



June 1, 2015

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

**Re: Sump Closure Summary Letter Report
Cundall 11-12 #2
API: 05-001-08995
Facility ID: 320315
Legal: NWNW Sec 12-T1S-R68W
Remediation Project #8961**

Dear Mr. LaRue:

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 Colorado Oil and Gas Conservation Commission (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 removal of a sump on September 24, 2014. Soil sampling activities, laboratory analytical results, and conclusions are presented below. The general site layout, excavation dimensions, and sample locations are provided in the attached field sketch (Attachment A).

The final extent of the excavation measured approximately 25 feet by 25 feet with an approximate depth of 13 feet below ground surface (bgs). Approximately 220 cubic yards of impacted material were excavated and transported to the Front Range Regional Landfill in Erie, Colorado for disposal. No liner was present beneath the sump, and groundwater was not encountered in the excavation.

Confirmation soil samples were collected from the excavation base and sidewalls at approximately 13 feet and 9 feet bgs, respectively. Soil samples were field screened for volatile organic compound (VOC) concentrations using a photoionization detector (PID). The four sidewall soil samples (north, south, east, and west) and the base sample collected from the final extent of the excavation area were submitted to Origins Laboratory in Denver, Colorado for



analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX) and total petroleum hydrocarbons (TPH) - gasoline range organics (GRO) by United States Environmental Protection Agency (USEPA) Method 8260B, and TPH - diesel range and oil range organics (DRO and ORO) by USEPA Method 8015. 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 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. The tank battery has since been re-built in a new location.

Please contact me at (720) 409-8791 if you have any questions regarding this report or require additional information.

Sincerely,

A handwritten signature in blue ink that reads "Christine Wasko".

Christine Wasko
Project Scientist

Attachments:

- Table 1 – Soil Sample Results Summary Table
- Attachment A – Field Sketch
- Attachment B – Laboratory Analytical Reports

Table

TABLE 1
CUNDALL 11-12 #2
SOIL SAMPLE RESULTS SUMMARY TABLE
KERR-McGEE OIL AND GAS ONSHORE LP

Sample ID	Date Sampled	Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TVPH - GRO (mg/kg)	TEPH - DRO + ORO (mg/kg)
COGCC standards for soil (mg/kg) ⁽¹⁾			0.17	85	100	175	500	
B01@13'	9/24/2014	13	<0.0020	<0.0020	<0.0020	<0.0020	1.16	<200
N01@9'	9/24/2014	9	<0.0020	<0.0020	<0.0020	<0.0020	0.942	<200
S01@9'	9/24/2014	9	<0.0020	<0.0020	<0.0020	<0.0020	<0.200	<200
E01@9'	9/24/2014	9	<0.0020	<0.0020	<0.0020	<0.0020	0.320	<200
W01@9'	9/24/2014	9	<0.0020	<0.0020	<0.0020	<0.0020	<0.200	<200

Notes:

1. Standards for soil are taken from 2 CCR 404-1, Table 910-1, effective February 1, 2014.

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

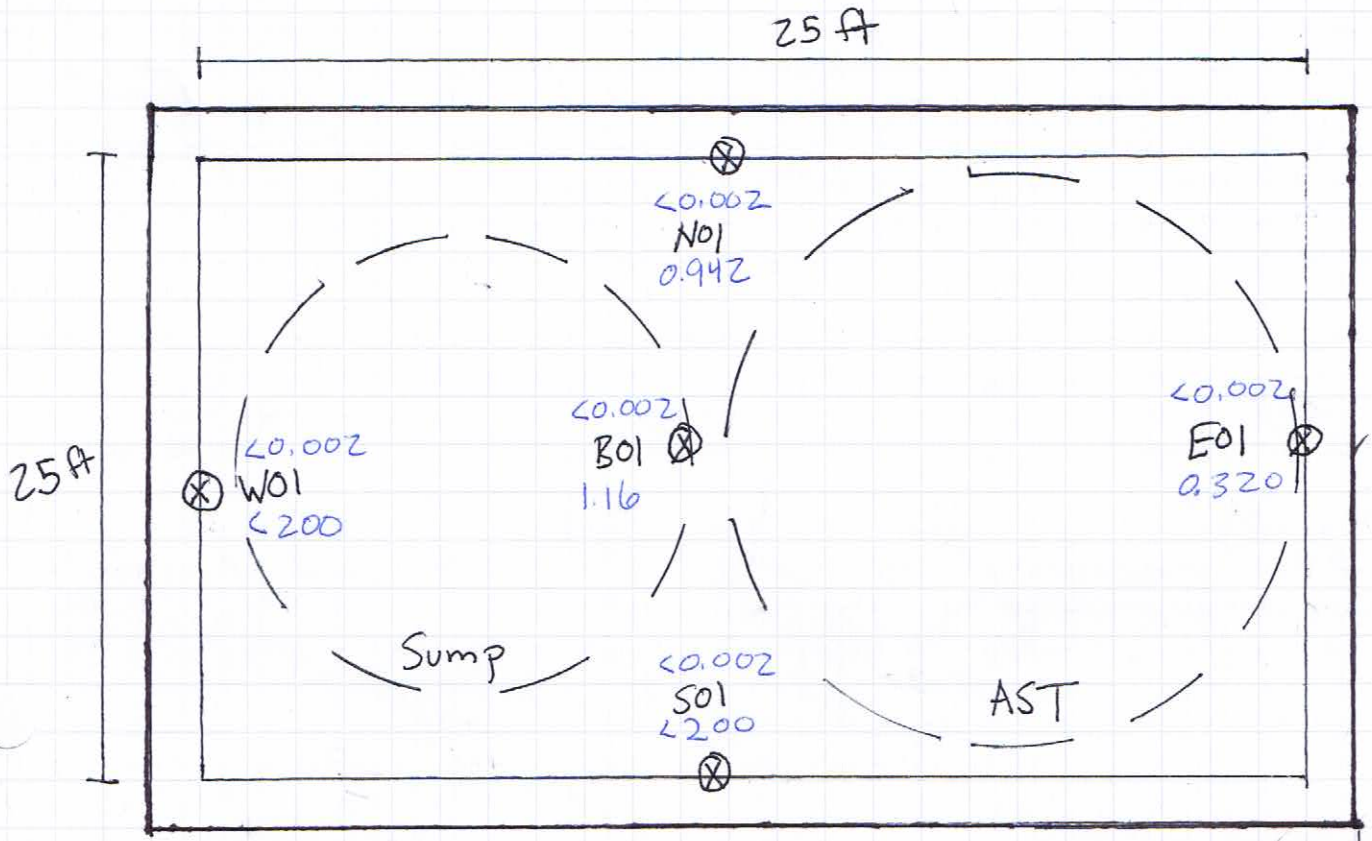
mg/kg = Milligrams per kilogram.

bgs = Below ground surface.

Bold Text = Analytical result is in exceedance of COGCC Table 910-1 soil standards

Attachment A

Cundall 11-12 #2



Legend

- Excavation Extent
- - - Former Infrastructure
- Berm
- ⊗ Approximate Soil Sample Location

Surface
Drainage

Attachment B

September 25, 2014

Tasman Geosciences

Phil Hamlin

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Cundall 11-12 #2

Project Number - 88615627

Attached are your analytical results for KMG - Cundall 11-12 #2 received by Origins Laboratory, Inc. September 24, 2014. This project is associated with Origins project number X409255-01.

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

Phil Hamlin
Project Number: 88615627
Project: KMG - Cundall 11-12 #2

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N01@9'	X409255-01	Soil	September 24, 2014 15:50	09/24/2014 16:10
E01@9'	X409255-02	Soil	September 24, 2014 15:55	09/24/2014 16:10
W01@9'	X409255-03	Soil	September 24, 2014 16:00	09/24/2014 16:10
S01@9'	X409255-04	Soil	September 24, 2014 16:05	09/24/2014 16:10
B01@13'	X409255-05	Soil	September 24, 2014 16:10	09/24/2014 16:10

Origins Laboratory, Inc.



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

Noelle Doyle Mathis, President

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Phil Hamlin
 Project Number: 88615627
 Project: KMG - Cundall 11-12 #2

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X409255 Client: Tasman
 Client Project ID: Cundall 11-12 #2
 Checklist Completed by: Joseph Smith Shipped Via: H/D
 Date/time completed: 9/24/14 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: N/A
 Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____
 Cooler Number/Temperature: _____ / 15.8 °C _____ / _____ °C _____ / _____ °C (Describe)
 Thermometer ID: T002

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.

