

ANALYTICAL TABLE

TABLE 1
HIGHWAY-62N66W12NWSW
SOIL SAMPLE RESULTS SUMMARY TABLE
KERR-McGEE OIL AND GAS ONSHORE LP

Sample ID	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@9'	02/09/16	9.0	<0.050	<0.050	0.178	0.224	42.4	<50	<200	1.22	8.02
B02@9'	02/09/16	9.0	<0.050	<0.050	<0.050	<0.050	<5.00	<50	<200	1.67	7.85
B03@9'	02/09/16	9.0	<0.050	<0.050	<0.050	<0.050	<5.00	<50	<200	2.13	7.80
E01@7'	02/09/16	7.0	<0.050	<0.050	1.41	8.86	264	630	<200	1.65	7.70
E02@7'	02/09/16	7.0	0.050	<0.050	0.418	3.52	114	<50	<200	0.196	8.26
W01@7'	02/09/16	7.0	<0.050	<0.050	1.87	17.1	328	110	<200	0.324	8.65
W02@7'	02/09/16	7.0	0.005	0.002	0.160	0.007	82.0	<50	<200	0.399	9.13
E04@7'	02/11/16	7.0	<0.050	<0.050	0.736	10.8	141	160	<200	0.641	9.14
N01@7'	02/11/16	7.0	<0.002	<0.002	<0.002	<0.002	<0.200	<50	<200	1.32	8.38
N02@7'	02/11/16	7.0	<0.002	<0.002	<0.002	<0.002	<0.200	<50	<200	0.970	8.78
B04@9'	02/11/16	9.0	<0.050	<0.050	0.308	<0.050	36.2	60	<200	2.54	8.27
W03@7'	02/16/16	7.0	0.248	<0.050	2.950	22.9	414	600	<200	0.698	8.13
B05@9'	02/16/16	9.0	<0.050	<0.050	<0.050	0.110	45.8	<50	<200	1.81	7.83
S01@7'	02/16/16	7.0	0.004	<0.002	0.050	0.008	96.5	<50	<200	0.247	8.07
W04@7'	02/17/16	7.0	<0.050	<0.050	<0.050	<0.050	<5.00	<50	<200	0.502	8.47
E05@7'	02/17/16	7.0	<0.050	<0.050	<0.050	<0.050	25.9	<50	<200	0.214	8.32
N03@7'	02/17/16	7.0	<0.050	<0.050	0.222	4.42	116	<50	<200	0.942	8.13
B06@6'	02/19/16	6.0	0.540	<0.050	3.08	0.885	283	130	<200	0.270	8.08
B07@6'	02/19/16	6.0	0.112	<0.050	1.77	10.4	211	72	<200	0.378	8.44
S02@5'	02/19/16	5.0	0.227	<0.050	3.14	8.49	416	270	<200	0.201	8.01
S03@5'	02/19/16	5.0	0.192	<0.050	2.89	<0.050	285	240	<200	0.384	8.13
E05@5'	02/19/16	5.0	<0.050	<0.050	0.304	<0.050	54.7	<50	<200	0.527	8.64
W05@5'	02/19/16	5.0	<0.050	<0.050	0.074	0.260	40.9	<50	<200	0.298	8.68
B08@7'	02/22/16	7.0	<0.050	<0.050	0.105	<0.050	36.2	<50	<200	0.395	8.50
S04@6'	02/22/16	6.0	<0.050	<0.050	0.897	<0.050	125	150	<200	0.232	8.59
S05@5'	02/22/16	5.0	<0.050	<0.050	<0.050	<0.050	104	<50	<200	0.249	9.00

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.

LABORATORY ANALYTICAL REPORTS



February 10, 2016

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver

CO 80211

**Project Name - KMG - Highway -
62N66W/12NWSW**

Project Number - [none]

Attached are your analytical results for KMG - Highway - 62N66W/12NWSW received by Origins Laboratory, Inc. February 09, 2016. This project is associated with Origins project number X602079-01.

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

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

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

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

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

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



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01 @ 9'	X602079-01	Soil	February 9, 2016 14:10	02/09/2016 17:00
B02 @ 9'	X602079-02	Soil	February 9, 2016 14:15	02/09/2016 17:00
B03 @ 9'	X602079-03	Soil	February 9, 2016 14:20	02/09/2016 17:00
E01 @ 7'	X602079-04	Soil	February 9, 2016 14:25	02/09/2016 17:00
E02 @ 7'	X602079-05	Soil	February 9, 2016 14:30	02/09/2016 17:00
W01 @ 7'	X602079-06	Soil	February 9, 2016 14:35	02/09/2016 17:00
W02 @ 7'	X602079-07	Soil	February 9, 2016 14:40	02/09/2016 17:00

Per the email from Brock on 02/10/16, sample W02 @ 7' was taken off hold for a same day TAT.

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

ORIGINS LABORATORY, INC X602079 www.originslaboratory.com

Client: Tasman Geo Project Manager: Bob Cornez
Address: _____ Project Name: Highway - 62N66W/12NWSW
Telephone Number: 912 230 7807 Project Number: _____
Email Address: rcornez@tasman-geo.com Samples Collected By: Becky Nelson
APC Envision Sam L. Rye

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9445

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix				Analysis	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Airborne Contaminant	Other		
B0109'	2/4/14	1410	2	X						X		6BTEX 8260 TPH - DGC/1000 EC/pH	2
B0209'		1415	2	X						X			3
B0309'		1420	2	X						X			4
E0107'		1425	2	X						X			5
E0207'		1430	2	X						X			6
W0107'		1435	2	X						X			7
W0207'		1440	2	X						X			8
W0307		1445	2	X						X			9
Relinquished By: <u>[Signature]</u> Date: <u>2/1/16</u> Time: _____ Received By: <u>[Signature]</u> Date: <u>2-9-16</u> Time: <u>1700</u> Relinquished By: _____ Date: _____ Time: _____ Received By: _____ Date: _____ Time: _____													Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/> <u>BN</u>

Date Results Needed: _____

Origins Laboratory, Inc.

Jefe Pellegrini

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X602079

Client: Tasman

Client Project ID: Highway-62N66W/12NWSW

Checklist Completed by: Jeff Smith

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

Date/time completed: 2/9/12

Airbill #: NA

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

Cooler Number/Temperature: 1 / 13.2 °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⁾ ?		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)

2/9/12
Date/Time Reviewed

Origins Laboratory, Inc.

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

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

B01 @ 9'
2/9/2016 2:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602079-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B6B0904	02/09/2016	02/09/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

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

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	42.4	5.00	mg/kg	25	B6B0810	02/09/2016	02/09/2016	
Benzene	ND	0.050	"	"	"	"	"	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	0.178	0.050	"	"	"	"	"	
Xylenes, total	0.224	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 97.2 % 70-130 " " "
Surrogate: Toluene-d8 99.8 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 90.9 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.02		pH Units	1	B6B0906	02/09/2016	02/09/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	1.22		mmhos/cm	"	B6B0907	02/09/2016	"	
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Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

B02 @ 9'
2/9/2016 2:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602079-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B6B0904	02/09/2016	02/09/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 81.4 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B6B0810	02/09/2016	02/09/2016	U
Benzene	ND	0.050	"	"	"	"	"	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	ND	0.050	"	"	"	"	"	U
Xylenes, total	ND	0.050	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 96.0 % 70-130 " " "
Surrogate: Toluene-d8 109 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 88.3 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.85		pH Units	1	B6B0906	02/09/2016	02/09/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	1.67		mmhos/cm	"	B6B0907	02/09/2016	"	
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Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

B03 @ 9'
2/9/2016 2:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602079-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B6B0904	02/09/2016	02/09/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 81.9 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B6B0810	02/09/2016	02/09/2016	U
Benzene	ND	0.050	"	"	"	"	"	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	ND	0.050	"	"	"	"	"	U
Xylenes, total	ND	0.050	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 99.0 % 70-130 " " "
Surrogate: Toluene-d8 109 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 94.8 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.80	pH Units	1	B6B0906	02/09/2016	02/09/2016
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	2.13	mmhos/cm	"	B6B0907	02/09/2016	"
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Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

