with HTs due within 48 hours present ^{(1)?}	X			PH
Is a chain-of-custody (COC) present and filled out completely ^{(1)?}	X			
Does the COC agree with the number and type of sample bottles received ^{(1)?}	1			
Do the sample IDs on the bottle labels match the COC ^{(1)?}	1			
Is the COC properly relinquished by the client with date and time recorded ^{(1)?}	1			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			X	
Are samples preserved that require preservation and was it checked ^{(1)?} (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCl, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			1	
Additional Comments (if any):				

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

Jose Smith
 Reviewed by (Project Manager)

9/10/13
 Date/Time Reviewed

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

B01 @ 14
9/10/2015 2:45:00PM

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

Origins Laboratory, Inc.
X509133-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5110006	09/10/2015	09/11/2015	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 70.2 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	327	5.00	mg/kg	25	5110005	09/10/2015	09/10/2015	
Benzene	3.00	0.050	"	"	"	"	"	
Toluene	22.5	0.498	"	250	"	"	09/10/2015	
Ethylbenzene	2.08	0.050	"	25	"	"	09/10/2015	
Xylenes, total	38.3	0.498	"	250	"	"	09/10/2015	

Surrogate: 1,2-Dichloroethane-d4 108 % 70-130 " " 09/10/2015
Surrogate: Toluene-d8 119 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 103 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.40		pH Units	1	5110015	09/10/2015	09/10/2015	
----	-------------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.881		mmhos/cm	"	5110014	09/10/2015	09/10/2015	
---------------------------	--------------	--	----------	---	---------	------------	------------	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5I10005 - EPA 5030 (soil)

Blank (5I10005-BLK1)

Prepared: 09/10/2015 Analyzed: 09/10/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	64.1		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	61.3		"	62.5		98.1	70-130			
Surrogate: 4-Bromofluorobenzene	65.9		"	62.5		105	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5110005 - EPA 5030 (soil)

LCS (5110005-BS1)

Prepared: 09/10/2015 Analyzed: 09/10/2015

Benzene	0.090	0.002	mg/kg	0.100		90.0	77.1-124			
Toluene	0.088	0.002	"	0.100		87.9	74.5-128			
Ethylbenzene	0.095	0.002	"	0.100		94.5	66.4-127			
m,p-Xylene	0.188	0.004	"	0.200		94.1	76.6-124			
o-Xylene	0.094	0.002	"	0.100		94.3	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	60.9		ug/kg	62.5		97.4	70-130			
Surrogate: Toluene-d8	61.7		"	62.5		98.7	70-130			
Surrogate: 4-Bromofluorobenzene	64.0		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5I10005 - EPA 5030 (soil)

Matrix Spike (5I10005-MS1)	Source: X509105-03			Prepared: 09/10/2015 Analyzed: 09/10/2015						
Benzene	0.101	0.002	mg/kg	0.100	ND	101	71.8-126			
Toluene	0.103	0.002	"	0.100	ND	103	65.1-130			
Ethylbenzene	0.137	0.002	"	0.100	ND	137	62.2-130			QM-07
m,p-Xylene	0.255	0.004	"	0.200	ND	127	46.5-137			
o-Xylene	0.122	0.002	"	0.100	ND	122	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	63.8		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	66.9		"	62.5		107	70-130			
Surrogate: 4-Bromofluorobenzene	76.9		"	62.5		123	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5110005 - EPA 5030 (soil)

Matrix Spike Dup (5110005-MSD1)	Source: X509105-03			Prepared: 09/10/2015 Analyzed: 09/10/2015						
Benzene	0.082	0.002	mg/kg	0.100	ND	82.1	71.8-126	20.7	11.3	QR-03
Toluene	0.072	0.002	"	0.100	ND	72.4	65.1-130	35.0	15.4	QR-03
Ethylbenzene	0.088	0.002	"	0.100	ND	87.8	62.2-130	43.9	19.6	QR-03
m,p-Xylene	0.154	0.004	"	0.200	ND	76.9	46.5-137	49.3	19.2	QR-03
o-Xylene	0.072	0.002	"	0.100	ND	71.7	54.2-134	52.2	17.9	QR-03
Surrogate: 1,2-Dichloroethane-d4	62.4		ug/kg	62.5		99.9	70-130			
Surrogate: Toluene-d8	65.0		"	62.5		104	70-130			
Surrogate: 4-Bromofluorobenzene	78.0		"	62.5		125	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5I10006 - EPA 3580

Blank (5I10006-BLK1)

Prepared: 09/10/2015 Analyzed: 09/10/2015

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
Surrogate: o-Terphenyl	47		"	50.0		93.5	59-131			

LCS (5I10006-BS1)

Prepared: 09/10/2015 Analyzed: 09/10/2015

Diesel (C10-C28)	850	50	mg/kg				64-121			
Residual Range Organics (C28-C36)	880	200	"	1000		87.7	58-124			
Surrogate: o-Terphenyl	46		"	50.0		92.6	59-131			

Matrix Spike (5I10006-MS1)

Source: X509105-03

Prepared: 09/10/2015 Analyzed: 09/10/2015

Diesel (C10-C28)	930	50	mg/kg		ND		53-125			
Residual Range Organics (C28-C36)	990	200	"	1000	41	95.3	47-133			
Surrogate: o-Terphenyl	50		"	50.0		100	59-131			

Matrix Spike Dup (5I10006-MSD1)

Source: X509105-03

Prepared: 09/10/2015 Analyzed: 09/10/2015

Diesel (C10-C28)	840	50	mg/kg		ND		53-125	10.2	20	
Residual Range Organics (C28-C36)	900	200	"	1000	41	85.9	47-133	9.92	20	
Surrogate: o-Terphenyl	46		"	50.0		91.6	59-131			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5110014 - NO PREP										
Blank (5110014-BLK1)					Prepared: 09/10/2015 Analyzed: 09/10/2015					
Specific Conductance (EC)	0.00470		mmhos/cm							
Duplicate (5110014-DUP1)					Source: X509124-01 Prepared: 09/10/2015 Analyzed: 09/10/2015					
Specific Conductance (EC)	0.102		mmhos/cm		0.109			5.97	25	
Batch 5110015 - NO PREP										
Duplicate (5110015-DUP1)					Source: X509126-01 Prepared: 09/10/2015 Analyzed: 09/10/2015					
pH	8.01		pH Units		7.97			0.501	25	

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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

September 14, 2015

Tasman Geosciences

Jim Dawe

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Mayer X33-15JI

Project Number - [none]

Attached are your analytical results for KMG - Mayer X33-15JI received by Origins Laboratory, Inc. September 11, 2015. This project is associated with Origins project number X509163-01.

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

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01@ 19'	X509163-01	Soil	September 11, 2015 15:25	09/11/2015 17:00

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X509163 Client: Tasman
 Client Project ID: KMG Mayer X33-15JI
 Checklist Completed by: J. Pellegrini Shipped Via: Deliver
 (URS, FedEx, Hand Delivered, Pick-up, etc.)
 Date/time completed: 9/11/15 1728 Airbill #: NA
 Matrix(s) Received: (Check all that apply): Soil/Solid _____ Water _____ Other: _____
 Cooler Number/Temperature: 1 / 24.9 °C _____ / _____ °C _____ / _____ °C _____ / _____ °C
 Thermometer ID: 5003

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

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

[Signature] Reviewed by (Project Manager) 9.11.15 Date/Time Reviewed

Origins Laboratory, Inc.

[Signature: Jen 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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

B01@ 19'
9/11/2015 3:25:00PM

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

Origins Laboratory, Inc.
X509163-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5111006	09/11/2015	09/11/2015	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 87.8 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	5111005	09/11/2015	09/11/2015	
Benzene	ND	0.050	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	
Xylenes, total	ND	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 105 % 70-130 " " "
Surrogate: Toluene-d8 96.0 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 103 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.62		pH Units	1	5111007	09/11/2015	09/14/2015	
----	------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.677		mmhos/cm	"	5111008	"	09/14/2015	
---------------------------	-------	--	----------	---	---------	---	------------	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5111005 - EPA 5030 (soil)

Blank (5111005-BLK1)

Prepared: 09/11/2015 Analyzed: 09/11/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	66.4		ug/kg	62.5		106	70-130			
Surrogate: Toluene-d8	60.7		"	62.5		97.2	70-130			
Surrogate: 4-Bromofluorobenzene	64.4		"	62.5		103	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5111005 - EPA 5030 (soil)

LCS (5111005-BS1)

Prepared: 09/11/2015 Analyzed: 09/11/2015

Benzene	0.102	0.002	mg/kg	0.100		102	77.1-124			
Toluene	0.100	0.002	"	0.100		99.6	74.5-128			
Ethylbenzene	0.106	0.002	"	0.100		106	66.4-127			
m,p-Xylene	0.212	0.004	"	0.200		106	76.6-124			
o-Xylene	0.105	0.002	"	0.100		105	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	61.4		ug/kg	62.5		98.3	70-130			
Surrogate: Toluene-d8	62.0		"	62.5		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	64.4		"	62.5		103	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5I11005 - EPA 5030 (soil)

Matrix Spike (5I11005-MS1)	Source: X509132-03			Prepared: 09/11/2015 Analyzed: 09/11/2015						
Benzene	0.104	0.002	mg/kg	0.100	ND	104	71.8-126			
Toluene	0.102	0.002	"	0.100	ND	102	65.1-130			
Ethylbenzene	0.108	0.002	"	0.100	ND	108	62.2-130			
m,p-Xylene	0.215	0.004	"	0.200	ND	107	46.5-137			
o-Xylene	0.106	0.002	"	0.100	ND	106	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	62.4		ug/kg	62.5		99.8	70-130			
Surrogate: Toluene-d8	61.7		"	62.5		98.7	70-130			
Surrogate: 4-Bromofluorobenzene	63.7		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5111005 - EPA 5030 (soil)