Phil Hamlin Reviewed by (Project Manager) 9/24/14 Date/Time Reviewed

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Phil Hamlin
 Project Number: 88615627
 Project: KMG - Cundall 11-12 #2

N01@9'

9/24/2014 3:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 X409255-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	4124011	09/24/2014	09/24/2014	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 84.4 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	0.942	0.200	mg/kg	1	4124012	09/24/2014	09/24/2014	
Benzene	ND	0.0020	"	"	"	"	"	
Toluene	ND	0.0020	"	"	"	"	"	
Ethylbenzene	ND	0.0020	"	"	"	"	"	
Xylenes, total	ND	0.0020	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 117 % 70-130 " " "

Surrogate: Toluene-d8 102 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 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

Phil Hamlin
 Project Number: 88615627
 Project: KMG - Cundall 11-12 #2

E01@9'
 9/24/2014 3:55:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 X409255-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	4124011	09/24/2014	09/24/2014	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	
<i>Surrogate: o-Terphenyl</i>	86.0 %	59-131			"	"	"	

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	0.320	0.200	mg/kg	1	4124012	09/24/2014	09/24/2014	
Benzene	ND	0.0020	"	"	"	"	"	
Toluene	ND	0.0020	"	"	"	"	"	
Ethylbenzene	ND	0.0020	"	"	"	"	"	
Xylenes, total	ND	0.0020	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	119 %	70-130			"	"	"	
<i>Surrogate: Toluene-d8</i>	103 %	70-130			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	97.1 %	70-130			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Phil Hamlin
 Project Number: 88615627
 Project: KMG - Cundall 11-12 #2

W01@9'

9/24/2014 4:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 X409255-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	4124011	09/24/2014	09/24/2014	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 80.0 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4124012	09/24/2014	09/24/2014	
Benzene	ND	0.0020	"	"	"	"	"	
Toluene	ND	0.0020	"	"	"	"	"	
Ethylbenzene	ND	0.0020	"	"	"	"	"	
Xylenes, total	ND	0.0020	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 123 % 70-130 " " "

Surrogate: Toluene-d8 105 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 99.3 % 70-130 " " "

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Phil Hamlin
 Project Number: 88615627
 Project: KMG - Cundall 11-12 #2

S01@9'

9/24/2014 4:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 X409255-04 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	4124011	09/24/2014	09/24/2014	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 78.7 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	4124012	09/24/2014	09/24/2014	
Benzene	ND	0.0020	"	"	"	"	"	
Toluene	ND	0.0020	"	"	"	"	"	
Ethylbenzene	ND	0.0020	"	"	"	"	"	
Xylenes, total	ND	0.0020	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 124 % 70-130 " " "

Surrogate: Toluene-d8 104 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Phil Hamlin
 Project Number: 88615627
 Project: KMG - Cundall 11-12 #2

B01@13'
 9/24/2014 4:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 X409255-05 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	4124011	09/24/2014	09/24/2014	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 102 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	1.16	0.200	mg/kg	1	4124012	09/24/2014	09/24/2014	
Benzene	ND	0.0020	"	"	"	"	"	
Toluene	ND	0.0020	"	"	"	"	"	
Ethylbenzene	ND	0.0020	"	"	"	"	"	
Xylenes, total	ND	0.0020	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 118 % 70-130 " " "

Surrogate: Toluene-d8 104 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 103 % 70-130 " " "

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Phil Hamlin
 Project Number: 88615627
 Project: KMG - Cundall 11-12 #2

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 4124012 - EPA 5030 (soil)

Blank (4124012-BLK1)

Prepared: 09/24/2014 Analyzed: 09/24/2014

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0020	"							
Ethylbenzene	ND	0.0020	"							
Xylenes, total	ND	0.0020	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>72.0</i>		<i>ug/kg</i>	<i>62.5</i>		<i>115</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>62.2</i>		<i>"</i>	<i>62.5</i>		<i>99.4</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>64.2</i>		<i>"</i>	<i>62.5</i>		<i>103</i>	<i>70-130</i>			

Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Phil Hamlin
 Project Number: 88615627
 Project: KMG - Cundall 11-12 #2

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 4124012 - EPA 5030 (soil)

LCS (4124012-BS1)