E01 @ 7'
2/9/2016 2:25:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602079-04 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	630	50	mg/kg	1	B6B0904	02/09/2016	02/09/2016	
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl	90.3 %	59-131			"	"	"	
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	264	5.00	mg/kg	25	B6B0810	02/09/2016	02/09/2016	
Benzene	ND	0.050	"	"	"	"	"	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	1.41	0.050	"	"	"	"	"	
Xylenes, total	8.86	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	92.9 %	70-130			"	"	"	
Surrogate: Toluene-d8	118 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	121 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	7.70		pH Units	1	B6B0906	02/09/2016	02/09/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	1.65		mmhos/cm	"	B6B0907	02/09/2016	"	
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Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

E02 @ 7'
2/9/2016 2:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602079-05 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B6B0904	02/09/2016	02/09/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 74.8 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	114	5.00	mg/kg	25	B6B0810	02/09/2016	02/09/2016	
Benzene	0.050	0.050	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	0.418	0.050	"	"	"	"	"	
Xylenes, total	3.52	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 98.4 % 70-130 " " "
Surrogate: Toluene-d8 105 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 102 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.26	pH Units	1	B6B0906	02/09/2016	02/09/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.196	mmhos/cm	"	B6B0907	02/09/2016	"	
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Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

W01 @ 7'
2/9/2016 2:35:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602079-06 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	110	50	mg/kg	1	B6B0904	02/09/2016	02/09/2016	
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 84.5 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	328	5.00	mg/kg	25	B6B0810	02/09/2016	02/09/2016	
Benzene	ND	0.050	"	"	"	"	"	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	1.87	0.050	"	"	"	"	"	
Xylenes, total	17.1	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 102 % 70-130 " " 02/09/2016
Surrogate: Toluene-d8 107 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 98.6 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.65		pH Units	1	B6B0906	02/09/2016	02/09/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.324		mmhos/cm	"	B6B0907	02/09/2016	"	
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Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

W02 @ 7'
2/9/2016 2:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602079-07 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B6B1002	02/10/2016	02/10/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 81.6 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	82.0	5.00	mg/kg	25	B6B1001	02/10/2016	02/10/2016	
Benzene	0.005	0.002	"	1	"	"	02/10/2016	
Toluene	0.002	0.002	"	"	"	"	"	
Ethylbenzene	0.160	0.002	"	"	"	"	"	
Xylenes, total	0.007	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 102 % 70-130 " " 02/10/2016
Surrogate: Toluene-d8 101 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 106 % 70-130 " " "

pH in Soil by EPA 9045D

pH	9.13		pH Units	1	B6B1003	02/10/2016	02/10/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.399		mmhos/cm	"	B6B1004	02/10/2016	"	
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Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B0810 - EPA 5030 (soil)										
Blank (B6B0810-BLK1)					Prepared: 02/09/2016 Analyzed: 02/09/2016					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Surrogate: 1,2-Dichloroethane-d4	62.9		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	64.3		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	55.3		"	62.5		88.5	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B0810 - EPA 5030 (soil)										
LCS (B6B0810-BS1)					Prepared: 02/09/2016 Analyzed: 02/09/2016					
Benzene	0.102	0.002	mg/kg	0.100		102	77.1-124			
Toluene	0.105	0.002	"	0.100		105	74.5-128			
Ethylbenzene	0.092	0.002	"	0.100		91.5	66.4-127			
m,p-Xylene	0.178	0.004	"	0.200		89.2	76.6-124			
o-Xylene	0.094	0.002	"	0.100		94.0	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	68.4		ug/kg	62.5		109	70-130			
Surrogate: Toluene-d8	68.7		"	62.5		110	70-130			
Surrogate: 4-Bromofluorobenzene	62.4		"	62.5		99.9	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B0810 - EPA 5030 (soil)

Matrix Spike (B6B0810-MS1)		Source: X602060-01			Prepared: 02/09/2016 Analyzed: 02/09/2016					
Benzene	0.098	0.002	mg/kg	0.100	ND	98.3	71.8-126			
Toluene	0.106	0.002	"	0.100	0.001	105	65.1-130			
Ethylbenzene	0.090	0.002	"	0.100	ND	90.5	62.2-130			
m,p-Xylene	0.188	0.004	"	0.200	ND	93.8	46.5-137			
o-Xylene	0.092	0.002	"	0.100	ND	92.2	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	60.6		ug/kg	62.5		97.0	70-130			
Surrogate: Toluene-d8	62.1		"	62.5		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	57.9		"	62.5		92.6	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B0810 - EPA 5030 (soil)

Matrix Spike Dup (B6B0810-MSD1)		Source: X602060-01			Prepared: 02/09/2016 Analyzed: 02/09/2016					
Benzene	0.103	0.002	mg/kg	0.100	ND	103	71.8-126	4.51	11.3	
Toluene	0.098	0.002	"	0.100	0.001	96.3	65.1-130	8.20	15.4	
Ethylbenzene	0.099	0.002	"	0.100	ND	98.6	62.2-130	8.63	19.6	
m,p-Xylene	0.199	0.004	"	0.200	ND	99.5	46.5-137	5.91	19.2	
o-Xylene	0.100	0.002	"	0.100	ND	100	54.2-134	8.12	17.9	
Surrogate: 1,2-Dichloroethane-d4	57.9		ug/kg	62.5		92.6	70-130			
Surrogate: Toluene-d8	60.9		"	62.5		97.5	70-130			
Surrogate: 4-Bromofluorobenzene	62.8		"	62.5		100	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B1001 - EPA 5030 (soil)										
Blank (B6B1001-BLK1)					Prepared: 02/10/2016 Analyzed: 02/10/2016					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Surrogate: 1,2-Dichloroethane-d4	63.0		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	63.4		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	61.7		"	62.5		98.7	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B1001 - EPA 5030 (soil)

LCS (B6B1001-BS1)

Prepared: 02/10/2016 Analyzed: 02/10/2016

Benzene	0.101	0.002	mg/kg	0.100		101	77.1-124			
Toluene	0.094	0.002	"	0.100		93.5	74.5-128			
Ethylbenzene	0.101	0.002	"	0.100		101	66.4-127			
m,p-Xylene	0.197	0.004	"	0.200		98.7	76.6-124			
o-Xylene	0.105	0.002	"	0.100		105	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	63.0		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	59.9		"	62.5		95.8	70-130			
Surrogate: 4-Bromofluorobenzene	62.6		"	62.5		100	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B1001 - EPA 5030 (soil)

Matrix Spike (B6B1001-MS1)		Source: X602079-07			Prepared: 02/10/2016 Analyzed: 02/10/2016					
Benzene	0.102	0.002	mg/kg	0.100	0.005	97.5	71.8-126			
Toluene	0.075	0.002	"	0.100	0.002	73.7	65.1-130			
Ethylbenzene	0.265	0.002	"	0.100	0.160	104	62.2-130			
m,p-Xylene	0.184	0.004	"	0.200	0.007	88.4	46.5-137			
o-Xylene	0.087	0.002	"	0.100	0.002	85.4	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	61.6		ug/kg	62.5		98.6	70-130			
Surrogate: Toluene-d8	70.7		"	62.5		113	70-130			
Surrogate: 4-Bromofluorobenzene	111		"	62.5		177	70-130			

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B1001 - EPA 5030 (soil)

Matrix Spike Dup (B6B1001-MSD1)		Source: X602079-07			Prepared: 02/10/2016 Analyzed: 02/10/2016					
Benzene	0.102	0.002	mg/kg	0.100	0.005	96.9	71.8-126	0.647	11.3	
Toluene	0.071	0.002	"	0.100	0.002	69.4	65.1-130	5.99	15.4	
Ethylbenzene	0.304	0.002	"	0.100	0.160	144	62.2-130	13.9	19.6	QM-07
m,p-Xylene	0.184	0.004	"	0.200	0.007	88.4	46.5-137	0.00	19.2	
o-Xylene	0.082	0.002	"	0.100	0.002	80.5	54.2-134	5.79	17.9	
Surrogate: 1,2-Dichloroethane-d4	61.8		ug/kg	62.5		98.9	70-130			
Surrogate: Toluene-d8	80.5		"	62.5		129	70-130			
Surrogate: 4-Bromofluorobenzene	141		"	62.5		226	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Extractable Petroleum Hydrocarbons by 8015C - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B0904 - EPA 3580

Blank (B6B0904-BLK1)

Prepared: 02/09/2016 Analyzed: 02/09/2016

Diesel (C10-C28)	ND	50	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	42		"	50.0		84.4	59-131			

LCS (B6B0904-BS1)