Matrix Spike Dup (5111005-MSD1)	Source: X509132-03			Prepared: 09/11/2015 Analyzed: 09/11/2015						
Benzene	0.105	0.002	mg/kg	0.100	ND	105	71.8-126	0.823	11.3	
Toluene	0.103	0.002	"	0.100	ND	103	65.1-130	0.940	15.4	
Ethylbenzene	0.107	0.002	"	0.100	ND	107	62.2-130	0.651	19.6	
m,p-Xylene	0.214	0.004	"	0.200	ND	107	46.5-137	0.317	19.2	
o-Xylene	0.106	0.002	"	0.100	ND	106	54.2-134	0.245	17.9	
Surrogate: 1,2-Dichloroethane-d4	61.5		ug/kg	62.5		98.4	70-130			
Surrogate: Toluene-d8	61.8		"	62.5		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	64.0		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5111006 - EPA 3580

Blank (5111006-BLK1)

Prepared: 09/11/2015 Analyzed: 09/11/2015

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
Surrogate: o-Terphenyl	64		"	50.0		128	59-131			

LCS (5111006-BS1)

Prepared: 09/11/2015 Analyzed: 09/11/2015

Diesel (C10-C28)	940	50	mg/kg				64-121			
Residual Range Organics (C28-C36)	950	200	"	1000		95.2	58-124			
Surrogate: o-Terphenyl	52		"	50.0		105	59-131			

Matrix Spike (5111006-MS1)

Source: X509132-03

Prepared: 09/11/2015 Analyzed: 09/11/2015

Diesel (C10-C28)	760	50	mg/kg		ND		53-125			
Residual Range Organics (C28-C36)	750	200	"	1000	17	73.8	47-133			
Surrogate: o-Terphenyl	41		"	50.0		81.3	59-131			

Matrix Spike Dup (5111006-MSD1)

Source: X509132-03

Prepared: 09/11/2015 Analyzed: 09/11/2015

Diesel (C10-C28)	920	50	mg/kg		ND		53-125	18.8	20	
Residual Range Organics (C28-C36)	950	200	"	1000	17	93.4	47-133	23.0	20	QR-02
Surrogate: o-Terphenyl	49		"	50.0		97.0	59-131			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5111007 - NO PREP										
Duplicate (5111007-DUP1)		Source: X509132-03			Prepared: 09/11/2015 Analyzed: 09/11/2015					
pH	8.97		pH Units		8.99			0.223	25	
Batch 5111008 - NO PREP										
Blank (5111008-BLK1)					Prepared: 09/11/2015 Analyzed: 09/11/2015					
Specific Conductance (EC)	0.00240		mmhos/cm							
Duplicate (5111008-DUP1)		Source: X509132-03			Prepared: 09/11/2015 Analyzed: 09/11/2015					
Specific Conductance (EC)	0.0248		mmhos/cm		0.0264			6.25	25	

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

Notes and Definitions

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.

Jen Pellegrini For Noelle Doyle Mathis, President

September 15, 2015

Tasman Geosciences

Jim Dawe

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Mayer X33-15JI

Project Number - [none]

Attached are your analytical results for KMG - Mayer X33-15JI received by Origins Laboratory, Inc. September 14, 2015. This project is associated with Origins project number X509178-01.

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

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
E01 @ 17'	X509178-01	Soil	September 14, 2015 10:45	09/14/2015 16:48

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: XSC0178

Client: Tasman

Client Project ID: Mayer X33-15JI

Checklist Completed by: Jeff Smith

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

Date/time completed: 9/14/15

Airbill #: 124

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

Cooler Number/Temperature: 1 / 9.1 °C 1 °C 1 °C 1 °C (Describe)

Thermometer ID: T003

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

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

Jeff Smith
 Reviewed by (Project Manager)

9/14/15
 Date/Time Reviewed

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

E01 @ 17'
9/14/2015 10:45:00AM

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

Origins Laboratory, Inc.
X509178-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5114009	09/14/2015	09/15/2015	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	
<i>Surrogate: o-Terphenyl</i>	77.4 %	59-131			"	"	"	

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	6.33	5.00	mg/kg	25	5114005	09/14/2015	09/14/2015	
Benzene	ND	0.050	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	
Xylenes, total	ND	0.050	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	105 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	100 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	99.2 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	8.40		pH Units	1	5114011	09/14/2015	09/14/2015	
----	-------------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.365		mmhos/cm	"	5114012	"	"	
---------------------------	--------------	--	----------	---	---------	---	---	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5114005 - EPA 5030 (soil)

Blank (5114005-BLK1)

Prepared: 09/14/2015 Analyzed: 09/14/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	62.5		ug/kg	62.5		100	70-130			
Surrogate: Toluene-d8	63.8		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	62.1		"	62.5		99.4	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5114005 - EPA 5030 (soil)

LCS (5114005-BS1)

Prepared: 09/14/2015 Analyzed: 09/14/2015

Benzene	0.089	0.002	mg/kg	0.100		89.2	77.1-124			
Toluene	0.086	0.002	"	0.100		85.6	74.5-128			
Ethylbenzene	0.090	0.002	"	0.100		90.2	66.4-127			
m,p-Xylene	0.181	0.004	"	0.200		90.6	76.6-124			
o-Xylene	0.089	0.002	"	0.100		89.5	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	58.5		ug/kg	62.5		93.6	70-130			
Surrogate: Toluene-d8	63.1		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	64.4		"	62.5		103	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5114005 - EPA 5030 (soil)

Matrix Spike (5114005-MS1)	Source: X509155-01			Prepared: 09/14/2015 Analyzed: 09/14/2015						
Benzene	0.090	0.002	mg/kg	0.100	ND	90.5	71.8-126			
Toluene	0.090	0.002	"	0.100	ND	90.4	65.1-130			
Ethylbenzene	0.090	0.002	"	0.100	ND	90.3	62.2-130			
m,p-Xylene	0.174	0.004	"	0.200	ND	86.9	46.5-137			
o-Xylene	0.088	0.002	"	0.100	ND	87.8	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	62.5		ug/kg	62.5		100	70-130			
Surrogate: Toluene-d8	62.5		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	62.3		"	62.5		99.7	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5114005 - EPA 5030 (soil)

Matrix Spike Dup (5114005-MSD1)	Source: X509155-01			Prepared: 09/14/2015 Analyzed: 09/14/2015						
Benzene	0.101	0.002	mg/kg	0.100	ND	101	71.8-126	11.3	11.3	
Toluene	0.098	0.002	"	0.100	ND	98.2	65.1-130	8.27	15.4	
Ethylbenzene	0.097	0.002	"	0.100	ND	97.4	62.2-130	7.65	19.6	
m,p-Xylene	0.195	0.004	"	0.200	ND	97.3	46.5-137	11.3	19.2	
o-Xylene	0.097	0.002	"	0.100	ND	97.3	54.2-134	10.3	17.9	
Surrogate: 1,2-Dichloroethane-d4	63.2		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	62.3		"	62.5		99.7	70-130			
Surrogate: 4-Bromofluorobenzene	63.4		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5114009 - EPA 3580

Blank (5114009-BLK1)

Prepared: 09/14/2015 Analyzed: 09/14/2015

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
Surrogate: o-Terphenyl	44		"	50.0		87.2	59-131			

LCS (5114009-BS1)

Prepared: 09/14/2015 Analyzed: 09/14/2015

Diesel (C10-C28)	950	50	mg/kg	1000		95.4	64-121			
Residual Range Organics (C28-C36)	1000	200	"	1000		100	58-124			
Surrogate: o-Terphenyl	53		"	50.0		106	59-131			

LCS Dup (5114009-BSD1)

Prepared: 09/14/2015 Analyzed: 09/14/2015

Diesel (C10-C28)	880	50	mg/kg	1000		88.2	64-121	7.81	20	
Residual Range Organics (C28-C36)	1000	200	"	1000		101	58-124	0.566	20	
Surrogate: o-Terphenyl	43		"	50.0		86.8	59-131			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5114011 - NO PREP										
Duplicate (5114011-DUP1)		Source: X509172-01			Prepared: 09/14/2015 Analyzed: 09/14/2015					
pH	8.28		pH Units		8.69			4.83	25	
Batch 5114012 - NO PREP										
Blank (5114012-BLK1)		Prepared: 09/14/2015 Analyzed: 09/14/2015								
Specific Conductance (EC)	0.00330		mmhos/cm							
Duplicate (5114012-DUP1)		Source: X509172-01			Prepared: 09/14/2015 Analyzed: 09/14/2015					
Specific Conductance (EC)	0.0755		mmhos/cm		0.0784			3.77	25	

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President

September 16, 2015

Tasman Geosciences

Jim Dawe

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Mayer X33-15JI

Project Number - [none]

Attached are your analytical results for KMG - Mayer X33-15JI received by Origins Laboratory, Inc. September 15, 2015. This project is associated with Origins project number X509188-01.

