



Table 1 - Soil Laboratory Results

Kerr-McGee Oil and Gas Onshore LP

Location Name: WCR Properties 41-5/Spaur 1-5 Tank Battery

Location ID: 305221

County: Weld

COGCC Table 910-1 Concentration Level			500 mg/kg			0.17 mg/kg	85 mg/kg	100 mg/kg	175 mg/kg	4 mmhos/cm	6-9 units
Sample ID	Sample Date	Sample Depth (ft bgs)	TPH-GRO (C6-C10) mg/kg	TPH-DRO (C10-C28) mg/kg	TPH-RRO (C28-C40) mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes - total mg/kg	EC (<4 mmhos/cm or 2x background)	pH units
N01@3'	7/26/18	3'	0.252	<25.0	<100.0	0.004	<0.002	<0.002	<0.002	0.0628	8.44
E01@3'	7/26/18	3'	0.355	<25.0	<100.0	0.022	<0.002	<0.002	<0.002	0.0275	8.19
S01@3'	7/26/18	3'	<0.200	<25.0	<100.0	<0.002	<0.002	<0.002	<0.002	0.0284	8.25
B01@4.5'	7/26/18	4.5'	<0.200	<25.0	<100.0	0.009	<0.002	<0.002	<0.002	0.118	8.74
W01@3'	7/26/18	3'	<0.200	<25.0	<100.0	0.018	<0.002	<0.002	<0.002	0.0533	7.89
N01@12'	8/3/18	12'	2660	1440	578	12.9	<0.050	13.9	93.9	0.247	8.27
B01@15'	8/3/18	15'	58.8	165	63.2	<0.050	<0.050	0.126	0.814	0.116	8.40
S01@10'	8/7/18	10'	16.1	52.3	100	<0.050	<0.050	<0.50	0.233	0.223	7.61
ES01@10'	8/7/18	10'	828	292	122	0.99	<0.050	3.44	28.6	0.19	7.77
EN01@10'	8/7/18	10'	<5.0	<25.0	<100.0	<0.050	<0.050	<0.050	<0.050	0.132	8.09
N02@10'	8/7/18	10'	7.44	<25.0	<100.0	<0.050	<0.050	<0.050	<0.050	0.167	7.94
WS01@10'	8/7/18	10'	<5.0	<25.0	<100.0	<0.050	<0.050	<0.050	<0.050	0.135	7.91
WN01@10'	8/7/18	10'	63	134	<100.0	<0.050	<0.050	0.176	1.88	0.14	8.05
ES02@10'	8/9/18	10'	62.5	156	<100.0	0.14	<0.050	0.309	2.36	0.13	8.21

Notes:

TPH Total Petroleum Hydrocarbons

GRO Gasoline Range Organics (C6-C10)

DRO Diesel Range Organics (C10-C28)

RRO Residual Range Organics (C28-C36)

Bold Indicates results exceeded COGCC Table 910-1 allowable concentrations

bgs

mg/kg

mmhos/cm

NA

COGCC

*

below ground surface

milligram per kilogram

millimhos per centimeter

Not analyzed/ Not Applicable

Colorado Oil and Gas Conservation Commission

Sample was collected below the designated root zone (>3' bgs)

Apex Companies, LLC

1746 Cole Blvd. Suite 265

Lakewood, CO 80401



Table 2 - Groundwater Laboratory Results

Kerr-McGee Oil and Gas Onshore LP

Location Name: WCR Properties 41-5/Spaur 1-5 Tank Battery

Location ID: 305221

County: Weld

COGCC Table 910-1 Concentration Levels (ug/L)			5	1,000	700	10,000
Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene ug/L	Toluene ug/L	Ethylbenzene ug/L	Xylenes - total ug/L
GW01	8/6/18	12	2,010	<4.0	56	869
GW02	8/7/18	15	5.52	<4.0	7.2	23.5

ft bgs feet below ground surface

ug/L micrograms per liter

NA Not analyzed/ Not Applicable

COGCC Colorado Oil and Gas Conservation Commission

Bold Indicates results exceeded COGCC Table 910-1 allowable concentrations

Attachment A

Laboratory Analytical Report



August 08, 2018

Apex Companies, LLC

Chandler Cole

4150 Darley Avenue, Suite 1

Boulder CO 80305

Project Name - KMG - WCR Properties 41-5/Spaur 1-5 Tank Battery
Project Number - [none]

Attached are your analytical results for KMG - WCR Properties 41-5/Spaur 1-5 Tank Battery received by Origins Laboratory, Inc. July 26, 2018. This project is associated with Origins project number Y807363-01.

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

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N01@3'	Y807363-01	Soil	July 26, 2018 15:25	07/26/2018 17:35
E01@3'	Y807363-02	Soil	July 26, 2018 15:28	07/26/2018 17:35
S01@3'	Y807363-03	Soil	July 26, 2018 15:30	07/26/2018 17:35
B01@4.5'	Y807363-04	Soil	July 26, 2018 15:35	07/26/2018 17:35
W01@3'	Y807363-05	Soil	July 26, 2018 15:38	07/26/2018 17:35

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.

Origins Laboratory, Inc.

Jeff Pellipini

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y807363

Client: Apex

Client Project ID: KMG - WCR 41-5

Checklist Completed by: JG

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

Date/time completed: 7/26/2018

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 5.6 °C _____ °C _____ °C _____ °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 type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input 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)

7/26/18
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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

N01@3'

7/26/2018 3:25:00PM

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

Origins Laboratory, Inc.
Y807363-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8G2604	ZZZ	07/26/2018	07/27/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ZZZ	"	"	U

Surrogate: o-Terphenyl 72.3 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	0.252	0.200	mg/kg	1	B8G2602	ZZZ	07/26/2018	07/26/2018	
Benzene	0.004	0.002	"	"	"	ZZZ	"	"	
Toluene	ND	0.002	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.002	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.002	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4 92.8 % 70-130 " " "
Surrogate: Toluene-d8 95.3 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 99.1 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.44		pH Units	1	B8G2609	OLAB	07/26/2018	07/26/2018	
----	------	--	----------	---	---------	------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0628	0.00504	mmhos/cm	"	B8G2610	OLAB	"	"	
---------------------------	--------	---------	----------	---	---------	------	---	---	--

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

E01@3'

7/26/2018 3:28:00PM

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

Origins Laboratory, Inc.
Y807363-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8G2604	ZZZ	07/26/2018	07/27/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ZZZ	"	"	U