Prepared: 09/24/2014 Analyzed: 09/24/2014

Benzene	0.0979	0.0020	mg/kg	0.100		97.9	77.1-124			
Toluene	0.0948	0.0020	"	0.100		94.8	74.5-128			
Ethylbenzene	0.0938	0.0020	"	0.100		93.8	66.4-127			
m,p-Xylene	0.187	0.0040	"	0.200		93.6	76.6-124			
o-Xylene	0.0934	0.0020	"	0.100		93.4	76.6-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>68.5</i>		<i>ug/kg</i>	<i>62.5</i>		<i>110</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>63.1</i>		<i>"</i>	<i>62.5</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>64.4</i>		<i>"</i>	<i>62.5</i>		<i>103</i>	<i>70-130</i>			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Phil Hamlin
 Project Number: 88615627
 Project: KMG - Cundall 11-12 #2

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 4124012 - EPA 5030 (soil)

Matrix Spike (4124012-MS1)	Source: X409246-01			Prepared: 09/24/2014 Analyzed: 09/24/2014						
Benzene	0.0993	0.0020	mg/kg	0.100	0.0072	92.0	71.8-126			
Toluene	0.0895	0.0020	"	0.100	ND	89.5	65.1-130			
Ethylbenzene	0.0825	0.0020	"	0.100	0.0088	73.7	62.2-130			
m,p-Xylene	0.155	0.0040	"	0.200	0.0011	76.8	46.5-137			
o-Xylene	0.0780	0.0020	"	0.100	0.0004	77.6	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	76.4		ug/kg	62.5		122	70-130			
Surrogate: Toluene-d8	63.6		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	63.0		"	62.5		101	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Phil Hamlin
 Project Number: 88615627
 Project: KMG - Cundall 11-12 #2

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 4124012 - EPA 5030 (soil)

Matrix Spike Dup (4124012-MSD1)	Source: X409246-01			Prepared: 09/24/2014 Analyzed: 09/24/2014						
Benzene	0.108	0.0020	mg/kg	0.100	0.0072	101	71.8-126	8.51	11.3	
Toluene	0.0972	0.0020	"	0.100	ND	97.2	65.1-130	8.24	15.4	
Ethylbenzene	0.0914	0.0020	"	0.100	0.0088	82.6	62.2-130	10.2	19.6	
m,p-Xylene	0.176	0.0040	"	0.200	0.0011	87.5	46.5-137	13.0	19.2	
o-Xylene	0.0882	0.0020	"	0.100	0.0004	87.8	54.2-134	12.3	17.9	
Surrogate: 1,2-Dichloroethane-d4	70.3		ug/kg	62.5		112	70-130			
Surrogate: Toluene-d8	64.6		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	63.7		"	62.5		102	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Phil Hamlin
 Project Number: 88615627
 Project: KMG - Cundall 11-12 #2

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 8015M - 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 4I24011 - EPA 3580

Blank (4I24011-BLK1)

Prepared: 09/24/2014 Analyzed: 09/24/2014

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
<i>Surrogate: o-Terphenyl</i>	47		g	50.0		93.4	59-131			

LCS (4I24011-BS1)

Prepared: 09/24/2014 Analyzed: 09/24/2014

Diesel (C10-C28)	930	50	mg/kg	1000		93.4	64-121			
Residual Range Organics (C28-C36)	920	200	"	1000		92.2	58-124			
<i>Surrogate: o-Terphenyl</i>	49		g	50.0		98.4	59-131			

Matrix Spike (4I24011-MS1)

Source: X409246-01

Prepared: 09/24/2014 Analyzed: 09/24/2014

Diesel (C10-C28)	980	50	mg/kg	1000	110	87.3	53-125			
Residual Range Organics (C28-C36)	1100	200	"	1000	87	106	47-133			
<i>Surrogate: o-Terphenyl</i>	42		g	50.0		83.0	59-131			

Matrix Spike Dup (4I24011-MSD1)

Source: X409246-01

Prepared: 09/24/2014 Analyzed: 09/24/2014

Diesel (C10-C28)	850	50	mg/kg	1000	110	73.9	53-125	14.6	20	
Residual Range Organics (C28-C36)	950	200	"	1000	87	86.4	47-133	18.5	20	
<i>Surrogate: o-Terphenyl</i>	40		g	50.0		80.9	59-131			

Origins Laboratory, Inc.



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

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Phil Hamlin
Project Number: 88615627
Project: KMG - Cundall 11-12 #2

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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Noelle Doyle Mathis, President