Prepared: 02/09/2016 Analyzed: 02/09/2016

Diesel (C10-C28)	760	50	mg/kg	1000		76.3	64-121			
Residual Range Organics (C28-C40)	700	200	"	1000		70.4	58-124			
Surrogate: o-Terphenyl	39		"	50.0		79.0	59-131			

LCS Dup (B6B0904-BSD1)

Prepared: 02/09/2016 Analyzed: 02/09/2016

Diesel (C10-C28)	770	50	mg/kg	1000		77.4	64-121	1.50	20	
Residual Range Organics (C28-C40)	720	200	"	1000		72.1	58-124	2.35	20	
Surrogate: o-Terphenyl	41		"	50.0		81.3	59-131			

Batch B6B1002 - EPA 3580

Blank (B6B1002-BLK1)

Prepared: 02/10/2016 Analyzed: 02/10/2016

Diesel (C10-C28)	ND	50	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	53		"	50.0		107	59-131			

LCS (B6B1002-BS1)

Prepared: 02/10/2016 Analyzed: 02/10/2016

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B1002 - EPA 3580										
LCS (B6B1002-BS1)					Prepared: 02/10/2016 Analyzed: 02/10/2016					
Diesel (C10-C28)	1100	50	mg/kg				64-121			
Residual Range Organics (C28-C40)	1100	200	"				58-124			
Surrogate: o-Terphenyl	58		"	50.0		116	59-131			
Matrix Spike (B6B1002-MS1)					Source: X602079-07 Prepared: 02/10/2016 Analyzed: 02/10/2016					
Diesel (C10-C28)	1000	50	mg/kg		21		53-125			
Residual Range Organics (C28-C40)	810	200	"		18		47-133			
Surrogate: o-Terphenyl	46		"	50.0		92.7	59-131			
Matrix Spike Dup (B6B1002-MSD1)					Source: X602079-07 Prepared: 02/10/2016 Analyzed: 02/10/2016					
Diesel (C10-C28)	990	50	mg/kg		21		53-125	3.78	20	
Residual Range Organics (C28-C40)	780	200	"		18		47-133	4.78	20	
Surrogate: o-Terphenyl	45		"	50.0		89.2	59-131			

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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B0906 - NO PREP										
Duplicate (B6B0906-DUP1)		Source: X602076-01			Prepared: 02/09/2016 Analyzed: 02/09/2016					
pH	7.95		pH Units		7.95			0.00	25	
Batch B6B0907 - NO PREP										
Blank (B6B0907-BLK1)		Prepared: 02/09/2016 Analyzed: 02/09/2016								
Specific Conductance (EC)	0.00300		mmhos/cm							
Duplicate (B6B0907-DUP1)		Source: X602076-01			Prepared: 02/09/2016 Analyzed: 02/09/2016					
Specific Conductance (EC)	0.0430		mmhos/cm		0.0501			15.3	25	
Batch B6B1003 - NO PREP										
Duplicate (B6B1003-DUP1)		Source: X602079-07			Prepared: 02/10/2016 Analyzed: 02/10/2016					
pH	9.04		pH Units		9.13			0.991	25	
Batch B6B1004 - NO PREP										
Blank (B6B1004-BLK1)		Prepared: 02/10/2016 Analyzed: 02/10/2016								
Specific Conductance (EC)	0.00260		mmhos/cm							
Duplicate (B6B1004-DUP1)		Source: X602079-07			Prepared: 02/10/2016 Analyzed: 02/10/2016					
Specific Conductance (EC)	0.394		mmhos/cm		0.399			1.26	25	

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Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: [none]

Project: KMG - Highway - 62N66W/12NWSW

Notes and Definitions

U Sample is Non-Detect.

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

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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.



February 12, 2016

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver

CO 80211

**Project Name - KMG - Highway -
62N66W/12NWSW**

Project Number - [none]

Attached are your analytical results for KMG - Highway - 62N66W/12NWSW received by Origins Laboratory, Inc. February 11, 2016. This project is associated with Origins project number X602114-01.

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

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

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

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

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

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



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

Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: [none]

Project: KMG - Highway - 62N66W/12NWSW

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
E04 @ 7'	X602114-01	Soil	February 11, 2016 14:05	02/11/2016 16:01
N01 @ 7'	X602114-02	Soil	February 11, 2016 14:11	02/11/2016 16:01
N02 @ 7'	X602114-03	Soil	February 11, 2016 14:09	02/11/2016 16:01
B04 @ 7'	X602114-04	Soil	February 11, 2016 14:07	02/11/2016 16:01

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

ORIGINS
LABORATORY, INC

X602114

www.originslaboratory.com

page ☐ of ☐

Client: Tasman Geosciences

Address: [blank]

Telephone Number: 352 262 9910

Email Address: info@tasman-geo.com

Project Manager: Bob Cornez

Project Name: Highway 62N66W/12NWSW

Project Number: [blank]

Samples Collected By: Kaye Foriswark

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa #		
F0407'	2/11/16	1405	2	X				X			GT EX 8200 TPH D80008015 EC, PH, SAR, EC(D)	1
N0007'		1411	1									2
N0207'		1409	1									3
B0407'		1407	1									4
												5
												6
												7
												8
												9
												10

Relinquished By: [Signature]

Relinquished By: [Signature]

Date: 2/11/16

Date: 2/11/16

Time: 1545

Time: 1601

Received By: [Signature]

Received By: [Signature]

Date: 2/11/16

Date: 2/11/16

Time: 1601

Time: 1601

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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X602114

Client: Tasman

Client Project ID: Highway 62N66W/12 NWSW

Checklist Completed by: Jeff Smith

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

Date/time completed: 2/11/16

Airbill #: 134

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

Cooler Number/Temperature: 1 / 3.3 °C 1 / _____ °C 1 / _____ °C (Describe)

Thermometer ID: TDS3

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.

Reviewed by (Project Manager) Jeff Smith

Date/Time Reviewed 2/11/16

Origins Laboratory, Inc.

Jeff Pellegrini

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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

E04 @ 7'
2/11/2016 2:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602114-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	160	50	mg/kg	1	B6B1103	02/11/2016	02/11/2016	
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 95.0 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	141	5.00	mg/kg	25	B6B1106	02/11/2016	02/11/2016	
Benzene	ND	0.050	"	"	"	"	"	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	0.736	0.050	"	"	"	"	"	
Xylenes, total	10.8	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 97.8 % 70-130 " " "
Surrogate: Toluene-d8 104 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 104 % 70-130 " " "

pH in Soil by EPA 9045D

pH	9.14		pH Units	1	B6B1105	02/11/2016	02/11/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.641		mmhos/cm	"	B6B1104	02/11/2016	02/11/2016	
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Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

N01 @ 7'
2/11/2016 2:11:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602114-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B6B1103	02/11/2016	02/11/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 69.0 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B6B1106	02/11/2016	02/11/2016	U
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 109 % 70-130 " " "
Surrogate: Toluene-d8 88.8 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 97.8 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.38		pH Units	1	B6B1105	02/11/2016	02/11/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	1.32		mmhos/cm	"	B6B1104	02/11/2016	02/11/2016	
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Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

N02 @ 7'
2/11/2016 2:09:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602114-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B6B1103	02/11/2016	02/11/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 69.2 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B6B1106	02/11/2016	02/11/2016	U
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 109 % 70-130 " " "
Surrogate: Toluene-d8 102 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 97.9 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.78	pH Units	1	B6B1105	02/11/2016	02/11/2016
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.970	mmhos/cm	"	B6B1104	02/11/2016	02/11/2016
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Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