Surrogate: o-Terphenyl 68.4 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	0.355	0.200	mg/kg	1	B8G2602	ZZZ	07/26/2018	07/26/2018	
Benzene	0.022	0.002	"	"	"	ZZZ	"	"	
Toluene	ND	0.002	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.002	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.002	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4 90.7 % 70-130 " " "
Surrogate: Toluene-d8 96.8 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 96.8 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.19		pH Units	1	B8G2609	OLAB	07/26/2018	07/26/2018	
----	------	--	----------	---	---------	------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0275	0.00500	mmhos/cm	"	B8G2610	OLAB	"	"	
---------------------------	--------	---------	----------	---	---------	------	---	---	--

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

S01@3'

7/26/2018 3:30:00PM

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

Origins Laboratory, Inc.
Y807363-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8G2604	ZZZ	07/26/2018	07/27/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ZZZ	"	"	U

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

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8G2602	ZZZ	07/26/2018	07/27/2018	U
Benzene	ND	0.002	"	"	"	ZZZ	"	"	U
Toluene	ND	0.002	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.002	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.002	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4 91.4 % 70-130 " " "
Surrogate: Toluene-d8 97.1 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 95.2 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.25		pH Units	1	B8G2609	OLAB	07/26/2018	07/26/2018	
----	------	--	----------	---	---------	------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0284	0.00501	mmhos/cm	"	B8G2610	OLAB	"	"	
---------------------------	--------	---------	----------	---	---------	------	---	---	--

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

B01@4.5'
7/26/2018 3:35:00PM

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

Origins Laboratory, Inc.
Y807363-04 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8G2604	ZZZ	07/26/2018	07/27/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ZZZ	"	"	U

Surrogate: o-Terphenyl 73.2 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8G2602	ZZZ	07/26/2018	07/27/2018	U
Benzene	0.009	0.002	"	"	"	ZZZ	"	"	
Toluene	ND	0.002	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.002	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.002	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4 92.9 % 70-130 " " "
Surrogate: Toluene-d8 97.4 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 96.7 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.74		pH Units	1	B8G2609	OLAB	07/26/2018	07/26/2018	
----	------	--	----------	---	---------	------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.118	0.00509	mmhos/cm	"	B8G2610	OLAB	"	"	
---------------------------	-------	---------	----------	---	---------	------	---	---	--

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

W01@3'

7/26/2018 3:38:00PM

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

Origins Laboratory, Inc.
Y807363-05 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8G2604	ZZZ	07/26/2018	07/27/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ZZZ	"	"	U

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

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8G2602	ZZZ	07/26/2018	07/27/2018	U
Benzene	0.018	0.002	"	"	"	ZZZ	"	"	
Toluene	ND	0.002	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.002	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.002	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4 93.8 % 70-130 " " "
Surrogate: Toluene-d8 117 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 116 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.89		pH Units	1	B8G2609	OLAB	07/26/2018	07/26/2018	
----	------	--	----------	---	---------	------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0533	0.00500	mmhos/cm	"	B8G2610	OLAB	"	"	
---------------------------	--------	---------	----------	---	---------	------	---	---	--

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8G2602 - EPA 5030 (soil)										
Blank (B8G2602-BLK1)					Prepared: 07/26/2018 Analyzed: 07/26/2018					
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		ug/kg	62.5		99.6	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.9	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8G2602 - EPA 5030 (soil)										
Blank (B8G2602-BLK2)					Prepared: 07/26/2018 Analyzed: 07/26/2018					
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		ug/kg	62.5		100	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8G2602 - EPA 5030 (soil)

LCS (B8G2602-BS1)

Prepared: 07/26/2018 Analyzed: 07/26/2018

Benzene	0.103	0.002	mg/kg	0.100		103	77.1-124			
Toluene	0.104	0.002	"	0.100		104	74.5-128			
Ethylbenzene	0.104	0.002	"	0.100		104	66.4-127			
m,p-Xylene	0.207	0.004	"	0.200		103	76.6-124			
o-Xylene	0.104	0.002	"	0.100		104	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	59		ug/kg	62.5		93.6	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.3	70-130			

Origins Laboratory, Inc.



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

Jen Pellegrini For Noelle Doyle Mathis, President

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8G2602 - EPA 5030 (soil)

LCS (B8G2602-BS2)

Prepared: 07/26/2018 Analyzed: 07/26/2018

Benzene	0.107	0.002	mg/kg	0.100		107	77.1-124			
Toluene	0.107	0.002	"	0.100		107	74.5-128			
Ethylbenzene	0.110	0.002	"	0.100		110	66.4-127			
m,p-Xylene	0.219	0.004	"	0.200		110	76.6-124			
o-Xylene	0.109	0.002	"	0.100		109	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	59		ug/kg	62.5		94.1	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.1	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8G2602 - EPA 5030 (soil)

Matrix Spike (B8G2602-MS1)		Source: Y807355-01			Prepared: 07/26/2018 Analyzed: 07/26/2018					
Benzene	0.099	0.002	mg/kg	0.100	ND	99.3	71.8-126			
Toluene	0.100	0.002	"	0.100	ND	99.9	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	0.100	0.002	"	0.100	ND	100	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	59		ug/kg	62.5		94.4	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.7	70-130			

Origins Laboratory, Inc.



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

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8G2602 - EPA 5030 (soil)

Matrix Spike (B8G2602-MS2)		Source: Y807355-02			Prepared: 07/26/2018 Analyzed: 07/26/2018					
Benzene	0.104	0.002	mg/kg	0.100	ND	104	71.8-126			
Toluene	0.103	0.002	"	0.100	ND	103	65.1-130			
Ethylbenzene	0.103	0.002	"	0.100	ND	103	62.2-130			
m,p-Xylene	0.206	0.004	"	0.200	ND	103	46.5-137			
o-Xylene	0.103	0.002	"	0.100	ND	103	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		98.6	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.8	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8G2602 - EPA 5030 (soil)

Matrix Spike Dup (B8G2602-MSD1)		Source: Y807355-01			Prepared: 07/26/2018 Analyzed: 07/26/2018					
Benzene	0.101	0.002	mg/kg	0.100	ND	101	71.8-126	1.76	11.3	
Toluene	0.102	0.002	"	0.100	ND	102	65.1-130	1.65	15.4	
Ethylbenzene	0.102	0.002	"	0.100	ND	102	62.2-130	0.711	19.6	
m,p-Xylene	0.205	0.004	"	0.200	ND	103	46.5-137	1.59	19.2	
o-Xylene	0.102	0.002	"	0.100	ND	102	54.2-134	2.15	17.9	
Surrogate: 1,2-Dichloroethane-d4	59		ug/kg	62.5		94.0	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.4	70-130			

Origins Laboratory, Inc.