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

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B02 @ 19'	X509188-01	Soil	September 15, 2015 13:15	09/15/2015 16:35

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: XSOA188

Client: Tasman

Client Project ID: Mayer X33-15JI

Checklist Completed by: Jeff Smith

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

Date/time completed: 9/15/15

Airbill #: NA

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

Cooler Number/Temperature: 1 / 19.8 °C 1 / _____ °C 1 / _____ °C 1 / _____ °C

Thermometer ID: TC03

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?		X		Simplified Some Dry
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	X			PH
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			X	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			X	
Additional Comments (if any):				

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

Jeff Smith
 Reviewed by (Project Manager)

9/15/15
 Date/Time Reviewed

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

B02 @ 19'
9/15/2015 1:15:00PM

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

Origins Laboratory, Inc.
X509188-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5115009	09/15/2015	09/15/2015	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 92.9 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5115007	09/15/2015	09/15/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 123 % 70-130 " " "
Surrogate: Toluene-d8 91.5 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 103 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.94		pH Units	1	5115012	09/15/2015	09/15/2015	
----	------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.284		mmhos/cm	"	5115013	09/15/2015	09/15/2015	
---------------------------	-------	--	----------	---	---------	------------	------------	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5115007 - EPA 5030 (soil)

Blank (5115007-BLK1)

Prepared: 09/15/2015 Analyzed: 09/15/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	64.4		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	60.2		"	62.5		96.4	70-130			
Surrogate: 4-Bromofluorobenzene	63.6		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5115007 - EPA 5030 (soil)

LCS (5115007-BS1)

Prepared: 09/15/2015 Analyzed: 09/15/2015

Benzene	0.098	0.002	mg/kg	0.100		97.7	77.1-124			
Toluene	0.093	0.002	"	0.100		93.3	74.5-128			
Ethylbenzene	0.097	0.002	"	0.100		96.9	66.4-127			
m,p-Xylene	0.194	0.004	"	0.200		97.2	76.6-124			
o-Xylene	0.096	0.002	"	0.100		96.5	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	61.3		ug/kg	62.5		98.1	70-130			
Surrogate: Toluene-d8	61.4		"	62.5		98.2	70-130			
Surrogate: 4-Bromofluorobenzene	63.8		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5I15007 - EPA 5030 (soil)

Matrix Spike (5I15007-MS1)	Source: X509162-02			Prepared: 09/15/2015 Analyzed: 09/15/2015						
Benzene	0.123	0.002	mg/kg	0.100	0.0006	122	71.8-126			
Toluene	0.117	0.002	"	0.100	ND	117	65.1-130			
Ethylbenzene	0.122	0.002	"	0.100	ND	122	62.2-130			
m,p-Xylene	0.244	0.004	"	0.200	ND	122	46.5-137			
o-Xylene	0.120	0.002	"	0.100	ND	120	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	62.3		ug/kg	62.5		99.7	70-130			
Surrogate: Toluene-d8	61.3		"	62.5		98.0	70-130			
Surrogate: 4-Bromofluorobenzene	63.8		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5115007 - EPA 5030 (soil)

Matrix Spike Dup (5115007-MSD1)	Source: X509162-02			Prepared: 09/15/2015 Analyzed: 09/15/2015						
Benzene	0.123	0.002	mg/kg	0.100	0.0006	123	71.8-126	0.455	11.3	
Toluene	0.115	0.002	"	0.100	ND	115	65.1-130	1.31	15.4	
Ethylbenzene	0.119	0.002	"	0.100	ND	119	62.2-130	2.50	19.6	
m,p-Xylene	0.240	0.004	"	0.200	ND	120	46.5-137	1.72	19.2	
o-Xylene	0.119	0.002	"	0.100	ND	119	54.2-134	0.968	17.9	
Surrogate: 1,2-Dichloroethane-d4	63.5		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	59.7		"	62.5		95.6	70-130			
Surrogate: 4-Bromofluorobenzene	64.4		"	62.5		103	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5115009 - EPA 3580

Blank (5115009-BLK1)

Prepared: 09/15/2015 Analyzed: 09/15/2015

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
Surrogate: o-Terphenyl	38		"	50.0		76.6	59-131			

LCS (5115009-BS1)

Prepared: 09/15/2015 Analyzed: 09/15/2015

Diesel (C10-C28)	1000	50	mg/kg	1000		100	64-121			
Residual Range Organics (C28-C36)	970	200	"	1000		97.0	58-124			
Surrogate: o-Terphenyl	52		"	50.0		104	59-131			

Matrix Spike (5115009-MS1)

Source: X509166-01

Prepared: 09/15/2015 Analyzed: 09/15/2015

Diesel (C10-C28)	1300	50	mg/kg	1000	370	93.8	53-125			
Residual Range Organics (C28-C36)	1000	200	"	1000	120	90.4	47-133			
Surrogate: o-Terphenyl	54		"	50.0		109	59-131			

Matrix Spike Dup (5115009-MSD1)

Source: X509166-01

Prepared: 09/15/2015 Analyzed: 09/15/2015

Diesel (C10-C28)	1100	50	mg/kg	1000	370	73.9	53-125	16.4	20	
Residual Range Organics (C28-C36)	820	200	"	1000	120	69.7	47-133	22.4	20	QR-02
Surrogate: o-Terphenyl	45		"	50.0		89.1	59-131			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5I15012 - NO PREP										
Duplicate (5I15012-DUP1)		Source: X509188-01			Prepared: 09/15/2015 Analyzed: 09/15/2015					
pH	7.87		pH Units		7.94			0.886	25	
Batch 5I15013 - NO PREP										
Blank (5I15013-BLK1)		Prepared: 09/15/2015 Analyzed: 09/15/2015								
Specific Conductance (EC)	0.00450		mmhos/cm							
Duplicate (5I15013-DUP1)		Source: X509188-01			Prepared: 09/15/2015 Analyzed: 09/15/2015					
Specific Conductance (EC)	0.330		mmhos/cm		0.284			15.0	25	

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

Notes and Definitions

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.

Jen Pellegrini For Noelle Doyle Mathis, President

September 18, 2015

Tasman Geosciences

Jim Dawe

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Mayer X33-15JI

Project Number - [none]

Attached are your analytical results for KMG - Mayer X33-15JI received by Origins Laboratory, Inc. September 17, 2015. This project is associated with Origins project number X509223-01.

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

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W01 @ 17'	X509223-01	Soil	September 17, 2015 15:10	09/17/2015 16:35
W02 @ 17'	X509223-02	Soil	September 17, 2015 15:10	09/17/2015 16:35
N01 @ 17'	X509223-03	Soil	September 17, 2015 10:00	09/17/2015 16:35

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X509223

Client: Tasman

Client Project ID: Mayer 33-15JI

Checklist Completed by: Jeff Smith

Shipped Via: Pick up

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

Date/time completed: 9/17/15

Airbill #: N/A

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

(Describe)

Cooler Number/Temperature: 1 / 5.9 °C 1 °C 1 °C 1 °C

Thermometer ID: 12003

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

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

Jeff Smith
 Reviewed by (Project Manager)

9/17/15
 Date/Time Reviewed

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

W01 @ 17'
9/17/2015 3:10:00PM

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

Origins Laboratory, Inc.
X509223-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5117010	09/17/2015	09/17/2015	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 84.9 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	54.2	5.00	mg/kg	25	5117015	09/17/2015	09/17/2015	
Benzene	0.226	0.050	"	"	"	"	"	
Toluene	1.93	0.050	"	"	"	"	"	
Ethylbenzene	0.320	0.050	"	"	"	"	"	
Xylenes, total	3.99	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 103 % 70-130 " " "
Surrogate: Toluene-d8 107 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.40		pH Units	1	5117012	09/17/2015	09/17/2015	
----	-------------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.396		mmhos/cm	"	5117013	"	09/17/2015	
---------------------------	--------------	--	----------	---	---------	---	------------	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

W02 @ 17'
9/17/2015 3:10:00PM

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

Origins Laboratory, Inc.
X509223-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5117010	09/17/2015	09/17/2015	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 79.5 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	86.9	5.00	mg/kg	25	5117015	09/17/2015	09/18/2015	
Benzene	0.304	0.050	"	"	"	"	"	
Toluene	2.48	0.050	"	"	"	"	"	
Ethylbenzene	0.413	0.050	"	"	"	"	"	
Xylenes, total	5.37	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 91.8 % 70-130 " " "
Surrogate: Toluene-d8 103 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 96.2 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.68		pH Units	1	5117012	09/17/2015	09/17/2015	
----	-------------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.915		mmhos/cm	"	5117013	"	09/17/2015	
---------------------------	--------------	--	----------	---	---------	---	------------	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

N01 @ 17'
9/17/2015 10:00:00AM

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

Origins Laboratory, Inc.
X509223-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5117010	09/17/2015	09/17/2015	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 85.3 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5117015	09/17/2015	09/17/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 116 % 70-130 " " "

Surrogate: Toluene-d8 93.7 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 105 % 70-130 " " "

pH in Soil by EPA 9045D

pH	9.14		pH Units	1	5117012	09/17/2015	09/17/2015	
----	------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.106		mmhos/cm	"	5117013	"	09/17/2015	
---------------------------	-------	--	----------	---	---------	---	------------	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5117015 - EPA 5030 (soil)

Blank (5117015-BLK1)

Prepared: 09/17/2015 Analyzed: 09/17/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	70.6		ug/kg	62.5		113	70-130			
Surrogate: Toluene-d8	58.4		"	62.5		93.5	70-130			
Surrogate: 4-Bromofluorobenzene	64.8		"	62.5		104	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5117015 - EPA 5030 (soil)

LCS (5117015-BS1)

Prepared: 09/17/2015 Analyzed: 09/17/2015

Benzene	0.108	0.002	mg/kg	0.100		108	77.1-124			
Toluene	0.099	0.002	"	0.100		98.9	74.5-128			
Ethylbenzene	0.099	0.002	"	0.100		99.3	66.4-127			
m,p-Xylene	0.198	0.004	"	0.200		98.9	76.6-124			
o-Xylene	0.099	0.002	"	0.100		98.9	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	64.4		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	59.6		"	62.5		95.3	70-130			
Surrogate: 4-Bromofluorobenzene	64.2		"	62.5		103	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5117015 - EPA 5030 (soil)