B04 @ 7'
2/11/2016 2:07:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602114-04 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	60	50	mg/kg	1	B6B1103	02/11/2016	02/11/2016	
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 73.5 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	36.2	5.00	mg/kg	25	B6B1106	02/11/2016	02/11/2016	
Benzene	ND	0.050	"	"	"	"	"	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	0.308	0.050	"	"	"	"	"	
Xylenes, total	ND	0.050	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 100 % 70-130 " " "
Surrogate: Toluene-d8 99.7 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 98.8 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.27		pH Units	1	B6B1105	02/11/2016	02/11/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	2.54		mmhos/cm	"	B6B1104	02/11/2016	02/11/2016	
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Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B1106 - EPA 5030 (soil)										
Blank (B6B1106-BLK1)					Prepared: 02/11/2016 Analyzed: 02/11/2016					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Surrogate: 1,2-Dichloroethane-d4	64.4		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	60.8		"	62.5		97.3	70-130			
Surrogate: 4-Bromofluorobenzene	61.2		"	62.5		98.0	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B1106 - EPA 5030 (soil)										
LCS (B6B1106-BS1)					Prepared: 02/11/2016 Analyzed: 02/11/2016					
Benzene	0.089	0.002	mg/kg	0.100		88.9	77.1-124			
Toluene	0.083	0.002	"	0.100		82.8	74.5-128			
Ethylbenzene	0.092	0.002	"	0.100		91.6	66.4-127			
m,p-Xylene	0.184	0.004	"	0.200		92.2	76.6-124			
o-Xylene	0.097	0.002	"	0.100		96.8	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	62.9		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	56.4		"	62.5		90.2	70-130			
Surrogate: 4-Bromofluorobenzene	67.8		"	62.5		108	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B1106 - EPA 5030 (soil)

Matrix Spike (B6B1106-MS1)		Source: X602114-02			Prepared: 02/11/2016 Analyzed: 02/11/2016					
Benzene	0.100	0.002	mg/kg	0.100	ND	100	71.8-126			
Toluene	0.098	0.002	"	0.100	ND	97.6	65.1-130			
Ethylbenzene	0.098	0.002	"	0.100	ND	98.0	62.2-130			
m,p-Xylene	0.199	0.004	"	0.200	ND	99.4	46.5-137			
o-Xylene	0.102	0.002	"	0.100	ND	102	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	65.4		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	62.0		"	62.5		99.1	70-130			
Surrogate: 4-Bromofluorobenzene	68.4		"	62.5		109	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B1106 - EPA 5030 (soil)

Matrix Spike Dup (B6B1106-MSD1)		Source: X602114-02			Prepared: 02/11/2016 Analyzed: 02/11/2016					
Benzene	0.095	0.002	mg/kg	0.100	ND	95.4	71.8-126	5.03	11.3	
Toluene	0.089	0.002	"	0.100	ND	88.8	65.1-130	9.46	15.4	
Ethylbenzene	0.092	0.002	"	0.100	ND	92.2	62.2-130	6.06	19.6	
m,p-Xylene	0.184	0.004	"	0.200	ND	92.2	46.5-137	7.49	19.2	
o-Xylene	0.098	0.002	"	0.100	ND	97.7	54.2-134	4.15	17.9	
Surrogate: 1,2-Dichloroethane-d4	64.0		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	58.9		"	62.5		94.2	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

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Extractable Petroleum Hydrocarbons by 8015C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B1103 - EPA 3580

Blank (B6B1103-BLK1)

Prepared: 02/11/2016 Analyzed: 02/11/2016

Diesel (C10-C28)	ND	50	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	40		"	50.0		79.5	59-131			

LCS (B6B1103-BS1)

Prepared: 02/11/2016 Analyzed: 02/11/2016

Diesel (C10-C28)	810	50	mg/kg	1000		81.1	64-121			
Residual Range Organics (C28-C40)	820	200	"	1000		81.8	58-124			
Surrogate: o-Terphenyl	43		"	50.0		86.3	59-131			

Matrix Spike (B6B1103-MS1)

Source: X602109-01

Prepared: 02/11/2016 Analyzed: 02/11/2016

Diesel (C10-C28)	750	50	mg/kg	1000	ND	75.3	53-125			
Residual Range Organics (C28-C40)	760	200	"	1000	13	74.9	47-133			
Surrogate: o-Terphenyl	38		"	50.0		76.5	59-131			

Matrix Spike Dup (B6B1103-MSD1)

Source: X602109-01

Prepared: 02/11/2016 Analyzed: 02/11/2016

Diesel (C10-C28)	790	50	mg/kg	1000	ND	79.4	53-125	5.37	20	
Residual Range Organics (C28-C40)	800	200	"	1000	13	78.7	47-133	4.83	20	
Surrogate: o-Terphenyl	42		"	50.0		83.1	59-131			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B1104 - NO PREP										
Blank (B6B1104-BLK1)					Prepared: 02/11/2016 Analyzed: 02/11/2016					
Specific Conductance (EC)	0.00260		mmhos/cm							
Duplicate (B6B1104-DUP1)					Source: X602114-01 Prepared: 02/11/2016 Analyzed: 02/11/2016					
Specific Conductance (EC)	0.672		mmhos/cm		0.641			4.72	25	
Batch B6B1105 - NO PREP										
Duplicate (B6B1105-DUP1)					Source: X602114-01 Prepared: 02/11/2016 Analyzed: 02/11/2016					
pH	9.16		pH Units		9.14			0.219	25	

Origins Laboratory, Inc.



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

Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: [none]

Project: KMG - Highway - 62N66W/12NWSW

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



February 17, 2016

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver

CO 80211

**Project Name - KMG - Highway -
62N66W/12NWSW**

Project Number - [none]

Attached are your analytical results for KMG - Highway - 62N66W/12NWSW received by Origins Laboratory, Inc. February 16, 2016. This project is associated with Origins project number X602170-01.

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

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

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

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

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

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



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

Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: [none]

Project: KMG - Highway - 62N66W/12NWSW

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W03 @ 7'	X602170-01	Soil	February 16, 2016 14:00	02/16/2016 16:45
B05 @ 9'	X602170-02	Soil	February 16, 2016 14:02	02/16/2016 16:45
S01 @ 7'	X602170-03	Soil	February 16, 2016 14:04	02/16/2016 16:45

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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page ☐ of ☐

ORIGINS LABORATORY, INC

X602170

Client: Tasman Geosciences

Address:

Telephone Number: 352 262 9910

Email Address: COOLNEZ@TASMAN-GEO.COM

Project Manager: Bob Cornez

Project Name: Highway 62N66W-12NWSW

Project Number:

Samples Collected By: Kate Forshaw

Sample ID Description

Date Sampled

Time Sampled

of Containers

Preservative

Matrix

Analysis

Sample Instructions

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative	Matrix	Analysis	Sample Instructions
W0307	2/16/16	1400	2	X	Soil	GRTX 8240	1
B0509	↓	1402	2	X	Groundwater	TPH DROLO 8015	2
S0107	↓	1404	2	X	Other	EC pH SAR (546)	3
							4
							5
							6
							7
							8
							9
							10

Relinquished By: [Signature]

Relinquished By: [Signature]

Date: 2/16/16

Date: 2/16/16

Time: 1630

Time: 1630

Received By: [Signature]

Received By: [Signature]

Date: 2/16/16

Date: 2/16/16

Time: 1630

Time: 1630

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

Date Results Needed: 3.9

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X602170

Client: Tasman

Client Project ID: Highway 62N66W-12NWSW

Checklist Completed by: Jeff Smith

Shipped Via: Pick Up

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

Date/time completed: 2/16/16

Airbill #: NA

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

Cooler Number/Temperature: 1 139 °C 1 °C 1 °C (Describe) 1 °C

Thermometer ID: B03

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)		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 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)

2/16/16
Date/Time Reviewed

Origins Laboratory, Inc.

Jefe Pellegrini

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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

W03 @ 7'
2/16/2016 2:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602170-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	600	50	mg/kg	1	B6B1510	02/16/2016	02/16/2016	
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl	78.9 %	59-131			"	"	"	
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	414	5.00	mg/kg	25	B6B1509	02/16/2016	02/16/2016	
Benzene	0.248	0.050	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	2.95	0.050	"	"	"	"	"	
Xylenes, total	22.9	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	79.9 %	70-130			"	"	"	
Surrogate: Toluene-d8	128 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	126 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	8.13		pH Units	1	B6B1507	02/16/2016	02/16/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.698		mmhos/cm	"	B6B1508	02/16/2016	02/16/2016	
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Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

B05 @ 9'
2/16/2016 2:02:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602170-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B6B1510	02/16/2016	02/16/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 61.6 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	45.8	5.00	mg/kg	25	B6B1509	02/16/2016	02/16/2016	
Benzene	ND	0.050	"	"	"	"	"	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	ND	0.050	"	"	"	"	"	U
Xylenes, total	0.110	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 79.7 % 70-130 " " "
Surrogate: Toluene-d8 101 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 93.2 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.83		pH Units	1	B6B1507	02/16/2016	02/16/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	1.81		mmhos/cm	"	B6B1508	02/16/2016	02/16/2016	
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Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