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

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8G2602 - EPA 5030 (soil)

Matrix Spike Dup (B8G2602-MSD2)		Source: Y807355-02			Prepared: 07/26/2018 Analyzed: 07/26/2018					
Benzene	0.104	0.002	mg/kg	0.100	ND	104	71.8-126	0.596	11.3	
Toluene	0.102	0.002	"	0.100	ND	102	65.1-130	0.176	15.4	
Ethylbenzene	0.100	0.002	"	0.100	ND	100	62.2-130	2.21	19.6	
m,p-Xylene	0.201	0.004	"	0.200	ND	100	46.5-137	2.47	19.2	
o-Xylene	0.101	0.002	"	0.100	ND	101	54.2-134	1.59	17.9	
Surrogate: 1,2-Dichloroethane-d4	61		ug/kg	62.5		97.2	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.6	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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

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

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

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

Batch B8G2604 - EPA 3550B

Blank (B8G2604-BLK1)

Prepared: 07/26/2018 Analyzed: 07/26/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	37		"	50.0		74.8	59-131			

Blank (B8G2604-BLK2)

Prepared: 07/26/2018 Analyzed: 07/26/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	44		"	50.0		87.5	59-131			

LCS (B8G2604-BS1)

Prepared: 07/26/2018 Analyzed: 07/26/2018

Diesel (C10-C28)	804	50.0	mg/kg	1000		80.4	64-121			
Residual Range Organics (C28-C40)	934	200	"	1000		93.4	58-124			
Surrogate: o-Terphenyl	47		"	50.0		94.4	59-131			

LCS (B8G2604-BS2)

Prepared: 07/26/2018 Analyzed: 07/26/2018

Diesel (C10-C28)	839	50.0	mg/kg	1000		83.9	64-121			
Residual Range Organics (C28-C40)	946	200	"	1000		94.6	58-124			
Surrogate: o-Terphenyl	47		"	50.0		93.1	59-131			

Matrix Spike (B8G2604-MS1)

Source: Y807346-01

Prepared: 07/26/2018 Analyzed: 07/26/2018

Diesel (C10-C28)	898	50.0	mg/kg	1000	ND	89.8	53-125			
Residual Range Organics (C28-C40)	1020	200	"	1000	8.64	101	47-133			

Origins Laboratory, Inc.



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

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8G2604 - EPA 3550B										
Matrix Spike (B8G2604-MS1)		Source: Y807346-01			Prepared: 07/26/2018 Analyzed: 07/26/2018					
Surrogate: o-Terphenyl	51		mg/kg	50.0		101	59-131			
Matrix Spike (B8G2604-MS2)		Source: Y807356-01			Prepared: 07/26/2018 Analyzed: 07/26/2018					
Diesel (C10-C28)	868	50.0	mg/kg	1000	ND	86.8	53-125			
Residual Range Organics (C28-C40)	984	200	"	1000	19.4	96.5	47-133			
Surrogate: o-Terphenyl	47		"	50.0		94.3	59-131			
Matrix Spike Dup (B8G2604-MSD1)		Source: Y807346-01			Prepared: 07/26/2018 Analyzed: 07/26/2018					
Diesel (C10-C28)	876	50.0	mg/kg	1000	ND	87.6	53-125	2.51	20	
Residual Range Organics (C28-C40)	1020	200	"	1000	8.64	102	47-133	0.633	20	
Surrogate: o-Terphenyl	50		"	50.0		99.1	59-131			
Matrix Spike Dup (B8G2604-MSD2)		Source: Y807356-01			Prepared: 07/26/2018 Analyzed: 07/26/2018					
Diesel (C10-C28)	838	50.0	mg/kg	1000	ND	83.8	53-125	3.51	20	
Residual Range Organics (C28-C40)	967	200	"	1000	19.4	94.8	47-133	1.75	20	
Surrogate: o-Terphenyl	48		"	50.0		96.9	59-131			

Origins Laboratory, Inc.



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

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8G2609 - NO PREP										
Duplicate (B8G2609-DUP1)		Source: Y807362-01			Prepared: 07/26/2018 Analyzed: 07/26/2018					
pH	7.55		pH Units		7.87			4.15	25	
Batch B8G2610 - NO PREP										
Blank (B8G2610-BLK1)		Prepared: 07/26/2018 Analyzed: 07/26/2018								
Specific Conductance (EC)	0.00410	0.00500	mmhos/cm							
Duplicate (B8G2610-DUP1)		Source: Y807362-01			Prepared: 07/26/2018 Analyzed: 07/26/2018					
Specific Conductance (EC)	0.159	0.00500	mmhos/cm		0.175			9.58	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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.

August 08, 2018

Apex Companies, LLC

Chandler Cole

4150 Darley Avenue, Suite 1

Boulder CO 80305

**Project Name - KMG - WCR Properties 41-5/Spaur Project Number - [none]
1-5 Tank Battery**

Attached are your analytical results for KMG - WCR Properties 41-5/Spaur 1-5 Tank Battery received by Origins Laboratory, Inc. August 03, 2018. This project is associated with Origins project number Y808050-01.

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



Apex Companies, LLC

4150 Darley Avenue, Suite 1

Boulder CO 80305

Chandler Cole

Project Number: [none]

Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N01@12'	Y808050-01	Soil	August 3, 2018 15:03	08/03/2018 17:00
B01@15'	Y808050-05	Soil	August 3, 2018 14:53	08/03/2018 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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

www.originslaboratory.com

page 1 of 1

1488050

ORIGINS
LABORATORY, INC

Client: Apex Companies
Address: 1746 Cole Blvd, Lakewood, CO 80401
Telephone Number: 970-903-1260
Email Address: Chandler.Cole@apexcos.com

Project Manager: Chandler Cole
Project Name: WCR 41-5
WO#: Erik Mickelson
Samples Collected By: Kate McDonald
Bill to Anadarko

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summ. #	Other	GRTEX	DRO/RRO	EC, pH	
N01@12'	8/3/18	1503	1	✓				✓				✓	✓	✓	1
S01@12'		1457	1	✓				✓							2
E01@12'		1500	1	✓				✓							3
W01@12'		1507	1	✓				✓							4
B01@15'		1453	1	✓				✓				✓	✓	✓	5
B601@0.5'		1534	1											✓	6
															7
															8
															9
															10
Relinquished By: Kate McDonald	Date: 8/3/18	Time: 1700		Received By: [Signature]	Date: 8/3/18	Time: 1700		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"/>							