Matrix Spike (5117015-MS1)	Source: X509223-03			Prepared: 09/17/2015 Analyzed: 09/17/2015						
Benzene	0.100	0.002	mg/kg	0.100	ND	100	71.8-126			
Toluene	0.090	0.002	"	0.100	ND	90.5	65.1-130			
Ethylbenzene	0.091	0.002	"	0.100	ND	91.1	62.2-130			
m,p-Xylene	0.182	0.004	"	0.200	ND	90.8	46.5-137			
o-Xylene	0.090	0.002	"	0.100	ND	90.0	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	68.8		ug/kg	62.5		110	70-130			
Surrogate: Toluene-d8	58.8		"	62.5		94.1	70-130			
Surrogate: 4-Bromofluorobenzene	63.9		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5117015 - EPA 5030 (soil)

Matrix Spike Dup (5117015-MSD1)	Source: X509223-03			Prepared: 09/17/2015 Analyzed: 09/17/2015						
Benzene	0.095	0.002	mg/kg	0.100	ND	95.1	71.8-126	5.24	11.3	
Toluene	0.084	0.002	"	0.100	ND	84.4	65.1-130	6.91	15.4	
Ethylbenzene	0.086	0.002	"	0.100	ND	86.1	62.2-130	5.64	19.6	
m,p-Xylene	0.171	0.004	"	0.200	ND	85.3	46.5-137	6.27	19.2	
o-Xylene	0.085	0.002	"	0.100	ND	84.7	54.2-134	6.09	17.9	
Surrogate: 1,2-Dichloroethane-d4	68.3		ug/kg	62.5		109	70-130			
Surrogate: Toluene-d8	57.9		"	62.5		92.7	70-130			
Surrogate: 4-Bromofluorobenzene	63.8		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5117010 - EPA 3580

Blank (5117010-BLK1)

Prepared: 09/17/2015 Analyzed: 09/17/2015

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
Surrogate: o-Terphenyl	42		"	50.0		84.8	59-131			

LCS (5117010-BS1)

Prepared: 09/17/2015 Analyzed: 09/17/2015

Diesel (C10-C28)	920	50	mg/kg	1000		91.6	64-121			
Residual Range Organics (C28-C36)	940	200	"	1000		93.9	58-124			
Surrogate: o-Terphenyl	49		"	50.0		98.8	59-131			

Matrix Spike (5117010-MS1)

Source: X509208-01

Prepared: 09/17/2015 Analyzed: 09/17/2015

Diesel (C10-C28)	970	50	mg/kg	1000	ND	97.0	53-125			
Residual Range Organics (C28-C36)	1000	200	"	1000	28	98.6	47-133			
Surrogate: o-Terphenyl	50		"	50.0		99.6	59-131			

Matrix Spike Dup (5117010-MSD1)

Source: X509208-01

Prepared: 09/17/2015 Analyzed: 09/17/2015

Diesel (C10-C28)	1000	50	mg/kg	1000	ND	99.9	53-125	2.90	20	
Residual Range Organics (C28-C36)	940	200	"	1000	28	91.0	47-133	7.75	20	
Surrogate: o-Terphenyl	48		"	50.0		96.9	59-131			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5117012 - NO PREP										
Duplicate (5117012-DUP1)		Source: X509217-01			Prepared: 09/17/2015 Analyzed: 09/17/2015					
pH	8.66		pH Units		8.70			0.461	25	
Batch 5117013 - NO PREP										
Blank (5117013-BLK1)		Prepared: 09/17/2015 Analyzed: 09/17/2015								
Specific Conductance (EC)	0.00270		mmhos/cm							
Duplicate (5117013-DUP1)		Source: X509217-01			Prepared: 09/17/2015 Analyzed: 09/17/2015					
Specific Conductance (EC)	0.0710		mmhos/cm		0.0692			2.57	25	

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President

May 18, 2016

Tasman Geosciences

Jim Dawe

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Mayer X33-15JI

Project Number - [none]

Attached are your analytical results for KMG - Mayer X33-15JI received by Origins Laboratory, Inc. September 18, 2015. This project is associated with Origins project number X509245-01.

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

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N02 @ 17'	X509245-01	Soil	September 18, 2015 14:57	09/18/2015 16:30
B03 @ 19'	X509245-02	Soil	September 18, 2015 15:05	09/18/2015 16:30
N03 @ 17'	X509245-03	Soil	September 18, 2015 15:30	09/18/2015 16:30

The following sample ID was changed per the email from Dan on 05/18/16 due to an incorrect depth noted in the field.
B03@17' to B03@19'

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X509245

Client: Tasman

Client Project ID: Mayer X33-15JI

Checklist Completed by: Jess Smith

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

Date/time completed: 9/18/15

Airbill #: NA

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

Cooler Number/Temperature: 1 / 14.9 °C 1 / _____ °C 1 / _____ °C 1 / _____ °C (Describe)

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	X			PH
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			X	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			X	
Additional Comments (if any):				

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

Jess Smith
 Reviewed by (Project Manager)

9/18/15
 Date/Time Reviewed

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

N02 @ 17'
9/18/2015 2:57:00PM

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

Origins Laboratory, Inc.
X509245-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5118008	09/18/2015	09/18/2015	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 77.5 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.20	mg/kg	1	5118009	09/18/2015	09/18/2015	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 113 % 70-130 " " "

Surrogate: Toluene-d8 93.5 % 70-130 " " "

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

pH in Soil by EPA 9045D

pH	9.10		pH Units	1	5118015	09/18/2015	09/18/2015	
----	------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.307		mmhos/cm	"	5118016	09/18/2015	"	
---------------------------	-------	--	----------	---	---------	------------	---	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

B03 @ 19'
9/18/2015 3:05:00PM

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

Origins Laboratory, Inc.
X509245-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5118008	09/18/2015	09/18/2015	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 67.9 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	5.0	mg/kg	25	5118009	09/18/2015	09/18/2015	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 95.5 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 102 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.05		pH Units	1	5118015	09/18/2015	09/18/2015	
----	------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.789		mmhos/cm	"	5118016	09/18/2015	"	
---------------------------	-------	--	----------	---	---------	------------	---	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

N03 @ 17'
9/18/2015 3:30:00PM

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

Origins Laboratory, Inc.
X509245-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5118008	09/18/2015	09/18/2015	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 88.7 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.20	mg/kg	1	5118009	09/18/2015	09/18/2015	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 119 % 70-130 " " "
Surrogate: Toluene-d8 92.6 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 103 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.30		pH Units	1	5118015	09/18/2015	09/18/2015	
----	------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.459		mmhos/cm	"	5118016	09/18/2015	"	
---------------------------	-------	--	----------	---	---------	------------	---	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5118009 - EPA 5030 (soil)

Blank (5118009-BLK1)

Prepared: 09/18/2015 Analyzed: 09/18/2015

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	65		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	59		"	62.5		94.7	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5118009 - EPA 5030 (soil)

LCS (5118009-BS1)

Prepared: 09/18/2015 Analyzed: 09/18/2015

Benzene	0.10	0.002	mg/kg	0.100		97.6	77.1-124			
Toluene	0.09	0.002	"	0.100		90.7	74.5-128			
Ethylbenzene	0.09	0.002	"	0.100		93.0	66.4-127			
m,p-Xylene	0.19	0.004	"	0.200		93.6	76.6-124			
o-Xylene	0.09	0.002	"	0.100		92.9	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		100	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.3	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5118009 - EPA 5030 (soil)

Matrix Spike (5118009-MS1)	Source: X509241-01			Prepared: 09/18/2015 Analyzed: 09/18/2015						
Benzene	0.11	0.002	mg/kg	0.100	0.02	90.9	71.8-126			
Toluene	0.10	0.002	"	0.100	0.002	94.0	65.1-130			
Ethylbenzene	0.10	0.002	"	0.100	0.002	98.4	62.2-130			
m,p-Xylene	0.20	0.004	"	0.200	0.01	96.0	46.5-137			
o-Xylene	0.10	0.002	"	0.100	0.006	94.3	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		99.1	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.6	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5118009 - EPA 5030 (soil)

Matrix Spike Dup (5118009-MSD1)	Source: X509241-01			Prepared: 09/18/2015 Analyzed: 09/18/2015						
Benzene	0.11	0.002	mg/kg	0.100	0.02	87.2	71.8-126	3.42	11.3	
Toluene	0.09	0.002	"	0.100	0.002	86.1	65.1-130	8.64	15.4	
Ethylbenzene	0.09	0.002	"	0.100	0.002	92.1	62.2-130	6.45	19.6	
m,p-Xylene	0.19	0.004	"	0.200	0.01	90.6	46.5-137	5.44	19.2	
o-Xylene	0.09	0.002	"	0.100	0.006	88.9	54.2-134	5.57	17.9	
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		104	70-130			
Surrogate: Toluene-d8	61		"	62.5		96.8	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15Jl

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5118008 - EPA 3580

Blank (5118008-BLK1)

Prepared: 09/18/2015 Analyzed: 09/18/2015

Diesel (C10-C28)	ND	50	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	36		"	50.0		71.8	59-131			

LCS (5118008-BS1)

Prepared: 09/18/2015 Analyzed: 09/18/2015

Diesel (C10-C28)	1000	50	mg/kg	1000		105	64-121			
Residual Range Organics (C28-C40)	1100	200	"	1000		113	58-124			
Surrogate: o-Terphenyl	55		"	50.0		110	59-131			

Matrix Spike (5118008-MS1)