S01 @ 7'
2/16/2016 2:04:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602170-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B6B1510	02/16/2016	02/16/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 83.1 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	96.5	5.00	mg/kg	25	B6B1509	02/16/2016	02/17/2016	
Benzene	0.004	0.002	"	1	"	"	02/17/2016	
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	0.050	0.002	"	"	"	"	"	
Xylenes, total	0.008	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 83.1 % 70-130 " " "
Surrogate: Toluene-d8 117 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 158 % 70-130 " " " S-04

pH in Soil by EPA 9045D

pH	8.07		pH Units	1	B6B1507	02/16/2016	02/16/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.247		mmhos/cm	"	B6B1508	02/16/2016	02/16/2016	
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Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B1509 - EPA 5030 (soil)										
Blank (B6B1509-BLK1)					Prepared: 02/15/2016 Analyzed: 02/16/2016					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Surrogate: 1,2-Dichloroethane-d4	65.5		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	65.4		"	62.5		105	70-130			
Surrogate: 4-Bromofluorobenzene	58.7		"	62.5		93.9	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B1509 - EPA 5030 (soil)

LCS (B6B1509-BS1)

Prepared: 02/15/2016 Analyzed: 02/16/2016

Benzene	0.094	0.002	mg/kg	0.100		94.1	77.1-124			
Toluene	0.095	0.002	"	0.100		94.6	74.5-128			
Ethylbenzene	0.095	0.002	"	0.100		94.9	66.4-127			
m,p-Xylene	0.188	0.004	"	0.200		93.8	76.6-124			
o-Xylene	0.095	0.002	"	0.100		94.6	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	56.5		ug/kg	62.5		90.3	70-130			
Surrogate: Toluene-d8	61.1		"	62.5		97.7	70-130			
Surrogate: 4-Bromofluorobenzene	64.9		"	62.5		104	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B1509 - EPA 5030 (soil)

Matrix Spike (B6B1509-MS1)		Source: X602155-01			Prepared: 02/15/2016 Analyzed: 02/16/2016					
Benzene	0.095	0.002	mg/kg	0.100	ND	95.4	71.8-126			
Toluene	0.101	0.002	"	0.100	ND	101	65.1-130			
Ethylbenzene	0.091	0.002	"	0.100	ND	91.3	62.2-130			
m,p-Xylene	0.181	0.004	"	0.200	ND	90.3	46.5-137			
o-Xylene	0.091	0.002	"	0.100	ND	91.4	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	56.2		ug/kg	62.5		89.9	70-130			
Surrogate: Toluene-d8	64.6		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	62.5		"	62.5		100	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B1509 - EPA 5030 (soil)

Matrix Spike Dup (B6B1509-MSD1)		Source: X602155-01			Prepared: 02/15/2016 Analyzed: 02/16/2016					
Benzene	0.092	0.002	mg/kg	0.100	ND	92.5	71.8-126	3.07	11.3	
Toluene	0.090	0.002	"	0.100	ND	90.0	65.1-130	11.2	15.4	
Ethylbenzene	0.086	0.002	"	0.100	ND	86.3	62.2-130	5.65	19.6	
m,p-Xylene	0.177	0.004	"	0.200	ND	88.3	46.5-137	2.27	19.2	
o-Xylene	0.085	0.002	"	0.100	ND	85.3	54.2-134	6.88	17.9	
Surrogate: 1,2-Dichloroethane-d4	55.8		ug/kg	62.5		89.2	70-130			
Surrogate: Toluene-d8	62.6		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	62.8		"	62.5		100	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Extractable Petroleum Hydrocarbons by 8015C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B1510 - EPA 3580

Blank (B6B1510-BLK1)

Prepared: 02/15/2016 Analyzed: 02/16/2016

Diesel (C10-C28)	ND	50	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	49		"	50.0		97.4	59-131			

LCS (B6B1510-BS1)

Prepared: 02/15/2016 Analyzed: 02/16/2016

Diesel (C10-C28)	1100	50	mg/kg	1000		113	64-121			
Residual Range Organics (C28-C40)	1100	200	"	1000		110	58-124			
Surrogate: o-Terphenyl	50		"	50.0		101	59-131			

Matrix Spike (B6B1510-MS1)

Source: X602145-06

Prepared: 02/15/2016 Analyzed: 02/16/2016

Diesel (C10-C28)	880	50	mg/kg	1000	ND	87.9	53-125			
Residual Range Organics (C28-C40)	860	200	"	1000	12	84.4	47-133			
Surrogate: o-Terphenyl	41		"	50.0		82.1	59-131			

Matrix Spike Dup (B6B1510-MSD1)

Source: X602145-06

Prepared: 02/15/2016 Analyzed: 02/16/2016

Diesel (C10-C28)	920	50	mg/kg	1000	ND	91.8	53-125	4.35	20	
Residual Range Organics (C28-C40)	880	200	"	1000	12	86.7	47-133	2.64	20	
Surrogate: o-Terphenyl	45		"	50.0		89.7	59-131			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B1507 - NO PREP										
Duplicate (B6B1507-DUP1)		Source: X602145-05			Prepared: 02/15/2016 Analyzed: 02/16/2016					
pH	8.21		pH Units		8.26			0.607	25	
Batch B6B1508 - NO PREP										
Blank (B6B1508-BLK1)		Prepared: 02/15/2016 Analyzed: 02/16/2016								
Specific Conductance (EC)	0.00340		mmhos/cm							
Duplicate (B6B1508-DUP1)		Source: X602145-05			Prepared: 02/15/2016 Analyzed: 02/16/2016					
Specific Conductance (EC)	0.0471		mmhos/cm		0.0439			7.03	25	

Origins Laboratory, Inc.



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

Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: [none]

Project: KMG - Highway - 62N66W/12NWSW

Notes and Definitions

U Sample is Non-Detect.

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

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.



February 18, 2016

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver

CO 80211

**Project Name - KMG - Highway -
62N66W/12NWSW**

Project Number - [none]

Attached are your analytical results for KMG - Highway - 62N66W/12NWSW received by Origins Laboratory, Inc. February 17, 2016. This project is associated with Origins project number X602190-01.

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

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

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

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

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

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



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

Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: [none]

Project: KMG - Highway - 62N66W/12NWSW

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W04 @ 7'	X602190-01	Soil	February 17, 2016 15:09	02/17/2016 17:00
E05 @ 7'	X602190-02	Soil	February 17, 2016 15:14	02/17/2016 17:00
N03 @ 7'	X602190-03	Soil	February 17, 2016 15:12	02/17/2016 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.

Jen Pellegrini For Noelle Doyle Mathis, President

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

ORIGINS
LABORATORY, INC

www.originslaboratory.com

page 1 of 1

Client: Tasman Geosciences

Address:

Telephone Number: 352 262 9910

Email Address: bobcornez@tasman-geo.com

Project Manager: Bob Cornez

Project Name: Highway 62N66W/12NWSW

Project Number:

Samples Collected By: Kate Fismack

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa #		
W0427	2/17/16	1509	2 X					X			GISTEY 8240 TPH, DIOXID 8015 pH, EC, SAR (11°C)	1
E0507	↓	1514	2 X					X				2
N0307	↓	1512	2 X					X				3
												4
												5
												6
												7
												8
												9
												10

Relinquished By: [Signature]

Relinquished By: [Signature]

Date: 2/17/16

Date:

Time: 1645

Time:

Received By: [Signature]

Received By:

Date: 2.17.16

Date:

Time: 1700

Time:

Turnaround Time:

Same Day ☒ 24 Hr ☐ 48 Hr ☐ 72 Hr ☐ Standard ☐

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order X602190

Client: Tasman

Client Project ID: Highway 62N66W/12NWSW

Checklist Completed by: Jeff Smith

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

Date/time completed: 2/17/12

Airbill #: NA

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

Cooler Number/Temperature: 18.1 °C 1 °C 1 °C (Describe)

Thermometer ID: TD63

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"/>		<u>Sampled Same Day</u>
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.

Jeff Smith
Reviewed by (Project Manager)

2/17/12
Date/Time Reviewed

Origins Laboratory, Inc.