Date Results Needed 7am

10/9

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y408050

Client: Apex

Client Project ID: _____

Checklist Completed by: JG

Shipped Via: HD

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

Date/time completed: 8/3/2018

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 10.9 °C _____ °C _____ °C (Describe) _____ °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"/>		Same Day
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)

8/3/18
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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

N01@12'

8/3/2018 3:03:00PM

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

Origins Laboratory, Inc.
Y808050-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	1440	125	mg/kg	10	B8H0303	JMH	08/03/2018	08/03/2018	
Residual Range Organics (C28-C40)	578	500	"	"	"	JMH	"	"	

Surrogate: o-Terphenyl 412 % 59-131 " " " S-04

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	2660	50.0	mg/kg	250	B8H0302	ZZZ	08/03/2018	08/04/2018	
Benzene	12.9	0.498	"	"	"	ZZZ	"	"	
Toluene	ND	0.050	"	25	"	ZZZ	"	08/04/2018	U
Ethylbenzene	13.9	0.498	"	250	"	ZZZ	"	08/04/2018	
Xylenes, total	93.9	0.498	"	"	"	ZZZ	"	"	

Surrogate: 1,2-Dichloroethane-d4 96.6 % 70-130 " " "

Surrogate: Toluene-d8 89.7 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 109 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.27		pH Units	1	B8H0304	OLAB	08/03/2018	08/03/2018	
----	------	--	----------	---	---------	------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.247	0.00503	mmhos/cm	"	B8H0305	OLAB	08/03/2018	"	
---------------------------	-------	---------	----------	---	---------	------	------------	---	--

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

B01@15'

8/3/2018 2:53:00PM

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

Origins Laboratory, Inc.
Y808050-05 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	165	12.5	mg/kg	1	B8H0303	JMH	08/03/2018	08/03/2018	
Residual Range Organics (C28-C40)	63.2	50.0	"	"	"	JMH	"	"	

Surrogate: o-Terphenyl	80.8 %	59-131			"	"	"	"	
------------------------	--------	--------	--	--	---	---	---	---	--

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	58.8	5.00	mg/kg	25	B8H0302	ZZZ	08/03/2018	08/03/2018	
Benzene	ND	0.050	"	"	"	ZZZ	"	"	U
Toluene	ND	0.050	"	"	"	ZZZ	"	"	U
Ethylbenzene	0.126	0.050	"	"	"	ZZZ	"	"	
Xylenes, total	0.814	0.050	"	"	"	ZZZ	"	"	

Surrogate: 1,2-Dichloroethane-d4	94.7 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	99.9 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	105 %	70-130			"	"	"	"	

pH in Soil by EPA 9045D

pH	8.40		pH Units	1	B8H0304	OLAB	08/03/2018	08/03/2018	
----	------	--	----------	---	---------	------	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.116	0.00502	mmhos/cm	"	B8H0305	OLAB	08/03/2018	"	
---------------------------	-------	---------	----------	---	---------	------	------------	---	--

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0302 - EPA 5030 (soil)										
Blank (B8H0302-BLK1)					Prepared: 08/03/2018 Analyzed: 08/03/2018					
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	60		ug/kg	62.5		96.7	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	70-130			

Origins Laboratory, Inc.



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

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0302 - EPA 5030 (soil)

LCS (B8H0302-BS1)

Prepared: 08/03/2018 Analyzed: 08/03/2018

Benzene	0.095	0.002	mg/kg	0.100		95.0	77.1-124			
Toluene	0.102	0.002	"	0.100		102	74.5-128			
Ethylbenzene	0.106	0.002	"	0.100		106	66.4-127			
m,p-Xylene	0.211	0.004	"	0.200		106	76.6-124			
o-Xylene	0.105	0.002	"	0.100		105	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	56		ug/kg	62.5		88.9	70-130			
Surrogate: Toluene-d8	65		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0302 - EPA 5030 (soil)

Matrix Spike (B8H0302-MS1)		Source: Y808034-01			Prepared: 08/03/2018 Analyzed: 08/03/2018					
Benzene	0.095	0.002	mg/kg	0.100	ND	94.6	71.8-126			
Toluene	0.105	0.002	"	0.100	ND	105	65.1-130			
Ethylbenzene	0.106	0.002	"	0.100	ND	106	62.2-130			
m,p-Xylene	0.211	0.004	"	0.200	ND	105	46.5-137			
o-Xylene	0.107	0.002	"	0.100	ND	107	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	57		ug/kg	62.5		91.8	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0302 - EPA 5030 (soil)

Matrix Spike Dup (B8H0302-MSD1)		Source: Y808034-01			Prepared: 08/03/2018 Analyzed: 08/03/2018					
Benzene	0.090	0.002	mg/kg	0.100	ND	90.1	71.8-126	4.94	11.3	
Toluene	0.095	0.002	"	0.100	ND	95.3	65.1-130	9.40	15.4	
Ethylbenzene	0.094	0.002	"	0.100	ND	94.1	62.2-130	11.9	19.6	
m,p-Xylene	0.188	0.004	"	0.200	ND	94.2	46.5-137	11.3	19.2	
o-Xylene	0.095	0.002	"	0.100	ND	95.0	54.2-134	11.5	17.9	
Surrogate: 1,2-Dichloroethane-d4	59		ug/kg	62.5		94.1	70-130			
Surrogate: Toluene-d8	64		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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

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

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

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

Batch B8H0303 - EPA 3580

Blank (B8H0303-BLK1)

Prepared: 08/03/2018 Analyzed: 08/03/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	45		"	50.0		89.4	59-131			

Blank (B8H0303-BLK2)

Prepared: 08/03/2018 Analyzed: 08/06/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	38		"	50.0		76.0	59-131			

LCS (B8H0303-BS1)

Prepared: 08/03/2018 Analyzed: 08/03/2018

Diesel (C10-C28)	968	50.0	mg/kg	1000		96.8	64-121			
Residual Range Organics (C28-C40)	1030	200	"	1000		103	58-124			
Surrogate: o-Terphenyl	49		"	50.0		97.9	59-131			

LCS (B8H0303-BS2)

Prepared: 08/03/2018 Analyzed: 08/06/2018

Diesel (C10-C28)	877	50.0	mg/kg	1000		87.7	64-121			
Residual Range Organics (C28-C40)	927	200	"	1000		92.7	58-124			
Surrogate: o-Terphenyl	51		"	50.0		101	59-131			

Matrix Spike (B8H0303-MS1)

Source: Y808034-01

Prepared: 08/03/2018 Analyzed: 08/03/2018

Diesel (C10-C28)	957	50.0	mg/kg	1000	ND	95.7	53-125			
Residual Range Organics (C28-C40)	1030	200	"	1000	15.7	101	47-133			

Origins Laboratory, Inc.



