



May 13, 2016

Mr. Erik Mickelson
Senior HSE Representative
Kerr-McGee Oil & Gas Onshore LP
1099 18th Street, Suite 1800
Denver, Colorado 80202

Re: Sump Closure Summary Letter Report
Milton H. Nelson Unit 'D'-62N68W29SENE (Milton Nelson D#1)
API: 05-123-09482
Facility ID: 318595
Legal: SENE Sec 29-T2N-R68W
Remediation Project #8961

Dear Mr. Mickelson:

On behalf of Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee), Tasman Geosciences, Inc. (Tasman) has prepared this Sump Closure Summary Letter Report (Report) to document sampling activities and the results of environmental testing at the above-referenced site. This Report is being submitted under the Form 27 Management Plan for Closure of Produced Water Vessels, which has been assigned Remediation #8961 by the COGCC. Tasman provided environmental services at the site that included collection of confirmation soil samples from the excavation and documentation of field activities, as described below.

Site Assessment Activities

The field activities described herein were performed with the purpose of assessing potential hydrocarbon impacts at the site related to the closure of the produced water sump on December 3, 2015. Soil sampling activities, laboratory analytical results, and conclusions are presented below. The general site layout and sample locations are provided in the attached site map (Attachment A).

The final extent of the excavation measured approximately 11 feet by 12 feet with an approximate depth of 5 feet below ground surface (bgs). No impacted material was removed from the site during closure activities. A liner was not present at the location, and groundwater was not encountered in the excavation.

Confirmation soil samples were collected from the base and sidewalls of the excavation area at approximately 5 feet and 3 feet bgs, respectively. Soil samples were field screened for volatile organic compound (VOC) concentrations using a photoionization detector (PID). The confirmation soil sample collected from the base and sidewalls of the excavation area were submitted to Origins Laboratory in Denver, Colorado, for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), total petroleum hydrocarbons (TPH) – gasoline range

organics (GRO) by United States Environmental Protection Agency (USEPA) Method 8260C, TPH – diesel range and oil range organics (DRO and ORO) by USEPA Method 8015, electrical conductivity (EC), and pH. Soil analytical data is summarized in Table 1 and the laboratory analytical report is provided in Attachment B.

Results

Soil analytical results from the samples collected from the base and sidewalls of the final extent of the excavation area indicated that BTEX and TPH concentrations were below the applicable COGCC Table 910-1 standards.

Conclusions

Analytical results described herein confirm BTEX and TPH impacts are not present at concentrations above applicable regulatory standards in the former sump location. Consequently, no further site assessment or remedial activity is recommended at this time. Following site assessment activities, the produced water sump was removed and the excavation area was backfilled and contoured to match pre-existing site conditions.

Please contact me at (303) 487-1228 if you have any questions regarding this report or require additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Daniel Wade', is positioned above the printed name.

Daniel Wade P.G.
Senior Geologist

Attachments:

Table 1 – Soil Sample Results Summary Table
Attachment A – Site Map
Attachment B – Laboratory Analytical Report

Table

TABLE 1
MILTON H. NELSON UNIT 'D'-62N68W29SENE (NELSON MILTON D#1)
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@5'	12/03/15	5	<0.002	<0.002	<0.002	<0.002	<0.20	<50	<200	0.160	8.60
N01@3'	12/03/15	3	<0.002	<0.002	<0.002	<0.002	<0.20	<50	<200	0.103	8.69
S01@3'	12/03/15	3	<0.002	<0.002	<0.002	<0.002	<0.20	<50	<200	0.0751	8.49
E01@3'	12/03/15	3	<0.002	<0.002	<0.002	<0.002	<0.20	<50	<200	0.0622	8.54
W01@3'	12/03/15	3	<0.002	<0.002	<0.002	<0.002	<0.20	<50	<200	0.0744	8.49

Notes:

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

COGCC = Colorado Oil and Gas Conservation Commission

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

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

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

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

EC = Electrical conductivity

BG = Background

mmhos/cm = Millimhos per centimeter

mg/kg = Milligrams per kilogram.

ft. bgs = Feet below ground surface.