Jeff Pellegrini

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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

W04 @ 7'
2/17/2016 3:09:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602190-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B6B1702	02/17/2016	02/18/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 97.2 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B6B1701	02/17/2016	02/18/2016	U
Benzene	ND	0.050	"	"	"	"	"	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	ND	0.050	"	"	"	"	"	U
Xylenes, total	ND	0.050	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 78.4 % 70-130 " " 02/17/2016
Surrogate: Toluene-d8 122 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 119 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.47		pH Units	1	B6B1709	02/17/2016	02/17/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.502		mmhos/cm	"	B6B1708	02/17/2016	02/17/2016	
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Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

E05 @ 7'
2/17/2016 3:14:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602190-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B6B1702	02/17/2016	02/17/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 79.2 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	25.9	5.00	mg/kg	25	B6B1701	02/17/2016	02/17/2016	
Benzene	ND	0.050	"	"	"	"	"	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	ND	0.050	"	"	"	"	"	U
Xylenes, total	ND	0.050	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 79.3 % 70-130 " " "
Surrogate: Toluene-d8 96.8 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 87.6 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.32		pH Units	1	B6B1709	02/17/2016	02/17/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.214		mmhos/cm	"	B6B1708	02/17/2016	02/17/2016	
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Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

N03 @ 7'
2/17/2016 3:12:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602190-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B6B1702	02/17/2016	02/17/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 75.8 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	116	5.00	mg/kg	25	B6B1701	02/17/2016	02/17/2016	
Benzene	ND	0.050	"	"	"	"	"	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	0.222	0.050	"	"	"	"	"	
Xylenes, total	4.42	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 76.0 % 70-130 " " "
Surrogate: Toluene-d8 107 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 98.5 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.13		pH Units	1	B6B1709	02/17/2016	02/17/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.942		mmhos/cm	"	B6B1708	02/17/2016	02/17/2016	
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Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B1701 - EPA 5030 (soil)										
Blank (B6B1701-BLK1)					Prepared: 02/17/2016 Analyzed: 02/17/2016					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Surrogate: 1,2-Dichloroethane-d4	53.8		ug/kg	62.5		86.0	70-130			
Surrogate: Toluene-d8	61.7		"	62.5		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	57.6		"	62.5		92.2	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

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B1701 - EPA 5030 (soil)										
LCS (B6B1701-BS1)					Prepared: 02/17/2016 Analyzed: 02/17/2016					
Benzene	0.094	0.002	mg/kg	0.100		93.8	77.1-124			
Toluene	0.088	0.002	"	0.100		88.4	74.5-128			
Ethylbenzene	0.091	0.002	"	0.100		91.0	66.4-127			
m,p-Xylene	0.187	0.004	"	0.200		93.6	76.6-124			
o-Xylene	0.094	0.002	"	0.100		93.7	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	54.5		ug/kg	62.5		87.2	70-130			
Surrogate: Toluene-d8	60.2		"	62.5		96.3	70-130			
Surrogate: 4-Bromofluorobenzene	63.3		"	62.5		101	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B1701 - EPA 5030 (soil)

Matrix Spike (B6B1701-MS1)		Source: X602169-01			Prepared: 02/17/2016 Analyzed: 02/17/2016					
Benzene	0.092	0.002	mg/kg	0.100	ND	91.6	71.8-126			
Toluene	0.088	0.002	"	0.100	ND	88.0	65.1-130			
Ethylbenzene	0.084	0.002	"	0.100	ND	84.1	62.2-130			
m,p-Xylene	0.169	0.004	"	0.200	ND	84.6	46.5-137			
o-Xylene	0.084	0.002	"	0.100	0.0003	83.8	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	51.9		ug/kg	62.5		83.0	70-130			
Surrogate: Toluene-d8	58.6		"	62.5		93.7	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

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B1701 - EPA 5030 (soil)

Matrix Spike Dup (B6B1701-MSD1)		Source: X602169-01			Prepared: 02/17/2016 Analyzed: 02/17/2016					
Benzene	0.088	0.002	mg/kg	0.100	ND	88.1	71.8-126	3.90	11.3	
Toluene	0.084	0.002	"	0.100	ND	84.0	65.1-130	4.65	15.4	
Ethylbenzene	0.082	0.002	"	0.100	ND	82.3	62.2-130	2.09	19.6	
m,p-Xylene	0.167	0.004	"	0.200	ND	83.6	46.5-137	1.27	19.2	
o-Xylene	0.082	0.002	"	0.100	0.0003	82.1	54.2-134	2.07	17.9	
Surrogate: 1,2-Dichloroethane-d4	52.7		ug/kg	62.5		84.4	70-130			
Surrogate: Toluene-d8	58.1		"	62.5		92.9	70-130			
Surrogate: 4-Bromofluorobenzene	61.9		"	62.5		99.0	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Extractable Petroleum Hydrocarbons by 8015C - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B1702 - EPA 3580

Blank (B6B1702-BLK1)

Prepared: 02/17/2016 Analyzed: 02/17/2016

Diesel (C10-C28)	ND	50	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	42		"	50.0		83.3	59-131			

LCS (B6B1702-BS1)

Prepared: 02/17/2016 Analyzed: 02/17/2016

Diesel (C10-C28)	830	50	mg/kg	1000		83.1	64-121			
Residual Range Organics (C28-C40)	820	200	"	1000		82.4	58-124			
Surrogate: o-Terphenyl	41		"	50.0		82.1	59-131			

Matrix Spike (B6B1702-MS1)

Source: X602155-01

Prepared: 02/17/2016 Analyzed: 02/17/2016

Diesel (C10-C28)	810	50	mg/kg	1000	ND	81.4	53-125			
Residual Range Organics (C28-C40)	830	200	"	1000	47	78.6	47-133			
Surrogate: o-Terphenyl	43		"	50.0		85.6	59-131			

Matrix Spike Dup (B6B1702-MSD1)

Source: X602155-01

Prepared: 02/17/2016 Analyzed: 02/17/2016

Diesel (C10-C28)	770	50	mg/kg	1000	ND	76.7	53-125	5.92	20	
Residual Range Organics (C28-C40)	840	200	"	1000	47	79.4	47-133	0.954	20	
Surrogate: o-Terphenyl	45		"	50.0		89.5	59-131			

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B1708 - NO PREP										
Blank (B6B1708-BLK1)					Prepared: 02/17/2016 Analyzed: 02/17/2016					
Specific Conductance (EC)	0.00390		mmhos/cm							
Duplicate (B6B1708-DUP1)					Source: X602187-01 Prepared: 02/17/2016 Analyzed: 02/17/2016					
Specific Conductance (EC)	0.240		mmhos/cm		0.200			18.2	25	
Batch B6B1709 - NO PREP										
Duplicate (B6B1709-DUP1)					Source: X602187-01 Prepared: 02/17/2016 Analyzed: 02/17/2016					
pH	7.07		pH Units		7.10			0.423	25	

Origins Laboratory, Inc.



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

Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: [none]

Project: KMG - Highway - 62N66W/12NWSW

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.



February 22, 2016

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver

CO 80211

**Project Name - KMG - Highway -
62N66W/12NWSW**

Project Number - [none]

Attached are your analytical results for KMG - Highway - 62N66W/12NWSW received by Origins Laboratory, Inc. February 19, 2016. This project is associated with Origins project number X602234-01.

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

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

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

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

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

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



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B06 @ 6'	X602234-01	Soil	February 19, 2016 12:30	02/19/2016 16:00
B07 @ 6'	X602234-02	Soil	February 19, 2016 12:40	02/19/2016 16:00
S02 @ 5'	X602234-03	Soil	February 19, 2016 12:45	02/19/2016 16:00
S03 @ 5'	X602234-04	Soil	February 19, 2016 12:50	02/19/2016 16:00
E05 @ 5'	X602234-05	Soil	February 19, 2016 12:55	02/19/2016 16:00
W05 @ 5'	X602234-06	Soil	February 19, 2016 13:00	02/19/2016 16:00

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X602234

Client: Tasman

Client Project ID: Highway 62N66W/12NWSW

Checklist Completed by: Joe Pellegrini

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

Date/time completed: 2/19/16 1637

Airbill #: AAA

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

Cooler Number/Temperature: 1 13.2 °C 1 °C 1 °C (Describe) 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"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>pH</u>
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Reviewed by (Project Manager) Joe Pellegrini

Date/Time Reviewed 2/19/16

Origins Laboratory, Inc.