Source: X509241-01

Prepared: 09/18/2015 Analyzed: 09/18/2015

Diesel (C10-C28)	870	50	mg/kg	1000	ND	87.3	53-125			
Residual Range Organics (C28-C40)	940	200	"	1000	24	92.0	47-133			
Surrogate: o-Terphenyl	48		"	50.0		96.8	59-131			

Matrix Spike Dup (5118008-MSD1)

Source: X509241-01

Prepared: 09/18/2015 Analyzed: 09/18/2015

Diesel (C10-C28)	870	50	mg/kg	1000	ND	86.5	53-125	0.903	20	
Residual Range Organics (C28-C40)	890	200	"	1000	24	87.0	47-133	5.51	20	
Surrogate: o-Terphenyl	46		"	50.0		92.7	59-131			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5118015 - NO PREP										
Duplicate (5118015-DUP1)		Source: X509245-01			Prepared: 09/18/2015 Analyzed: 09/18/2015					
pH	9.05		pH Units		9.10			0.551	25	
Batch 5118016 - NO PREP										
Blank (5118016-BLK1)		Prepared: 09/18/2015 Analyzed: 09/18/2015								
Specific Conductance (EC)	0.00240		mmhos/cm							
Duplicate (5118016-DUP1)		Source: X509245-01			Prepared: 09/18/2015 Analyzed: 09/18/2015					
Specific Conductance (EC)	0.295		mmhos/cm		0.307			3.99	25	

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President

May 17, 2016

Tasman Geosciences

Jim Dawe

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Mayer X33-15JI

Project Number - [none]

Attached are your analytical results for KMG - Mayer X33-15JI received by Origins Laboratory, Inc. September 21, 2015. This project is associated with Origins project number X509273-01.

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

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W03 @ 17'	X509273-01	Soil	September 21, 2015 11:53	09/21/2015 16:45
W04 @ 17'	X509273-02	Soil	September 21, 2015 13:04	09/21/2015 16:45
E02 @ 17'	X509273-03	Soil	September 21, 2015 14:48	09/21/2015 16:45

The following sample IDs were changed per the email from Dan Wade on 05/17/16 due to duplicate numbering in the field.

W01@17' to W03@17'
W02@17' to W04@17'

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X509273

Client: Tasman

Client Project ID: Mayer X33-15JI

Checklist Completed by: Jeff Smith

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

Date/time completed: 9/2/11

Airbill #: NA

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

Cooler Number/Temperature: 1 12.0 °C 1 °C 1 °C 1 °C

Thermometer ID: T003

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

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

Reviewed by (Project Manager)

Date/Time Reviewed

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

W03 @ 17'
9/21/2015 11:53:00AM

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

Origins Laboratory, Inc.
X509273-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5121008	09/21/2015	09/21/2015	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 75.5 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	17	5.0	mg/kg	25	5121007	09/21/2015	09/22/2015	
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 101 % 70-130 " " "
Surrogate: Toluene-d8 97.1 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 97.7 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.47		pH Units	1	5121016	09/21/2015	09/21/2015	
----	------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.376		mmhos/cm	"	5121017	"	"	
---------------------------	-------	--	----------	---	---------	---	---	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

W04 @ 17'
9/21/2015 1:04:00PM

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

Origins Laboratory, Inc.
X509273-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5121008	09/21/2015	09/21/2015	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 76.1 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	0.66	0.20	mg/kg	1	5121007	09/21/2015	09/22/2015	
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 113 % 70-130 " " "
Surrogate: Toluene-d8 96.6 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.61		pH Units	1	5121016	09/21/2015	09/21/2015	
----	-------------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.501		mmhos/cm	"	5121017	"	"	
---------------------------	--------------	--	----------	---	---------	---	---	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

E02 @ 17'
9/21/2015 2:48:00PM

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

Origins Laboratory, Inc.
X509273-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	410	50	mg/kg	1	5121008	09/21/2015	09/21/2015	
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: *o*-Terphenyl 94.4 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	27	5.0	mg/kg	25	5121007	09/21/2015	09/22/2015	
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 101 % 70-130 " " "
 Surrogate: Toluene-d8 97.4 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 99.1 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.83		pH Units	1	5121016	09/21/2015	09/21/2015	
----	------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.424		mmhos/cm	"	5121017	"	"	
---------------------------	-------	--	----------	---	---------	---	---	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5121007 - EPA 5030 (soil)

Blank (5121007-BLK1)

Prepared: 09/21/2015 Analyzed: 09/21/2015

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	65		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.6	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.9	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5I21007 - EPA 5030 (soil)

LCS (5I21007-BS1)

Prepared: 09/21/2015 Analyzed: 09/21/2015

Benzene	0.09	0.002	mg/kg	0.100		90.1	77.1-124			
Toluene	0.09	0.002	"	0.100		90.4	74.5-128			
Ethylbenzene	0.10	0.002	"	0.100		99.3	66.4-127			
m,p-Xylene	0.20	0.004	"	0.200		97.8	76.6-124			
o-Xylene	0.10	0.002	"	0.100		98.4	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.1	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5I21007 - EPA 5030 (soil)

Matrix Spike (5I21007-MS1)	Source: X509221-02			Prepared: 09/21/2015 Analyzed: 09/21/2015						
Benzene	0.11	0.002	mg/kg	0.100	ND	108	71.8-126			
Toluene	0.11	0.002	"	0.100	ND	107	65.1-130			
Ethylbenzene	0.11	0.002	"	0.100	ND	115	62.2-130			
m,p-Xylene	0.23	0.004	"	0.200	ND	114	46.5-137			
o-Xylene	0.11	0.002	"	0.100	ND	113	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	66		ug/kg	62.5		106	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.6	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5I21007 - EPA 5030 (soil)

Matrix Spike Dup (5I21007-MSD1)	Source: X509221-02			Prepared: 09/21/2015 Analyzed: 09/21/2015						
Benzene	0.11	0.002	mg/kg	0.100	ND	106	71.8-126	1.87	11.3	
Toluene	0.10	0.002	"	0.100	ND	101	65.1-130	5.21	15.4	
Ethylbenzene	0.11	0.002	"	0.100	ND	110	62.2-130	4.58	19.6	
m,p-Xylene	0.22	0.004	"	0.200	ND	109	46.5-137	4.68	19.2	
o-Xylene	0.11	0.002	"	0.100	ND	111	54.2-134	2.00	17.9	
Surrogate: 1,2-Dichloroethane-d4	67		ug/kg	62.5		107	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.2	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5I21008 - EPA 3580

Blank (5I21008-BLK1)

Prepared: 09/21/2015 Analyzed: 09/21/2015

Diesel (C10-C28)	ND	50	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	37		"	50.0		73.7	59-131			

LCS (5I21008-BS1)

Prepared: 09/21/2015 Analyzed: 09/21/2015

Diesel (C10-C28)	730	50	mg/kg	1000		73.2	64-121			
Residual Range Organics (C28-C40)	740	200	"	1000		73.9	58-124			
Surrogate: o-Terphenyl	39		"	50.0		78.6	59-131			

Matrix Spike (5I21008-MS1)

Source: X509221-01

Prepared: 09/21/2015 Analyzed: 09/21/2015

Diesel (C10-C28)	930	50	mg/kg	1000	ND	93.2	53-125			
Residual Range Organics (C28-C40)	990	200	"	1000	12	97.8	47-133			
Surrogate: o-Terphenyl	47		"	50.0		94.9	59-131			

Matrix Spike Dup (5I21008-MSD1)

Source: X509221-01

Prepared: 09/21/2015 Analyzed: 09/21/2015

Diesel (C10-C28)	790	50	mg/kg	1000	ND	78.7	53-125	16.9	20	
Residual Range Organics (C28-C40)	740	200	"	1000	12	72.5	47-133	29.7	20	QR-02
Surrogate: o-Terphenyl	39		"	50.0		79.0	59-131			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5I21016 - NO PREP										
Duplicate (5I21016-DUP1)		Source: X509273-01			Prepared: 09/21/2015 Analyzed: 09/21/2015					
pH	8.49		pH Units		8.47			0.236	25	
Batch 5I21017 - NO PREP										
Blank (5I21017-BLK1)		Prepared: 09/21/2015 Analyzed: 09/21/2015								
Specific Conductance (EC)	0.00270		mmhos/cm							
Duplicate (5I21017-DUP1)		Source: X509273-01			Prepared: 09/21/2015 Analyzed: 09/21/2015					
Specific Conductance (EC)	0.375		mmhos/cm		0.376			0.266	25	

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

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.

Jen Pellegrini For Noelle Doyle Mathis, President

September 23, 2015

Tasman Geosciences

Jim Dawe

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Mayer X33-15JI

Project Number - [none]

Attached are your analytical results for KMG - Mayer X33-15JI received by Origins Laboratory, Inc. September 22, 2015. This project is associated with Origins project number X509298-01.