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

Attachment A



DATE:	April 6, 2016
DESIGNED BY:	B. Nelson
DRAWN BY:	B. Nelson



Kerr-McGee Oil and Gas Onshore, LP
Milton H. Nelson Unit 'D'-62N68W29SENE (Milton Nelson D#1)
SENE, Section 29, Township 2 North, Range 68 West
Weld County, Colorado

Sample Location
Map

FIGURE
1

Attachment B

December 04, 2015

Tasman Geosciences

Christine Wasko

6899 Pecos Street, Unit C

Denver

CO 80211

Project Name - KMG - Milton Nelson D #1

Project Number - [none]

Attached are your analytical results for KMG - Milton Nelson D #1 received by Origins Laboratory, Inc. December 03, 2015. This project is associated with Origins project number X512049-01.

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

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

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

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

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

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



Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Milton Nelson D #1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01 @ 5'	X512049-01	Soil	December 3, 2015 14:04	12/03/2015 16:35
N01 @ 3'	X512049-02	Soil	December 3, 2015 14:05	12/03/2015 16:35
S01 @ 3'	X512049-03	Soil	December 3, 2015 14:06	12/03/2015 16:35
E01 @ 3'	X512049-04	Soil	December 3, 2015 14:07	12/03/2015 16:35
W01 @ 3'	X512049-05	Soil	December 3, 2015 14:08	12/03/2015 16:35

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Milton Nelson D #1

www.originslaboratory.com

page 1 of 1

XS1204

ORIGINS LABORATORY, INC

Client: Tasman Geosciences
Address: [blank]
Telephone Number: 352 262 9910
Email Address: cwasko@tasman-geo.com

Project Manager: Christine Wasko
Project Name: Milton Nelson D #1
Project Number: [blank]
Samples Collected By: Kate Rasmak

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa #		
B0125'	12/3/15	1404	2	X				X			GIBTEX 8240 TPH: D44060 805 EC, pH, SAR (15 EC 54.0)	1
N0123'	1405											2
S0123'	1406											3
F0123'	1407											4
W0123'	1408											5
												6
												7
												8
												9
												10

Relinquished By: [Signature] Date: 12/3/15 Time: 1600
Relinquished By: [Signature] Date: [blank] Time: [blank]

Received By: [Signature] Date: 12-3-15 Time: 1635
Received By: [Signature] Date: [blank] Time: [blank]

Turnaround Time: Same Day ☒ 24 Hr ☐ 48 Hr ☐ 72 Hr ☐ Standard ☐ 0.8

Date Results Needed [blank]

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

Origins Laboratory, Inc.

Jefe Pellegrini

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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Milton Nelson D #1

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: XS12049

Client: Tasman

Client Project ID: Milton Nelson D#1

Checklist Completed by: Jeff Smith

Shipped Via: H/D

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

Date/time completed: 12/3/15

Airbill #: N/A

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

(Describe)

Cooler Number/Temperature: 1 / 0.8 °C 1 / _____ °C 1 / _____ °C 1 / _____ °C

Thermometer ID: TU03

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"/>	
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.

Jeff Smith
Reviewed by (Project Manager)

12/3/15
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

Christine Wasko
Project Number: [none]
Project: KMG - Milton Nelson D #1

B01 @ 5'
12/3/2015 2:04:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X512049-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B5L0308	12/03/2015	12/03/2015
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"

Surrogate: o-Terphenyl 80.3 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B5L0307	12/03/2015	12/03/2015
Benzene	ND	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4 116 % 70-130 " " "
Surrogate: Toluene-d8 87.1 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 106 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.60		pH Units	1	B5L0309	12/03/2015	12/03/2015
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.160		mmhos/cm	"	B5L0310	12/03/2015	"
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Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Milton Nelson D #1