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

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0303 - EPA 3580										
Matrix Spike (B8H0303-MS1)		Source: Y808034-01			Prepared: 08/03/2018 Analyzed: 08/03/2018					
Surrogate: o-Terphenyl	47		mg/kg	50.0		94.1	59-131			
Matrix Spike (B8H0303-MS2)		Source: Y808040-02			Prepared: 08/03/2018 Analyzed: 08/06/2018					
Diesel (C10-C28)	921	50.0	mg/kg	1000	ND	92.1	53-125			
Residual Range Organics (C28-C40)	979	200	"	1000	29.3	95.0	47-133			
Surrogate: o-Terphenyl	48		"	50.0		96.8	59-131			
Matrix Spike Dup (B8H0303-MSD1)		Source: Y808034-01			Prepared: 08/03/2018 Analyzed: 08/03/2018					
Diesel (C10-C28)	905	50.0	mg/kg	1000	ND	90.5	53-125	5.60	20	
Residual Range Organics (C28-C40)	969	200	"	1000	15.7	95.3	47-133	6.18	20	
Surrogate: o-Terphenyl	44		"	50.0		87.2	59-131			
Matrix Spike Dup (B8H0303-MSD2)		Source: Y808040-02			Prepared: 08/03/2018 Analyzed: 08/06/2018					
Diesel (C10-C28)	945	50.0	mg/kg	1000	ND	94.5	53-125	2.51	20	
Residual Range Organics (C28-C40)	1000	200	"	1000	29.3	97.1	47-133	2.13	20	
Surrogate: o-Terphenyl	49		"	50.0		97.8	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0304 - NO PREP										
Duplicate (B8H0304-DUP1)		Source: Y808034-01			Prepared: 08/03/2018 Analyzed: 08/03/2018					
pH	7.92		pH Units		8.90			11.7	25	
Batch B8H0305 - NO PREP										
Blank (B8H0305-BLK1)		Prepared: 08/03/2018 Analyzed: 08/03/2018								
Specific Conductance (EC)	0.00450	0.00500	mmhos/cm							
Duplicate (B8H0305-DUP1)		Source: Y808034-01			Prepared: 08/03/2018 Analyzed: 08/03/2018					
Specific Conductance (EC)	0.111	0.00500	mmhos/cm		0.0976			13.2	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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.

August 08, 2018

Apex Companies, LLC

Chandler Cole

4150 Darley Avenue, Suite 1

Boulder CO 80305

Project Name - KMG - WCR Properties 41-5/Spaur 1-5 Tank Battery
Project Number - [none]

Attached are your analytical results for KMG - WCR Properties 41-5/Spaur 1-5 Tank Battery received by Origins Laboratory, Inc. August 06, 2018. This project is associated with Origins project number Y808066-01.

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



Apex Companies, LLC

4150 Darley Avenue, Suite 1

Boulder CO 80305

Chandler Cole

Project Number: [none]

Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW01	Y808066-01	Water	August 6, 2018 9:35	08/06/2018 16:45

Per the phone call from Chandler on 08-07-18, the GRO was removed from the results and only BTEX was reported.

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

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

ORIGINS

LABORATORY, INC

www.originslaboratory.com

page 1 of 1

Client: Apex Companies

Address: 1746 Cole Blvd, Lakewood, CO 80401

Telephone Number: 970-903-1260

Email Address: Chandler.Cole@apexcos.com

Project Manager: Chandler Cole

Project Name: WCR 41-5

Project Number: WO# 16D Greg Harrison

Samples Collected By: Ryan Finley

Bill to Anadarko

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysts				Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa #	Other	HOLD SAR	EC, PH	DIC/RIO		
Gw#1	8/6/18	0935	3	X					X						1	
																2
																3
																4
																5
																6
																7
																8
																9
																10
Relinquished By: Ryan Finley	Date: 8/6/2018	Time: 1645	Time: 1645	Received By: [Signature]	Date: 8/6/18	Time: 1645	Time: 1645	Received By: [Signature]	Date: 8/6/18	Time: 1645	Time: 1645	Received By: [Signature]	Date: 8/6/18	Time: 1645	Time: 1645	Time: 1645
Relinquished By:	Date:	Time:	Time:	Received By:	Date:	Time:	Time:	Received By:	Date:	Time:	Time:	Received By:	Date:	Time:	Time:	Time:

5.3

Date Results Needed 7am,

Origins Laboratory, Inc.

Jeff Pellipini

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 1908066

Client: Apex
Client Project ID: KMG - WCR 41-5

Checklist Completed by: JG
Date/time completed: 8/6/2018

Shipped Via: HD
(UPS, FedEx, Hand Delivered, Pick-up, etc.)
Airbill #: N/A

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

Cooler Number/Temperature: 1 5.3 °C 1 °C 1 °C 1 °C

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<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 type="checkbox"/>	<input checked="" 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 (> ½ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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)

8/6/18
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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

GW01

8/6/2018 9:35:00AM

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

Origins Laboratory, Inc. Y808066-01 (Water)

BTEX by EPA 8260C

Benzene	2010	50.0	ug/L	50	B8H0601	ZZZ	08/06/2018	08/07/2018	
Toluene	ND	4.00	"	4	"	ZZZ	"	08/06/2018	U
Ethylbenzene	56.0	4.00	"	"	"	ZZZ	"	"	
Xylenes, total	869	4.00	"	"	"	ZZZ	"	"	

Surrogate: 1,2-Dichloroethane-d4	96.2 %	84-121	"	"	"
Surrogate: Toluene-d8	98.5 %	85-115	"	"	"
Surrogate: 4-Bromofluorobenzene	96.5 %	84-114	"	"	"

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0601 - EPA 5030B (Water)

Blank (B8H0601-BLK1)

Prepared: 08/06/2018 Analyzed: 08/06/2018

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	68		"	62.5	109		84-121			
Surrogate: Toluene-d8	62		"	62.5	99.0		85-115			
Surrogate: 4-Bromofluorobenzene	59		"	62.5	93.6		84-114			

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0601 - EPA 5030B (Water)

LCS (B8H0601-BS1)