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

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01 @ 17'	X509298-01	Soil	September 22, 2015 11:24	09/22/2015 17:03
B04 @ 19'	X509298-02	Soil	September 22, 2015 14:56	09/22/2015 17:03

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

www.originslaboratory.com
 page 1 of 1

ORIGINS
 LABORATORY, INC X50A298

Client: ARC Project Manager/Send Report To: Jim Dawe
 Address: _____ Email Address: JimDawe@TasMan-geo.com
 Telephone Number: 303 824 1287 Project Name/Number: Mayer X33-15JI
 Samples Collected By: M.H.P

1725 Elk Place | Phone: 303.433.1322 | Fax: 303.265.9645 | Denver, CO 80211

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis/Method	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Ground - other	Soil	Per Summa Container			
S01@17	9/22/15	11:24	1	X					X			X x x x x -	Same day Early A.M. 1 2 3 4 5 6 7 8 9 10
b04@1a	9/22/15	14:56	1	X					X			X x x x x -	
Relinquished By: _____	Date: 9/22/15	Time: 16:30											Turnaround Time: 24 Hr <input type="checkbox"/>
Relinquished By: _____	Date: _____	Time: _____											Some Day <input checked="" type="checkbox"/>
													48 Hr <input type="checkbox"/>
													Standard <input type="checkbox"/> 1,1

Comments: _____ Date Results Needed: _____

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: XSOA298 Client: Tasman
 Client Project ID: Mayer X33-15JI
 Checklist Completed by: Jeff Smith Shipped Via: Pick Up
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Date/time completed: 9/22/15 Airbill #: _____
 Matrix(s) Received: (Check all that apply): Soil/Solid _____ Water _____ Other: _____
 Cooler Number/Temperature: 1 4.1 °C _____ °C _____ °C _____ °C (Describe)
 Thermometer ID: 1203

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input checked="" type="checkbox"/>			PH
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Jeff Smith Reviewed by (Project Manager) 9/22/15 Date/Time Reviewed

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

S01 @ 17'
9/22/2015 11:24:00AM

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

Origins Laboratory, Inc.
X509298-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5122010	09/22/2015	09/23/2015	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 70.7 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	6.19	5.00	mg/kg	25	5122009	09/22/2015	09/22/2015	
Benzene	ND	0.050	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	
Xylenes, total	0.114	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 102 % 70-130 " " 09/22/2015
Surrogate: Toluene-d8 116 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 130 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.69		pH Units	1	5122008	09/22/2015	09/22/2015	
----	-------------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.511		mmhos/cm	"	5122007	09/22/2015	09/22/2015	
---------------------------	--------------	--	----------	---	---------	------------	------------	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

B04 @ 19'
9/22/2015 2:56:00PM

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

Origins Laboratory, Inc.
X509298-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5122010	09/22/2015	09/22/2015	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 83.2 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5122009	09/22/2015	09/22/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 110 % 70-130 " " "
Surrogate: Toluene-d8 102 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 85.4 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.36		pH Units	1	5122008	09/22/2015	09/22/2015	
----	------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.530		mmhos/cm	"	5122007	09/22/2015	09/22/2015	
---------------------------	-------	--	----------	---	---------	------------	------------	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5122009 - EPA 5030 (soil)

Blank (5122009-BLK1)

Prepared: 09/22/2015 Analyzed: 09/22/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	64.9		ug/kg	62.5		104	70-130			
Surrogate: Toluene-d8	61.3		"	62.5		98.1	70-130			
Surrogate: 4-Bromofluorobenzene	62.2		"	62.5		99.5	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5122009 - EPA 5030 (soil)

LCS (5122009-BS1)

Prepared: 09/22/2015 Analyzed: 09/22/2015

Benzene	0.097	0.002	mg/kg	0.100		96.9	77.1-124			
Toluene	0.098	0.002	"	0.100		97.5	74.5-128			
Ethylbenzene	0.099	0.002	"	0.100		99.1	66.4-127			
m,p-Xylene	0.200	0.004	"	0.200		100	76.6-124			
o-Xylene	0.101	0.002	"	0.100		101	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	61.2		ug/kg	62.5		97.9	70-130			
Surrogate: Toluene-d8	62.4		"	62.5		99.9	70-130			
Surrogate: 4-Bromofluorobenzene	62.0		"	62.5		99.2	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5I22009 - EPA 5030 (soil)

Matrix Spike (5I22009-MS1)	Source: X509257-03			Prepared: 09/22/2015 Analyzed: 09/22/2015						
Benzene	0.104	0.002	mg/kg	0.100	ND	104	71.8-126			
Toluene	0.104	0.002	"	0.100	ND	104	65.1-130			
Ethylbenzene	0.114	0.002	"	0.100	0.0006	113	62.2-130			
m,p-Xylene	0.227	0.004	"	0.200	0.002	113	46.5-137			
o-Xylene	0.111	0.002	"	0.100	ND	111	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	58.3		ug/kg	62.5		93.3	70-130			
Surrogate: Toluene-d8	63.6		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	66.9		"	62.5		107	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5122009 - EPA 5030 (soil)

Matrix Spike Dup (5122009-MSD1)	Source: X509257-03			Prepared: 09/22/2015 Analyzed: 09/22/2015						
Benzene	0.108	0.002	mg/kg	0.100	ND	108	71.8-126	3.81	11.3	
Toluene	0.108	0.002	"	0.100	ND	108	65.1-130	3.36	15.4	
Ethylbenzene	0.111	0.002	"	0.100	0.0006	111	62.2-130	2.20	19.6	
m,p-Xylene	0.223	0.004	"	0.200	0.002	111	46.5-137	1.97	19.2	
o-Xylene	0.111	0.002	"	0.100	ND	111	54.2-134	0.0542	17.9	
Surrogate: 1,2-Dichloroethane-d4	59.6		ug/kg	62.5		95.3	70-130			
Surrogate: Toluene-d8	63.7		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	66.9		"	62.5		107	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5I22010 - EPA 3580

Blank (5I22010-BLK1)

Prepared: 09/22/2015 Analyzed: 09/22/2015

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
Surrogate: o-Terphenyl	40		"	50.0		80.2	59-131			

LCS (5I22010-BS1)

Prepared: 09/22/2015 Analyzed: 09/22/2015

Diesel (C10-C28)	780	50	mg/kg	1000		78.0	64-121			
Residual Range Organics (C28-C36)	790	200	"	1000		79.5	58-124			
Surrogate: o-Terphenyl	39		"	50.0		77.6	59-131			

Matrix Spike (5I22010-MS1)

Source: X509257-01

Prepared: 09/22/2015 Analyzed: 09/22/2015

Diesel (C10-C28)	2200	50	mg/kg	1000	930	130	53-125			QM-07
Residual Range Organics (C28-C36)	1800	200	"	1000	550	121	47-133			
Surrogate: o-Terphenyl	48		"	50.0		95.9	59-131			

Matrix Spike Dup (5I22010-MSD1)

Source: X509257-01

Prepared: 09/22/2015 Analyzed: 09/22/2015

Diesel (C10-C28)	2200	50	mg/kg	1000	930	126	53-125	1.95	20	QM-07
Residual Range Organics (C28-C36)	1700	200	"	1000	550	116	47-133	3.18	20	
Surrogate: o-Terphenyl	51		"	50.0		103	59-131			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5I22007 - NO PREP										
Blank (5I22007-BLK1)					Prepared: 09/22/2015 Analyzed: 09/22/2015					
Specific Conductance (EC)	0.00340		mmhos/cm							
Duplicate (5I22007-DUP1)					Source: X509261-01 Prepared: 09/22/2015 Analyzed: 09/22/2015					
Specific Conductance (EC)	0.0190		mmhos/cm		0.0230			19.0	25	
Batch 5I22008 - NO PREP										
Duplicate (5I22008-DUP1)					Source: X509261-01 Prepared: 09/22/2015 Analyzed: 09/22/2015					
pH	7.19		pH Units		7.30			1.52	25	

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

Notes and Definitions

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

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President

September 24, 2015

Tasman Geosciences

Jim Dawe

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Mayer X33-15JI

Project Number - [none]

Attached are your analytical results for KMG - Mayer X33-15JI received by Origins Laboratory, Inc. September 23, 2015. This project is associated with Origins project number X509310-01.

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

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S02 @ 17'	X509310-01	Soil	September 23, 2015 14:02	09/23/2015 16:30

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15J1

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: XSOA310 Client: Tasman
 Client Project ID: Mayer X33-15J1
 Checklist Completed by: Jeff Smith Shipped Via: Pick Up
 Date/time completed: 9/23/15 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: NA
 Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____
 Cooler Number/Temperature: 1 / 3.1 °C 1 / _____ °C 1 / _____ °C
 Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ^{(1)?}	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact ^{(1)?}	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ^{(1)?}	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ^{(1)?}	<input checked="" type="checkbox"/>			PH
Is a chain-of-custody (COC) present and filled out completely ^{(1)?}	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ^{(1)?}	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ^{(1)?}	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ^{(1)?}	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked ^{(1)?} (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCl, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Jeff Smith 9/23/15
 Reviewed by (Project Manager) Date/Time Reviewed

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

S02 @ 17'
9/23/2015 2:02:00PM

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

Origins Laboratory, Inc.
X509310-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5123008	09/23/2015	09/23/2015	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 80.6 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	14.0	5.00	mg/kg	25	5123007	09/23/2015	09/24/2015	
Benzene	ND	0.050	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	
Xylenes, total	ND	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 96.9 % 70-130 " " "
Surrogate: Toluene-d8 96.8 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 98.0 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.48		pH Units	1	5123014	09/23/2015	09/23/2015	
----	-------------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.227		mmhos/cm	"	5123015	"	"	
---------------------------	--------------	--	----------	---	---------	---	---	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5123007 - EPA 5030 (soil)

Blank (5123007-BLK1)

Prepared: 09/23/2015 Analyzed: 09/23/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	64.5		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	59.8		"	62.5		95.6	70-130			
Surrogate: 4-Bromofluorobenzene	60.7		"	62.5		97.1	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5123007 - EPA 5030 (soil)

LCS (5123007-BS1)

Prepared: 09/23/2015 Analyzed: 09/23/2015

Benzene	0.098	0.002	mg/kg	0.100		97.8	77.1-124			
Toluene	0.097	0.002	"	0.100		96.7	74.5-128			
Ethylbenzene	0.108	0.002	"	0.100		108	66.4-127			
m,p-Xylene	0.210	0.004	"	0.200		105	76.6-124			
o-Xylene	0.108	0.002	"	0.100		108	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	64.5		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	60.2		"	62.5		96.4	70-130			
Surrogate: 4-Bromofluorobenzene	63.6		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5I23007 - EPA 5030 (soil)