N01 @ 3'
12/3/2015 2:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X512049-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B5L0308	12/03/2015	12/03/2015
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"

Surrogate: o-Terphenyl	86.2 %	59-131			"	"	"
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B5L0307	12/03/2015	12/03/2015
Benzene	ND	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	115 %	70-130			"	"	"
Surrogate: Toluene-d8	87.8 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	111 %	70-130			"	"	"

pH in Soil by EPA 9045D

pH	8.69		pH Units	1	B5L0309	12/03/2015	12/03/2015
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.103		mmhos/cm	"	B5L0310	12/03/2015	"
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Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Milton Nelson D #1

S01 @ 3'
12/3/2015 2:06:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X512049-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B5L0308	12/03/2015	12/03/2015
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"

Surrogate: o-Terphenyl	86.3 %	59-131			"	"	"
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B5L0307	12/03/2015	12/03/2015
Benzene	ND	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	117 %	70-130			"	"	"
Surrogate: Toluene-d8	86.9 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	106 %	70-130			"	"	"

pH in Soil by EPA 9045D

pH	8.49		pH Units	1	B5L0309	12/03/2015	12/03/2015
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0751		mmhos/cm	"	B5L0310	12/03/2015	"
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Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Milton Nelson D #1

E01 @ 3'
12/3/2015 2:07:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X512049-04 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B5L0308	12/03/2015	12/03/2015
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"

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

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B5L0307	12/03/2015	12/03/2015
Benzene	ND	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4 119 % 70-130 " " "
Surrogate: Toluene-d8 87.2 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 103 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.54		pH Units	1	B5L0309	12/03/2015	12/03/2015
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0622		mmhos/cm	"	B5L0310	12/03/2015	"
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Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Milton Nelson D #1

W01 @ 3'
12/3/2015 2:08:00PM

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

Origins Laboratory, Inc.
X512049-05 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	B5L0308	12/03/2015	12/03/2015
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"

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

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B5L0307	12/03/2015	12/03/2015
Benzene	ND	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4 118 % 70-130 " " "
Surrogate: Toluene-d8 87.0 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 109 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.49		pH Units	1	B5L0309	12/03/2015	12/03/2015
----	------	--	----------	---	---------	------------	------------

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0744		mmhos/cm	"	B5L0310	12/03/2015	"
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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

Christine Wasko
Project Number: [none]
Project: KMG - Milton Nelson D #1

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 B5L0307 - EPA 5030 (soil)

Blank (B5L0307-BLK1)

Prepared: 12/03/2015 Analyzed: 12/03/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	74.1		ug/kg	62.5		119	70-130			
Surrogate: Toluene-d8	54.2		"	62.5		86.6	70-130			
Surrogate: 4-Bromofluorobenzene	65.5		"	62.5		105	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Milton Nelson D #1

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 B5L0307 - EPA 5030 (soil)										
LCS (B5L0307-BS1)					Prepared: 12/03/2015 Analyzed: 12/03/2015					
Benzene	0.109	0.002	mg/kg	0.100		109	77.1-124			
Toluene	0.090	0.002	"	0.100		89.6	74.5-128			
Ethylbenzene	0.091	0.002	"	0.100		91.5	66.4-127			
m,p-Xylene	0.190	0.004	"	0.200		95.2	76.6-124			
o-Xylene	0.092	0.002	"	0.100		91.9	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	71.1		ug/kg	62.5		114	70-130			
Surrogate: Toluene-d8	54.8		"	62.5		87.6	70-130			
Surrogate: 4-Bromofluorobenzene	64.3		"	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

Christine Wasko
Project Number: [none]
Project: KMG - Milton Nelson D #1

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 B5L0307 - EPA 5030 (soil)