Prepared: 08/06/2018 Analyzed: 08/06/2018

Benzene	46.0	1.00	ug/L	50.0		92.0	73.3-129
Toluene	51.3	1.00	"	50.0		103	76.2-123
Ethylbenzene	52.4	1.00	"	50.0		105	73.6-130
m,p-Xylene	111	2.00	"	100		111	76.1-126
o-Xylene	48.1	1.00	"	50.0		96.2	76.6-124
Surrogate: 1,2-Dichloroethane-d4	68		"	62.5		108	84-121
Surrogate: Toluene-d8	62		"	62.5		98.8	85-115
Surrogate: 4-Bromofluorobenzene	66		"	62.5		105	84-114

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0601 - EPA 5030B (Water)

Matrix Spike (B8H0601-MS1)		Source: Y808047-01			Prepared: 08/06/2018 Analyzed: 08/06/2018					
Benzene	37.0	1.00	ug/L	50.0	ND	74.0	74-130			
Toluene	41.2	1.00	"	50.0	ND	82.5	73-131			
Ethylbenzene	40.3	1.00	"	50.0	ND	80.5	76-132			
m,p-Xylene	86.3	2.00	"	100	ND	86.3	69-139			
o-Xylene	37.7	1.00	"	50.0	ND	75.3	74-131			
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		107	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.9	85-115			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	84-114			

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0601 - EPA 5030B (Water)

Matrix Spike Dup (B8H0601-MSD1)		Source: Y808047-01			Prepared: 08/06/2018 Analyzed: 08/06/2018					
Benzene	40.9	1.00	ug/L	50.0	ND	81.8	74-130	9.98	20	
Toluene	45.6	1.00	"	50.0	ND	91.2	73-131	10.0	20	
Ethylbenzene	44.4	1.00	"	50.0	ND	88.9	76-132	9.87	20	
m,p-Xylene	95.0	2.00	"	100	ND	95.0	69-139	9.61	20	
o-Xylene	41.6	1.00	"	50.0	ND	83.1	74-131	9.84	20	
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		105	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.2	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	84-114			

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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.

August 08, 2018

Apex Companies, LLC

Chandler Cole

4150 Darley Avenue, Suite 1

Boulder CO 80305

**Project Name - KMG - WCR Properties 41-5/Spaur Project Number - [none]
1-5 Tank Battery**

Attached are your analytical results for KMG - WCR Properties 41-5/Spaur 1-5 Tank Battery received by Origins Laboratory, Inc. August 07, 2018. This project is associated with Origins project number Y808084-01.

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



Apex Companies, LLC

4150 Darley Avenue, Suite 1

Boulder CO 80305

Chandler Cole

Project Number: [none]

Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW02	Y808084-01	Water	August 7, 2018 15:10	08/07/2018 17:15

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

www.originslaboratory.com

page 1 of 1

1806084

ORIGINS LABORATORY, INC

Client: Apex Companies
Address: 1746 Cole Blvd, Lakewood, CO 80401
Telephone Number: 720-501-5052
Email Address: Chandler.Cole@apexcos.com

Project Manager: Chandler Cole
Project Name: WCR 41-5
Project Number: WO# TBD Greg Hamilton
Samples Collected By: Ryan Finley
Bill to Anadarko

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis		Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #	Other	RTX	
GW02	8/7/18	1510	3		X				X				1
													2
													3
													4
													5
													6
													7
													8
													9
													10

Relinquished By: [Signature] Date: 8/7/18 Time: 1715
Relinquished By: [Signature] Date: 8/7/18 Time: 1715

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

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

5,1 Date Results Needed Next day, 7am

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 788084

Client: Apex Co.

Client Project ID: KMG - WCR 41-5

Checklist Completed by: Don Lee

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

Date/time completed: 6-7-13

Airbill #: NA

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

Cooler Number/Temperature: 15.1 °C 1 °C 1 °C 1 °C

Thermometer ID: 1003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽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 type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input 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) [Signature]

Date/Time Reviewed 6-7-13

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

GW02

8/7/2018 3:10:00PM

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

Origins Laboratory, Inc. Y808084-01 (Water)

BTEX by EPA 8260C

Benzene	5.52	4.00	ug/L	4	B8H0701	ZZZ	08/07/2018	08/07/2018	
Toluene	ND	4.00	"	"	"	ZZZ	"	"	U
Ethylbenzene	7.20	4.00	"	"	"	ZZZ	"	"	
Xylenes, total	23.5	4.00	"	"	"	ZZZ	"	"	
Surrogate: 1,2-Dichloroethane-d4	112 %	84-121			"	"	"	"	
Surrogate: Toluene-d8	97.8 %	85-115			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	95.1 %	84-114			"	"	"	"	

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0701 - EPA 5030B (Water)

Blank (B8H0701-BLK1)

Prepared: 08/07/2018 Analyzed: 08/07/2018

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5	105		84-121			
Surrogate: Toluene-d8	62		"	62.5	99.0		85-115			
Surrogate: 4-Bromofluorobenzene	59		"	62.5	93.9		84-114			

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0701 - EPA 5030B (Water)

LCS (B8H0701-BS1)

Prepared: 08/07/2018 Analyzed: 08/07/2018

Benzene	47.2	1.00	ug/L	50.0		94.4	73.3-129
Toluene	52.2	1.00	"	50.0		104	76.2-123
Ethylbenzene	52.0	1.00	"	50.0		104	73.6-130
m,p-Xylene	110	2.00	"	100		110	76.1-126
o-Xylene	47.7	1.00	"	50.0		95.4	76.6-124
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.6	84-121
Surrogate: Toluene-d8	61		"	62.5		98.2	85-115
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0701 - EPA 5030B (Water)

Matrix Spike (B8H0701-MS1)		Source: Y808061-02			Prepared: 08/07/2018 Analyzed: 08/07/2018					
Benzene	47.9	1.00	ug/L	50.0	ND	95.8	74-130			
Toluene	51.8	1.00	"	50.0	ND	104	73-131			
Ethylbenzene	51.3	1.00	"	50.0	0.060	102	76-132			
m,p-Xylene	108	2.00	"	100	ND	108	69-139			
o-Xylene	47.0	1.00	"	50.0	ND	94.1	74-131			
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		106	84-121			
Surrogate: Toluene-d8	60		"	62.5		96.5	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0701 - EPA 5030B (Water)

Matrix Spike Dup (B8H0701-MSD1)		Source: Y808061-02			Prepared: 08/07/2018 Analyzed: 08/07/2018					
Benzene	48.0	1.00	ug/L	50.0	ND	96.0	74-130	0.125	20	
Toluene	52.6	1.00	"	50.0	ND	105	73-131	1.59	20	
Ethylbenzene	50.4	1.00	"	50.0	0.060	101	76-132	1.63	20	
m,p-Xylene	107	2.00	"	100	ND	107	69-139	1.23	20	
o-Xylene	46.9	1.00	"	50.0	ND	93.9	74-131	0.213	20	
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		107	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.2	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		102	84-114			

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.