Matrix Spike (5I23007-MS1)	Source: X509303-01			Prepared: 09/23/2015 Analyzed: 09/23/2015						
Benzene	0.109	0.002	mg/kg	0.100	ND	109	71.8-126			
Toluene	0.108	0.002	"	0.100	ND	108	65.1-130			
Ethylbenzene	0.113	0.002	"	0.100	ND	113	62.2-130			
m,p-Xylene	0.230	0.004	"	0.200	ND	115	46.5-137			
o-Xylene	0.115	0.002	"	0.100	ND	115	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	66.6		ug/kg	62.5		107	70-130			
Surrogate: Toluene-d8	61.2		"	62.5		97.9	70-130			
Surrogate: 4-Bromofluorobenzene	64.6		"	62.5		103	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5I23007 - EPA 5030 (soil)

Matrix Spike Dup (5I23007-MSD1)	Source: X509303-01			Prepared: 09/23/2015 Analyzed: 09/23/2015						
Benzene	0.106	0.002	mg/kg	0.100	ND	106	71.8-126	2.67	11.3	
Toluene	0.103	0.002	"	0.100	ND	103	65.1-130	4.28	15.4	
Ethylbenzene	0.106	0.002	"	0.100	ND	106	62.2-130	6.83	19.6	
m,p-Xylene	0.215	0.004	"	0.200	ND	107	46.5-137	6.77	19.2	
o-Xylene	0.109	0.002	"	0.100	ND	109	54.2-134	5.13	17.9	
Surrogate: 1,2-Dichloroethane-d4	68.2		ug/kg	62.5		109	70-130			
Surrogate: Toluene-d8	60.4		"	62.5		96.6	70-130			
Surrogate: 4-Bromofluorobenzene	65.3		"	62.5		105	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5I23008 - EPA 3580

Blank (5I23008-BLK1)

Prepared: 09/23/2015 Analyzed: 09/23/2015

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
Surrogate: o-Terphenyl	48		"	50.0		96.7	59-131			

LCS (5I23008-BS1)

Prepared: 09/23/2015 Analyzed: 09/23/2015

Diesel (C10-C28)	900	50	mg/kg	1000		90.1	64-121			
Residual Range Organics (C28-C36)	990	200	"	1000		99.0	58-124			
Surrogate: o-Terphenyl	52		"	50.0		103	59-131			

Matrix Spike (5I23008-MS1)

Source: X509303-01

Prepared: 09/23/2015 Analyzed: 09/23/2015

Diesel (C10-C28)	1000	50	mg/kg	1000	130	88.9	53-125			
Residual Range Organics (C28-C36)	790	200	"	1000	70	72.0	47-133			
Surrogate: o-Terphenyl	46		"	50.0		91.2	59-131			

Matrix Spike Dup (5I23008-MSD1)

Source: X509303-01

Prepared: 09/23/2015 Analyzed: 09/23/2015

Diesel (C10-C28)	1000	50	mg/kg	1000	130	91.7	53-125	2.72	20	
Residual Range Organics (C28-C36)	950	200	"	1000	70	87.7	47-133	18.0	20	
Surrogate: o-Terphenyl	49		"	50.0		97.3	59-131			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5I23014 - NO PREP										
Duplicate (5I23014-DUP1)		Source: X509308-01			Prepared: 09/23/2015 Analyzed: 09/23/2015					
pH	7.59		pH Units		7.67			1.05	25	
Batch 5I23015 - NO PREP										
Blank (5I23015-BLK1)		Prepared: 09/23/2015 Analyzed: 09/23/2015								
Specific Conductance (EC)	0.00390		mmhos/cm							
Duplicate (5I23015-DUP1)		Source: X509308-01			Prepared: 09/23/2015 Analyzed: 09/23/2015					
Specific Conductance (EC)	0.0352		mmhos/cm		0.0312			12.0	25	

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President

September 25, 2015

Tasman Geosciences

Jim Dawe

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Mayer X33-15JI

Project Number - [none]

Attached are your analytical results for KMG - Mayer X33-15JI received by Origins Laboratory, Inc. September 24, 2015. This project is associated with Origins project number X509325-01.

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

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B05@19'	X509325-01	Soil	September 24, 2015 14:12	09/24/2015 16:40
S03@17'	X509325-02	Soil	September 24, 2015 14:26	09/24/2015 16:40

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.

Noelle Doyle Mathis, President

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X509325 Client: Tasman/APC
 Client Project ID: KMG-Mayer X33-15JI
 Checklist Completed by: Joe Anderson Shipped Via: Picked
 Date/time completed: 9/24/15 1725 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: _____
 Matrix(s) Received: (Check all that apply): Soil/Solid _____ Water _____ Other: _____
 Cooler Number/Temperature: 1 / 58 °c _____ °c _____ °c _____ °c (Describe)
 Thermometer ID: T003

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

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

[Signature] Reviewed by (Project Manager) 9/24/15 1725 Date/Time Reviewed

Origins Laboratory, Inc.

[Signature]

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

B05@19'
 9/24/2015 2:12:00PM

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

Origins Laboratory, Inc.
 X509325-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5124008	09/24/2015	09/24/2015	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 71.9 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	2.50	mg/kg	12.5	5124009	09/24/2015	09/24/2015	
Benzene	ND	0.025	"	"	"	"	"	
Toluene	ND	0.025	"	"	"	"	"	
Ethylbenzene	ND	0.025	"	"	"	"	"	
Xylenes, total	ND	0.025	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 105 % 70-130 " " "
Surrogate: Toluene-d8 96.8 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 102 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.99		pH Units	1	5124012	09/24/2015	09/24/2015	
----	------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.570		mmhos/cm	"	5124013	09/24/2015	09/24/2015	
---------------------------	-------	--	----------	---	---------	------------	------------	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

S03@17'

9/24/2015 2:26:00PM

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

Origins Laboratory, Inc.
 X509325-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5124008	09/24/2015	09/24/2015	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	
<i>Surrogate: o-Terphenyl</i>	70.1 %	59-131			"	"	"	

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	6.12	5.00	mg/kg	25	5124009	09/24/2015	09/24/2015	
Benzene	ND	0.050	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	
Xylenes, total	ND	0.050	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	102 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	93.9 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	102 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	8.42		pH Units	1	5124012	09/24/2015	09/24/2015	
----	------	--	----------	---	---------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.391		mmhos/cm	"	5124013	09/24/2015	09/24/2015	
---------------------------	-------	--	----------	---	---------	------------	------------	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5124009 - EPA 5030 (soil)

Blank (5124009-BLK1)

Prepared: 09/24/2015 Analyzed: 09/24/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>59.9</i>		<i>ug/kg</i>	<i>62.5</i>		<i>95.9</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>61.2</i>		<i>"</i>	<i>62.5</i>		<i>97.9</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>61.4</i>		<i>"</i>	<i>62.5</i>		<i>98.3</i>	<i>70-130</i>			

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.

Noelle Doyle Mathis, President

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5124009 - EPA 5030 (soil)

LCS (5124009-BS1)

Prepared: 09/24/2015 Analyzed: 09/24/2015

Benzene	0.090	0.002	mg/kg	0.100		90.4	77.1-124			
Toluene	0.093	0.002	"	0.100		93.4	74.5-128			
Ethylbenzene	0.090	0.002	"	0.100		90.1	66.4-127			
m,p-Xylene	0.183	0.004	"	0.200		91.6	76.6-124			
o-Xylene	0.094	0.002	"	0.100		94.5	76.6-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>58.1</i>		<i>ug/kg</i>	<i>62.5</i>		<i>93.0</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>60.5</i>		<i>"</i>	<i>62.5</i>		<i>96.8</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>52.8</i>		<i>"</i>	<i>62.5</i>		<i>84.4</i>	<i>70-130</i>			

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5124009 - EPA 5030 (soil)

Matrix Spike (5124009-MS1)	Source: X509299-01			Prepared: 09/24/2015 Analyzed: 09/24/2015						
Benzene	0.095	0.002	mg/kg	0.100	ND	95.2	71.8-126			
Toluene	0.085	0.002	"	0.100	ND	84.6	65.1-130			
Ethylbenzene	0.091	0.002	"	0.100	ND	91.4	62.2-130			
m,p-Xylene	0.179	0.004	"	0.200	ND	89.4	46.5-137			
o-Xylene	0.091	0.002	"	0.100	ND	90.7	54.2-134			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>60.1</i>		<i>ug/kg</i>	<i>62.5</i>		<i>96.2</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>58.6</i>		<i>"</i>	<i>62.5</i>		<i>93.7</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>60.0</i>		<i>"</i>	<i>62.5</i>		<i>96.1</i>	<i>70-130</i>			

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5124009 - EPA 5030 (soil)

Matrix Spike Dup (5124009-MSD1)	Source: X509299-01			Prepared: 09/24/2015 Analyzed: 09/24/2015						
Benzene	0.090	0.002	mg/kg	0.100	ND	89.6	71.8-126	6.04	11.3	
Toluene	0.089	0.002	"	0.100	ND	88.9	65.1-130	4.93	15.4	
Ethylbenzene	0.090	0.002	"	0.100	ND	90.3	62.2-130	1.30	19.6	
m,p-Xylene	0.183	0.004	"	0.200	ND	91.6	46.5-137	2.34	19.2	
o-Xylene	0.091	0.002	"	0.100	ND	91.2	54.2-134	0.506	17.9	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>61.9</i>		<i>ug/kg</i>	<i>62.5</i>		<i>99.0</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>60.4</i>		<i>"</i>	<i>62.5</i>		<i>96.7</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>59.5</i>		<i>"</i>	<i>62.5</i>		<i>95.2</i>	<i>70-130</i>			