Jefe Pellegrini

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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

B06 @ 6'

2/19/2016 12:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602234-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	130	50	mg/kg	1	B6B1902	02/19/2016	02/19/2016	
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl	78.8 %	59-131			"	"	"	
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	283	5.00	mg/kg	25	B6B1903	02/19/2016	02/19/2016	
Benzene	0.540	0.050	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	3.08	0.050	"	"	"	"	"	
Xylenes, total	0.885	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	82.9 %	70-130			"	"	"	
Surrogate: Toluene-d8	115 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	110 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	8.08		pH Units	1	B6B1905	02/19/2016	02/19/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.270		mmhos/cm	"	B6B1906	"	02/19/2016	
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Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

B07 @ 6'

2/19/2016 12:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602234-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	72	50	mg/kg	1	B6B1902	02/19/2016	02/19/2016	
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl	86.9 %	59-131			"	"	"	
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	211	5.00	mg/kg	25	B6B1903	02/19/2016	02/19/2016	
Benzene	0.112	0.050	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	1.77	0.050	"	"	"	"	"	
Xylenes, total	10.4	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	88.2 %	70-130			"	"	"	
Surrogate: Toluene-d8	110 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	110 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	8.44		pH Units	1	B6B1905	02/19/2016	02/19/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.378		mmhos/cm	"	B6B1906	"	02/19/2016	
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Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

S02 @ 5'

2/19/2016 12:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. X602234-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	270	50	mg/kg	1	B6B1902	02/19/2016	02/19/2016	
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl	74.1 %	59-131			"	"	"	
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	416	5.00	mg/kg	25	B6B1903	02/19/2016	02/19/2016	
Benzene	0.227	0.050	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	3.14	0.050	"	"	"	"	"	
Xylenes, total	8.49	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	84.7 %	70-130			"	"	"	
Surrogate: Toluene-d8	112 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	129 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	8.01		pH Units	1	B6B1905	02/19/2016	02/19/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.201		mmhos/cm	"	B6B1906	"	02/19/2016	
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Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

S03 @ 5'

2/19/2016 12:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602234-04 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	240	50	mg/kg	1	B6B1902	02/19/2016	02/19/2016	
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 74.0 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	285	5.00	mg/kg	25	B6B1903	02/19/2016	02/20/2016	
Benzene	0.192	0.050	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	2.89	0.050	"	"	"	"	"	
Xylenes, total	ND	0.050	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 85.0 % 70-130 " " "
Surrogate: Toluene-d8 107 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 115 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.13		pH Units	1	B6B1905	02/19/2016	02/19/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.384		mmhos/cm	"	B6B1906	"	02/19/2016	
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Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

E05 @ 5'

2/19/2016 12:55:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602234-05 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B6B1902	02/19/2016	02/19/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 66.1 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	54.7	5.00	mg/kg	25	B6B1903	02/19/2016	02/20/2016	
Benzene	ND	0.050	"	"	"	"	"	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	0.304	0.050	"	"	"	"	"	
Xylenes, total	ND	0.050	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 85.6 % 70-130 " " "
Surrogate: Toluene-d8 96.6 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 98.4 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.64		pH Units	1	B6B1905	02/19/2016	02/19/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.527		mmhos/cm	"	B6B1906	"	02/19/2016	
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Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

W05 @ 5'
2/19/2016 1:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602234-06 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B6B1902	02/19/2016	02/19/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

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

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	40.9	5.00	mg/kg	25	B6B1903	02/19/2016	02/20/2016	
Benzene	ND	0.050	"	"	"	"	"	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	0.074	0.050	"	"	"	"	"	
Xylenes, total	0.260	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 84.8 % 70-130 " " "
Surrogate: Toluene-d8 98.8 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 94.2 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.68		pH Units	1	B6B1905	02/19/2016	02/19/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.298		mmhos/cm	"	B6B1906	"	02/19/2016	
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Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B1903 - EPA 5030 (soil)										
Blank (B6B1903-BLK1)					Prepared: 02/19/2016 Analyzed: 02/19/2016					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Surrogate: 1,2-Dichloroethane-d4	56.2		ug/kg	62.5		89.9	70-130			
Surrogate: Toluene-d8	59.4		"	62.5		95.0	70-130			
Surrogate: 4-Bromofluorobenzene	59.3		"	62.5		94.9	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B1903 - EPA 5030 (soil)										
LCS (B6B1903-BS1)					Prepared: 02/19/2016 Analyzed: 02/19/2016					
Benzene	0.102	0.002	mg/kg	0.100		102	77.1-124			
Toluene	0.102	0.002	"	0.100		102	74.5-128			
Ethylbenzene	0.092	0.002	"	0.100		92.4	66.4-127			
m,p-Xylene	0.194	0.004	"	0.200		97.0	76.6-124			
o-Xylene	0.094	0.002	"	0.100		94.1	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	56.8		ug/kg	62.5		90.9	70-130			
Surrogate: Toluene-d8	61.5		"	62.5		98.4	70-130			
Surrogate: 4-Bromofluorobenzene	60.3		"	62.5		96.5	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

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B1903 - EPA 5030 (soil)

Matrix Spike (B6B1903-MS1)		Source: X602231-01			Prepared: 02/19/2016 Analyzed: 02/19/2016					
Benzene	0.100	0.002	mg/kg	0.100	ND	100	71.8-126			
Toluene	0.104	0.002	"	0.100	ND	104	65.1-130			
Ethylbenzene	0.101	0.002	"	0.100	ND	101	62.2-130			
m,p-Xylene	0.202	0.004	"	0.200	ND	101	46.5-137			
o-Xylene	0.101	0.002	"	0.100	ND	101	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	51.7		ug/kg	62.5		82.7	70-130			
Surrogate: Toluene-d8	61.7		"	62.5		98.8	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

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B1903 - EPA 5030 (soil)

Matrix Spike Dup (B6B1903-MSD1)		Source: X602231-01			Prepared: 02/19/2016 Analyzed: 02/19/2016					
Benzene	0.108	0.002	mg/kg	0.100	ND	108	71.8-126	7.70	11.3	
Toluene	0.111	0.002	"	0.100	ND	111	65.1-130	7.08	15.4	
Ethylbenzene	0.099	0.002	"	0.100	ND	99.1	62.2-130	1.58	19.6	
m,p-Xylene	0.199	0.004	"	0.200	ND	99.5	46.5-137	1.62	19.2	
o-Xylene	0.100	0.002	"	0.100	ND	100	54.2-134	0.378	17.9	
Surrogate: 1,2-Dichloroethane-d4	56.6		ug/kg	62.5		90.6	70-130			
Surrogate: Toluene-d8	64.6		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	59.6		"	62.5		95.4	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

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Extractable Petroleum Hydrocarbons by 8015C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B1902 - EPA 3580

Blank (B6B1902-BLK1)

Prepared: 02/19/2016 Analyzed: 02/19/2016

Diesel (C10-C28)	ND	50	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	47		"	50.0		93.3	59-131			

LCS (B6B1902-BS1)

Prepared: 02/19/2016 Analyzed: 02/19/2016

Diesel (C10-C28)	780	50	mg/kg	1000		78.4	64-121			
Residual Range Organics (C28-C40)	790	200	"	1000		78.9	58-124			
Surrogate: o-Terphenyl	42		"	50.0		83.9	59-131			

LCS Dup (B6B1902-BSD1)

Prepared: 02/19/2016 Analyzed: 02/19/2016

Diesel (C10-C28)	810	50	mg/kg	1000		81.1	64-121	3.35	20	
Residual Range Organics (C28-C40)	820	200	"	1000		81.6	58-124	3.31	20	
Surrogate: o-Terphenyl	42		"	50.0		83.8	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

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B1905 - NO PREP										
Duplicate (B6B1905-DUP1)		Source: X602231-01			Prepared: 02/19/2016 Analyzed: 02/19/2016					
pH	7.51		pH Units		7.45			0.802	25	
Batch B6B1906 - NO PREP										
Blank (B6B1906-BLK1)		Prepared: 02/19/2016 Analyzed: 02/19/2016								
Specific Conductance (EC)	0.00410		mmhos/cm							
Duplicate (B6B1906-DUP1)		Source: X602231-01			Prepared: 02/19/2016 Analyzed: 02/19/2016					
Specific Conductance (EC)	0.0229		mmhos/cm		0.0207			10.1	25	

Origins Laboratory, Inc.



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

Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: [none]

Project: KMG - Highway - 62N66W/12NWSW

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.



February 23, 2016

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver

CO 80211

**Project Name - KMG - Highway -
62N66W/12NWSW**

Project Number - [none]

Attached are your analytical results for KMG - Highway - 62N66W/12NWSW received by Origins Laboratory, Inc. February 22, 2016. This project is associated with Origins project number X602250-01.