Apex Companies, LLC

4150 Darley Avenue, Suite 1

Boulder CO 80305

Chandler Cole

Project Number: [none]

Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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.



August 08, 2018

Apex Companies, LLC

Chandler Cole

4150 Darley Avenue, Suite 1

Boulder CO 80305

Project Name - KMG - WCR Properties 41-5/Spaur 1-5 Tank Battery **Project Number - [none]**

Attached are your analytical results for KMG - WCR Properties 41-5/Spaur 1-5 Tank Battery received by Origins Laboratory, Inc. August 07, 2018. This project is associated with Origins project number Y808085-01.

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

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01@10	Y808085-01	Soil	August 7, 2018 15:24	08/07/2018 17:15
ES01@10	Y808085-02	Soil	August 7, 2018 15:29	08/07/2018 17:15
EN01@10	Y808085-03	Soil	August 7, 2018 15:32	08/07/2018 17:15
N02@10	Y808085-04	Soil	August 7, 2018 15:39	08/07/2018 17:15
WS01@10	Y808085-05	Soil	August 7, 2018 15:47	08/07/2018 17:15
WN01@10	Y808085-06	Soil	August 7, 2018 15:52	08/07/2018 17:15

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

www.originslaboratory.com

page 1 of 1

1800085

Client: Apex Companies
Address: 1746 Cole Blvd, Lakewood, CO 80401
Telephone Number: 720-501-5052
Email Address: Chandler.Cole@apexcos.com

Project Manager: Chandler Cole
Project Name: WCR 41-5
Project Number: WO# TBD Greg Hamilton
Samples Collected By: Ryan Finley
Bill to Anadarko

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa	Other	GRTEX	DRG/RRO	EC, pH	
S01@10	8/7/18	1524	1	X					X				X		1
ES01@10		1529	1												2
EN01@10		1532	1												3
NO2@10		1539	1												4
WS01@10		1547	1												5
WN 01@10		1552	1												6
															7
															8
															9
															10
Relinquished By: <i>[Signature]</i>	Date: 8/7/18	Time: 11:5	Received By: <i>[Signature]</i>	Date: 8-7-18	Time: 11:15	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"/>									
Relinquished By:	Date:	Time:	Received By:	Date:	Time:										

Next day, 7am

Date Results Needed

5.1

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 480805 Client: Apex Co.
Client Project ID: WCR - 41-5
Checklist Completed by: [Signature] Shipped Via: HS
(UPS, FedEx, Hand Delivered, Pick-up, etc.)
Date/time completed: 8-1-12 Airbill #: NA
Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: (Describe)
Cooler Number/Temperature: 15.1 °C 1 °C 1 °C 1 °C
Thermometer ID: 1003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽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>pt</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 checked="" 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 checked="" 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) [Signature]

Date/Time Reviewed 8-1-12

Origins Laboratory, Inc.

[Signature]

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

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

S01@10

8/7/2018 3:24:00PM

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

Origins Laboratory, Inc.
Y808085-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	52.3	25.0	mg/kg	1	B8H0704	KDK	08/07/2018	08/07/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: o-Terphenyl 69.7 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	16.1	5.00	mg/kg	25	B8H0706	KDK	08/07/2018	08/07/2018	
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.050	"	"	"	KDK	"	"	U
Xylenes, total	0.233	0.050	"	"	"	KDK	"	"	

Surrogate: 1,2-Dichloroethane-d4 97.8 % 70-130 " " "
Surrogate: Toluene-d8 99.8 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.61		pH Units	1	B8H0707	KDK	08/07/2018	08/07/2018	
----	------	--	----------	---	---------	-----	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.223	0.00500	mmhos/cm	"	B8H0708	KDK	"	"	
---------------------------	-------	---------	----------	---	---------	-----	---	---	--

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

ES01@10

8/7/2018 3:29:00PM

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

Origins Laboratory, Inc.
Y808085-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	292	25.0	mg/kg	1	B8H0704	KDK	08/07/2018	08/07/2018	
Residual Range Organics (C28-C40)	122	100	"	"	"	KDK	"	"	

Surrogate: o-Terphenyl 86.4 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	828	50.0	mg/kg	250	B8H0706	KDK	08/07/2018	08/08/2018	
Benzene	0.990	0.498	"	"	"	KDK	"	08/07/2018	
Toluene	ND	0.498	"	"	"	KDK	"	"	U
Ethylbenzene	3.44	0.498	"	"	"	KDK	"	"	
Xylenes, total	28.6	0.498	"	"	"	KDK	"	"	

Surrogate: 1,2-Dichloroethane-d4 98.2 % 70-130 " " "
Surrogate: Toluene-d8 96.7 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 103 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.77		pH Units	1	B8H0707	KDK	08/07/2018	08/07/2018	
----	------	--	----------	---	---------	-----	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.190	0.00509	mmhos/cm	"	B8H0708	KDK	"	"	
---------------------------	-------	---------	----------	---	---------	-----	---	---	--

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

EN01@10

8/7/2018 3:32:00PM

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

Origins Laboratory, Inc.
Y808085-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8H0704	KDK	08/07/2018	08/07/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: o-Terphenyl 70.0 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B8H0706	KDK	08/07/2018	08/07/2018	U
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.050	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.050	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 96.2 % 70-130 " " "
Surrogate: Toluene-d8 99.6 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 100 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.09		pH Units	1	B8H0707	KDK	08/07/2018	08/07/2018	
----	------	--	----------	---	---------	-----	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.132	0.00500	mmhos/cm	"	B8H0708	KDK	"	"	
---------------------------	-------	---------	----------	---	---------	-----	---	---	--

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

N02@10

8/7/2018 3:39:00PM

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

Origins Laboratory, Inc.
Y808085-04 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8H0704	KDK	08/07/2018	08/07/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: o-Terphenyl 64.3 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	7.44	5.00	mg/kg	25	B8H0706	KDK	08/07/2018	08/07/2018	
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.050	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.050	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 95.5 % 70-130 " " "
Surrogate: Toluene-d8 101 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.94		pH Units	1	B8H0707	KDK	08/07/2018	08/07/2018	
----	------	--	----------	---	---------	-----	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.167	0.00500	mmhos/cm	"	B8H0708	KDK	"	"	
---------------------------	-------	---------	----------	---	---------	-----	---	---	--