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5124008 - EPA 3580

Blank (5124008-BLK1)

Prepared: 09/24/2015 Analyzed: 09/24/2015

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
<i>Surrogate: o-Terphenyl</i>	41		"	50.0		81.2	59-131			

LCS (5124008-BS1)

Prepared: 09/24/2015 Analyzed: 09/24/2015

Diesel (C10-C28)	910	50	mg/kg	1000		90.7	64-121			
Residual Range Organics (C28-C36)	970	200	"	1000		96.9	58-124			
<i>Surrogate: o-Terphenyl</i>	49		"	50.0		98.3	59-131			

Matrix Spike (5124008-MS1)

Source: X509320-01

Prepared: 09/24/2015 Analyzed: 09/24/2015

Diesel (C10-C28)	840	50	mg/kg	1000	ND	84.3	53-125			
Residual Range Organics (C28-C36)	900	200	"	1000	22	88.3	47-133			
<i>Surrogate: o-Terphenyl</i>	47		"	50.0		94.6	59-131			

Matrix Spike Dup (5124008-MSD1)

Source: X509320-01

Prepared: 09/24/2015 Analyzed: 09/24/2015

Diesel (C10-C28)	770	50	mg/kg	1000	ND	77.3	53-125	8.61	20	
Residual Range Organics (C28-C36)	790	200	"	1000	22	76.7	47-133	13.8	20	
<i>Surrogate: o-Terphenyl</i>	43		"	50.0		86.0	59-131			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5I24012 - NO PREP										
Duplicate (5I24012-DUP1)		Source: X509318-01			Prepared: 09/24/2015 Analyzed: 09/24/2015					
pH	8.63		pH Units		8.64			0.116	25	
Batch 5I24013 - NO PREP										
Blank (5I24013-BLK1)		Prepared: 09/24/2015 Analyzed: 09/24/2015								
Specific Conductance (EC)	0.00460		mmhos/cm							
Duplicate (5I24013-DUP1)		Source: X509318-01			Prepared: 09/24/2015 Analyzed: 09/24/2015					
Specific Conductance (EC)	0.0791		mmhos/cm		0.0735			7.34	25	

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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

Noelle Doyle Mathis, President

September 28, 2015

Tasman Geosciences

Jim Dawe

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Mayer X33-15JI

Project Number - [none]

Attached are your analytical results for KMG - Mayer X33-15JI received by Origins Laboratory, Inc. September 24, 2015. This project is associated with Origins project number X509328-01.

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

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Back Fill	X509328-01	Soil	September 24, 2015 13:05	09/24/2015 16:40

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

www.originslaboratory.com
 X509328
 page 1 of 1

Client: APC
 Project Manager: Jim Dawe
 Address: [blank]
 Project Name: Mayer X33-15JI
 Project Number: [blank]
 Telephone Number: [blank]
 Email Address: jim.dawe@tasman-geo.com
 Samples Collected By: Math P

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix				Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air/Surface	Other			
Back Fill	9/24/15	13:05	1	X					X			000 I U 15 000 D 0 2 11 10 X X X X X X (P 25)	1	
														2
														3
														4
														5
														6
														7
														8
														9
														10

Relinquished By: [Signature] Date: 9/24/15 Time: 16:00
 Turnaround Time: Same Day 24 Hr 48 Hr 72 Hr Standard

Received By: [Signature] Date: 9/24/15 Time: 16:40
 Date Results Needed: [blank]

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15J1

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X309328

Client: Tasman

Client Project ID: Mayer X33-15J1

Checklist Completed by: Jeff Smith

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

Date/time completed: 9/25/15

Airbill #: NA

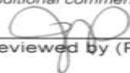
Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____

Cooler Number/Temperature: 1 / 5.8 °C 1 °C 1 °C 1 °C (Describe)

Thermometer ID: TR05

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

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


 Reviewed by (Project Manager)

9/28/15
 Date/Time Reviewed

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Back Fill
9/24/2015 1:05:00PM

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

Origins Laboratory, Inc.
X509328-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5125012	09/25/2015	09/25/2015	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 80.4 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5125013	09/25/2015	09/25/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 110 % 70-130 " " "
Surrogate: Toluene-d8 96.6 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 103 % 70-130 " " "

pH in Soil by EPA 9045D

pH	6.12		pH Units	1	5125014	"	09/25/2015	
----	------	--	----------	---	---------	---	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0595		mmhos/cm	"	5125015	09/25/2015	09/25/2015	
---------------------------	--------	--	----------	---	---------	------------	------------	--

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

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5125013 - EPA 5030 (soil)

Blank (5125013-BLK1)

Prepared: 09/25/2015 Analyzed: 09/25/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	66.2		ug/kg	62.5		106	70-130			
Surrogate: Toluene-d8	58.6		"	62.5		93.7	70-130			
Surrogate: 4-Bromofluorobenzene	63.7		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5I25013 - EPA 5030 (soil)

LCS (5I25013-BS1)

Prepared: 09/25/2015 Analyzed: 09/25/2015

Benzene	0.097	0.002	mg/kg	0.100		96.6	77.1-124			
Toluene	0.097	0.002	"	0.100		96.6	74.5-128			
Ethylbenzene	0.104	0.002	"	0.100		104	66.4-127			
m,p-Xylene	0.208	0.004	"	0.200		104	76.6-124			
o-Xylene	0.106	0.002	"	0.100		106	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	65.5		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	59.0		"	62.5		94.4	70-130			
Surrogate: 4-Bromofluorobenzene	62.7		"	62.5		100	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5I25013 - EPA 5030 (soil)

Matrix Spike (5I25013-MS1)	Source: X509328-01			Prepared: 09/25/2015 Analyzed: 09/25/2015						
Benzene	0.100	0.002	mg/kg	0.100	ND	100	71.8-126			
Toluene	0.100	0.002	"	0.100	ND	99.7	65.1-130			
Ethylbenzene	0.109	0.002	"	0.100	ND	109	62.2-130			
m,p-Xylene	0.214	0.004	"	0.200	ND	107	46.5-137			
o-Xylene	0.108	0.002	"	0.100	ND	108	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	66.1		ug/kg	62.5		106	70-130			
Surrogate: Toluene-d8	60.2		"	62.5		96.3	70-130			
Surrogate: 4-Bromofluorobenzene	63.4		"	62.5		101	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5I25013 - EPA 5030 (soil)

Matrix Spike Dup (5I25013-MSD1)	Source: X509328-01			Prepared: 09/25/2015 Analyzed: 09/25/2015						
Benzene	0.100	0.002	mg/kg	0.100	ND	99.8	71.8-126	0.679	11.3	
Toluene	0.098	0.002	"	0.100	ND	98.4	65.1-130	1.27	15.4	
Ethylbenzene	0.110	0.002	"	0.100	ND	110	62.2-130	0.110	19.6	
m,p-Xylene	0.216	0.004	"	0.200	ND	108	46.5-137	0.817	19.2	
o-Xylene	0.108	0.002	"	0.100	ND	108	54.2-134	0.704	17.9	
Surrogate: 1,2-Dichloroethane-d4	66.6		ug/kg	62.5		107	70-130			
Surrogate: Toluene-d8	58.2		"	62.5		93.1	70-130			
Surrogate: 4-Bromofluorobenzene	62.9		"	62.5		101	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5I25012 - EPA 3580

Blank (5I25012-BLK1)

Prepared: 09/25/2015 Analyzed: 09/25/2015

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
Surrogate: o-Terphenyl	38		"	50.0		75.9	59-131			

LCS (5I25012-BS1)

Prepared: 09/25/2015 Analyzed: 09/25/2015

Diesel (C10-C28)	830	50	mg/kg	1000		83.3	64-121			
Residual Range Organics (C28-C36)	950	200	"	1000		94.8	58-124			
Surrogate: o-Terphenyl	47		"	50.0		93.2	59-131			

Matrix Spike (5I25012-MS1)

Source: X509328-01

Prepared: 09/25/2015 Analyzed: 09/25/2015

Diesel (C10-C28)	870	50	mg/kg	1000	ND	87.2	53-125			
Residual Range Organics (C28-C36)	950	200	"	1000	16	93.1	47-133			
Surrogate: o-Terphenyl	44		"	50.0		88.9	59-131			

Matrix Spike Dup (5I25012-MSD1)

Source: X509328-01

Prepared: 09/25/2015 Analyzed: 09/25/2015

Diesel (C10-C28)	860	50	mg/kg	1000	ND	85.6	53-125	1.91	20	
Residual Range Organics (C28-C36)	920	200	"	1000	16	90.8	47-133	2.54	20	
Surrogate: o-Terphenyl	44		"	50.0		88.7	59-131			

Origins Laboratory, Inc.



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

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Jim Dawe
 Project Number: [none]
 Project: KMG - Mayer X33-15JI

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5I25014 - NO PREP										
Duplicate (5I25014-DUP1)		Source: X509328-01			Prepared: 09/25/2015 Analyzed: 09/25/2015					
pH	6.26		pH Units		6.12			2.26	25	
Batch 5I25015 - NO PREP										
Blank (5I25015-BLK1)		Prepared: 09/25/2015 Analyzed: 09/25/2015								
Specific Conductance (EC)	0.00370		mmhos/cm							
Duplicate (5I25015-DUP1)		Source: X509328-01			Prepared: 09/25/2015 Analyzed: 09/25/2015					
Specific Conductance (EC)	0.0548		mmhos/cm		0.0595			8.22	25	

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Jim Dawe
Project Number: [none]
Project: KMG - Mayer X33-15JI

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President