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

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

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

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

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

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



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

Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: [none]

Project: KMG - Highway - 62N66W/12NWSW

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B08 @ 7'	X602250-01	Soil	February 22, 2016 14:50	02/22/2016 16:33
S04 @ 6'	X602250-02	Soil	February 22, 2016 14:55	02/22/2016 16:33
S05 @ 5'	X602250-03	Soil	February 22, 2016 15:00	02/22/2016 16:33

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X1602250

Client: Tasman Geosciences

Client Project ID: Highway-62N66W/12NWSW

Checklist Completed by: J. Pellegrini

Shipped Via: 342/21

Date/time completed: 2/22/16 1656

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

Airbill #: 181

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

Cooler Number/Temperature: 1 / 1.9 °C 1 / _____ °C 1 / _____ °C (Describe)

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			
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.

Reviewed by (Project Manager)

Date/Time Reviewed

Origins Laboratory, Inc.

Jefe Pellegrini

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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

B08 @ 7'
2/22/2016 2:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602250-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B6B2213	02/22/2016	02/22/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 87.5 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	36.2	5.00	mg/kg	25	B6B2214	02/22/2016	02/23/2016	
Benzene	ND	0.050	"	"	"	"	"	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	0.105	0.050	"	"	"	"	"	
Xylenes, total	ND	0.050	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 103 % 70-130 " " "
Surrogate: Toluene-d8 99.8 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 99.9 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.50		pH Units	1	B6B2203	02/22/2016	02/22/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.395		mmhos/cm	"	B6B2204	"	02/22/2016	
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Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

S04 @ 6'
2/22/2016 2:55:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602250-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	150	50	mg/kg	1	B6B2213	02/22/2016	02/22/2016	
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

Surrogate: o-Terphenyl 75.4 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	125	5.00	mg/kg	25	B6B2214	02/22/2016	02/23/2016	
Benzene	ND	0.050	"	"	"	"	"	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	0.897	0.050	"	"	"	"	"	
Xylenes, total	ND	0.050	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 101 % 70-130 " " "
Surrogate: Toluene-d8 111 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 109 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.59		pH Units	1	B6B2203	02/22/2016	02/22/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.232		mmhos/cm	"	B6B2204	"	02/22/2016	
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Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

S05 @ 5'
2/22/2016 3:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X602250-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B6B2213	02/22/2016	02/22/2016	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	"	"	U

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

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	104	5.00	mg/kg	25	B6B2214	02/22/2016	02/23/2016	
Benzene	ND	0.050	"	"	"	"	"	U
Toluene	ND	0.050	"	"	"	"	"	U
Ethylbenzene	ND	0.050	"	"	"	"	"	U
Xylenes, total	ND	0.050	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 99.8 % 70-130 " " "
Surrogate: Toluene-d8 103 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 113 % 70-130 " " "

pH in Soil by EPA 9045D

pH	9.00		pH Units	1	B6B2203	02/22/2016	02/22/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.249		mmhos/cm	"	B6B2204	"	02/22/2016	
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Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B2214 - EPA 5030 (soil)										
Blank (B6B2214-BLK1)					Prepared: 02/22/2016 Analyzed: 02/22/2016					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Surrogate: 1,2-Dichloroethane-d4	69.2		ug/kg	62.5		111	70-130			
Surrogate: Toluene-d8	63.2		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	60.6		"	62.5		96.9	70-130			

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Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B2214 - EPA 5030 (soil)										
LCS (B6B2214-BS1)					Prepared: 02/22/2016 Analyzed: 02/22/2016					
Benzene	0.109	0.002	mg/kg	0.100		109	77.1-124			
Toluene	0.106	0.002	"	0.100		106	74.5-128			
Ethylbenzene	0.102	0.002	"	0.100		102	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	66.9		ug/kg	62.5		107	70-130			
Surrogate: Toluene-d8	63.3		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	64.2		"	62.5		103	70-130			

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Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B2214 - EPA 5030 (soil)

Matrix Spike (B6B2214-MS1)		Source: X602253-01			Prepared: 02/22/2016 Analyzed: 02/22/2016					
Benzene	0.108	0.002	mg/kg	0.100	ND	108	71.8-126			
Toluene	0.091	0.002	"	0.100	ND	91.1	65.1-130			
Ethylbenzene	0.107	0.002	"	0.100	ND	107	62.2-130			
m,p-Xylene	0.216	0.004	"	0.200	ND	108	46.5-137			
o-Xylene	0.108	0.002	"	0.100	ND	108	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	65.0		ug/kg	62.5		104	70-130			
Surrogate: Toluene-d8	53.1		"	62.5		85.0	70-130			
Surrogate: 4-Bromofluorobenzene	74.9		"	62.5		120	70-130			

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Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B2214 - EPA 5030 (soil)										
Matrix Spike Dup (B6B2214-MSD1)		Source: X602253-01			Prepared: 02/22/2016 Analyzed: 02/22/2016					
Benzene	0.108	0.002	mg/kg	0.100	ND	108	71.8-126	0.185	11.3	
Toluene	0.108	0.002	"	0.100	ND	108	65.1-130	17.3	15.4	QR-02
Ethylbenzene	0.104	0.002	"	0.100	ND	104	62.2-130	2.33	19.6	
m,p-Xylene	0.209	0.004	"	0.200	ND	105	46.5-137	3.18	19.2	
o-Xylene	0.100	0.002	"	0.100	ND	100	54.2-134	7.66	17.9	
Surrogate: 1,2-Dichloroethane-d4	64.8		ug/kg	62.5		104	70-130			
Surrogate: Toluene-d8	63.6		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	64.2		"	62.5		103	70-130			

Origins Laboratory, Inc.



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Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Extractable Petroleum Hydrocarbons by 8015C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6B2213 - EPA 3580

Blank (B6B2213-BLK1)

Prepared: 02/22/2016 Analyzed: 02/22/2016

Diesel (C10-C28)	ND	50	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	44		"	50.0		87.8	59-131			

LCS (B6B2213-BS1)

Prepared: 02/22/2016 Analyzed: 02/22/2016

Diesel (C10-C28)	860	50	mg/kg	1000		85.6	64-121			
Residual Range Organics (C28-C40)	830	200	"	1000		82.6	58-124			
Surrogate: o-Terphenyl	42		"	50.0		84.3	59-131			

Matrix Spike (B6B2213-MS1)

Source: X602253-01

Prepared: 02/22/2016 Analyzed: 02/22/2016

Diesel (C10-C28)	860	50	mg/kg	1000	ND	85.6	53-125			
Residual Range Organics (C28-C40)	800	200	"	1000	12	78.8	47-133			
Surrogate: o-Terphenyl	38		"	50.0		76.7	59-131			

Matrix Spike Dup (B6B2213-MSD1)

Source: X602253-01

Prepared: 02/22/2016 Analyzed: 02/22/2016

Diesel (C10-C28)	880	50	mg/kg	1000	ND	88.0	53-125	2.77	20	
Residual Range Organics (C28-C40)	820	200	"	1000	12	80.6	47-133	2.20	20	
Surrogate: o-Terphenyl	44		"	50.0		87.2	59-131			

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Denver CO 80211

Bob Cornez
Project Number: [none]
Project: KMG - Highway - 62N66W/12NWSW

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 B6B2203 - NO PREP										
Duplicate (B6B2203-DUP1)		Source: X602220-05			Prepared: 02/22/2016 Analyzed: 02/22/2016					
pH	7.86		pH Units		7.56			3.89	25	
Duplicate (B6B2203-DUP2)		Source: X602253-01			Prepared: 02/22/2016 Analyzed: 02/22/2016					
pH	8.02		pH Units		8.72			8.36	25	
Batch B6B2204 - NO PREP										
Blank (B6B2204-BLK1)		Prepared: 02/22/2016 Analyzed: 02/22/2016								
Specific Conductance (EC)	0.0300		mmhos/cm							
Duplicate (B6B2204-DUP1)		Source: X602220-05			Prepared: 02/22/2016 Analyzed: 02/22/2016					
Specific Conductance (EC)	0.0661		mmhos/cm		0.0668			1.05	25	

Origins Laboratory, Inc.



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Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: [none]

Project: KMG - Highway - 62N66W/12NWSW

Notes and Definitions

U Sample is Non-Detect.

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

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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