Matrix Spike (B5L0307-MS1)		Source: X512049-01			Prepared: 12/03/2015 Analyzed: 12/03/2015					
Benzene	0.103	0.002	mg/kg	0.100	ND	103	71.8-126			
Toluene	0.086	0.002	"	0.100	ND	86.1	65.1-130			
Ethylbenzene	0.089	0.002	"	0.100	ND	89.1	62.2-130			
m,p-Xylene	0.185	0.004	"	0.200	ND	92.6	46.5-137			
o-Xylene	0.088	0.002	"	0.100	ND	87.6	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	71.1		ug/kg	62.5		114	70-130			
Surrogate: Toluene-d8	55.4		"	62.5		88.6	70-130			
Surrogate: 4-Bromofluorobenzene	66.0		"	62.5		106	70-130			

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Milton Nelson D #1

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 B5L0307 - EPA 5030 (soil)

Matrix Spike Dup (B5L0307-MSD1)		Source: X512049-01			Prepared: 12/03/2015 Analyzed: 12/03/2015					
Benzene	0.113	0.002	mg/kg	0.100	ND	113	71.8-126	9.34	11.3	
Toluene	0.094	0.002	"	0.100	ND	93.6	65.1-130	8.28	15.4	
Ethylbenzene	0.098	0.002	"	0.100	ND	98.0	62.2-130	9.60	19.6	
m,p-Xylene	0.202	0.004	"	0.200	ND	101	46.5-137	8.87	19.2	
o-Xylene	0.096	0.002	"	0.100	ND	95.7	54.2-134	8.86	17.9	
Surrogate: 1,2-Dichloroethane-d4	70.7		ug/kg	62.5		113	70-130			
Surrogate: Toluene-d8	54.7		"	62.5		87.6	70-130			
Surrogate: 4-Bromofluorobenzene	66.4		"	62.5		106	70-130			

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6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Milton Nelson D #1

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 B5L0308 - EPA 3580

Blank (B5L0308-BLK1)

Prepared: 12/03/2015 Analyzed: 12/03/2015

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
Surrogate: o-Terphenyl	41		"	50.0		81.7	59-131			

LCS (B5L0308-BS1)

Prepared: 12/03/2015 Analyzed: 12/03/2015

Diesel (C10-C28)	820	50	mg/kg	1000		82.0	64-121			
Residual Range Organics (C28-C36)	890	200	"	1000		88.6	58-124			
Surrogate: o-Terphenyl	45		"	50.0		90.4	59-131			

Matrix Spike (B5L0308-MS1)

Source: X512049-01

Prepared: 12/03/2015 Analyzed: 12/03/2015

Diesel (C10-C28)	860	50	mg/kg	1000	ND	86.4	53-125			
Residual Range Organics (C28-C36)	950	200	"	1000	16	93.0	47-133			
Surrogate: o-Terphenyl	47		"	50.0		94.4	59-131			

Matrix Spike Dup (B5L0308-MSD1)

Source: X512049-01

Prepared: 12/03/2015 Analyzed: 12/03/2015

Diesel (C10-C28)	860	50	mg/kg	1000	ND	86.0	53-125	0.447	20	
Residual Range Organics (C28-C36)	940	200	"	1000	16	92.9	47-133	0.0643	20	
Surrogate: o-Terphenyl	48		"	50.0		95.7	59-131			

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6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Milton Nelson D #1

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 B5L0309 - NO PREP										
Duplicate (B5L0309-DUP1)	Source: X512049-01				Prepared: 12/03/2015 Analyzed: 12/03/2015					
pH	8.63		pH Units		8.60			0.348	25	
Batch B5L0310 - NO PREP										
Blank (B5L0310-BLK1)					Prepared: 12/03/2015 Analyzed: 12/03/2015					
Specific Conductance (EC)	0.00260		mmhos/cm							
Duplicate (B5L0310-DUP1)	Source: X512049-01				Prepared: 12/03/2015 Analyzed: 12/03/2015					
Specific Conductance (EC)	0.147		mmhos/cm		0.160			8.58	25	

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Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Christine Wasko

Project Number: [none]

Project: KMG - Milton Nelson D #1

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President