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

WS01@10

8/7/2018 3:47:00PM

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

Origins Laboratory, Inc.
Y808085-05 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8H0704	KDK	08/07/2018	08/07/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

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

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B8H0706	KDK	08/07/2018	08/08/2018	U
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.050	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.050	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 95.0 % 70-130 " " "
Surrogate: Toluene-d8 99.9 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.91		pH Units	1	B8H0707	KDK	08/07/2018	08/07/2018	
----	------	--	----------	---	---------	-----	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.135	0.00503	mmhos/cm	"	B8H0708	KDK	"	"	
---------------------------	-------	---------	----------	---	---------	-----	---	---	--

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

WN01@10

8/7/2018 3:52:00PM

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

Origins Laboratory, Inc.
Y808085-06 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	134	25.0	mg/kg	1	B8H0704	KDK	08/07/2018	08/07/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: o-Terphenyl 86.9 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	63.0	5.00	mg/kg	25	B8H0706	KDK	08/07/2018	08/08/2018	
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	0.176	0.050	"	"	"	KDK	"	"	
Xylenes, total	1.88	0.050	"	"	"	KDK	"	"	

Surrogate: 1,2-Dichloroethane-d4 99.0 % 70-130 " " "
Surrogate: Toluene-d8 97.1 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 104 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.05		pH Units	1	B8H0707	KDK	08/07/2018	08/07/2018	
----	------	--	----------	---	---------	-----	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.140	0.00509	mmhos/cm	"	B8H0708	KDK	"	"	
---------------------------	-------	---------	----------	---	---------	-----	---	---	--

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0706 - EPA 5030 (soil)										
Blank (B8H0706-BLK1)					Prepared: 08/07/2018 Analyzed: 08/07/2018					
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		ug/kg	62.5		99.1	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0706 - EPA 5030 (soil)										
LCS (B8H0706-BS1)					Prepared: 08/07/2018 Analyzed: 08/07/2018					
Benzene	0.094	0.002	mg/kg	0.100		94.5	77.1-124			
Toluene	0.093	0.002	"	0.100		93.5	74.5-128			
Ethylbenzene	0.095	0.002	"	0.100		95.5	66.4-127			
m,p-Xylene	0.191	0.004	"	0.200		95.4	76.6-124			
o-Xylene	0.096	0.002	"	0.100		95.9	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	59		ug/kg	62.5		94.1	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.7	70-130			

Origins Laboratory, Inc.



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

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0706 - EPA 5030 (soil)

Matrix Spike (B8H0706-MS1)		Source: Y808078-01			Prepared: 08/07/2018 Analyzed: 08/07/2018					
Benzene	0.101	0.002	mg/kg	0.100	ND	101	71.8-126			
Toluene	0.100	0.002	"	0.100	ND	100	65.1-130			
Ethylbenzene	0.097	0.002	"	0.100	ND	96.6	62.2-130			
m,p-Xylene	0.195	0.004	"	0.200	ND	97.7	46.5-137			
o-Xylene	0.098	0.002	"	0.100	ND	98.4	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	61		ug/kg	62.5		97.0	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.3	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0706 - EPA 5030 (soil)

Matrix Spike Dup (B8H0706-MSD1)		Source: Y808078-01			Prepared: 08/07/2018 Analyzed: 08/07/2018					
Benzene	0.099	0.002	mg/kg	0.100	ND	98.7	71.8-126	2.54	11.3	
Toluene	0.098	0.002	"	0.100	ND	97.8	65.1-130	2.26	15.4	
Ethylbenzene	0.096	0.002	"	0.100	ND	96.1	62.2-130	0.457	19.6	
m,p-Xylene	0.191	0.004	"	0.200	ND	95.7	46.5-137	2.03	19.2	
o-Xylene	0.096	0.002	"	0.100	ND	96.3	54.2-134	2.14	17.9	
Surrogate: 1,2-Dichloroethane-d4	60		ug/kg	62.5		96.4	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.0	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.9	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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

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

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

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

Batch B8H0704 - EPA 3580

Blank (B8H0704-BLK1)

Prepared: 08/07/2018 Analyzed: 08/07/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	41		"	50.0		81.6	59-131			

Blank (B8H0704-BLK2)

Prepared: 08/07/2018 Analyzed: 08/07/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	40		"	50.0		80.8	59-131			

LCS (B8H0704-BS1)

Prepared: 08/07/2018 Analyzed: 08/07/2018

Diesel (C10-C28)	925	50.0	mg/kg	1000		92.5	64-121			
Residual Range Organics (C28-C40)	963	200	"	1000		96.3	58-124			
Surrogate: o-Terphenyl	47		"	50.0		93.5	59-131			

LCS (B8H0704-BS2)

Prepared: 08/07/2018 Analyzed: 08/07/2018

Diesel (C10-C28)	909	50.0	mg/kg	1000		90.9	64-121			
Residual Range Organics (C28-C40)	941	200	"	1000		94.1	58-124			
Surrogate: o-Terphenyl	47		"	50.0		94.3	59-131			

Matrix Spike (B8H0704-MS1)

Source: Y808072-01

Prepared: 08/07/2018 Analyzed: 08/07/2018

Diesel (C10-C28)	1030	50.0	mg/kg	1000	132	89.4	53-125			
Residual Range Organics (C28-C40)	1040	200	"	1000	90.5	95.1	47-133			

Origins Laboratory, Inc.



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

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0704 - EPA 3580										
Matrix Spike (B8H0704-MS1)		Source: Y808072-01			Prepared: 08/07/2018 Analyzed: 08/07/2018					
Surrogate: o-Terphenyl	48		mg/kg	50.0		96.2	59-131			
Matrix Spike (B8H0704-MS2)		Source: Y808078-01			Prepared: 08/07/2018 Analyzed: 08/07/2018					
Diesel (C10-C28)	893	50.0	mg/kg	1000	ND	89.3	53-125			
Residual Range Organics (C28-C40)	928	200	"	1000	11.9	91.6	47-133			
Surrogate: o-Terphenyl	46		"	50.0		91.7	59-131			
Matrix Spike Dup (B8H0704-MSD1)		Source: Y808072-01			Prepared: 08/07/2018 Analyzed: 08/07/2018					
Diesel (C10-C28)	1080	50.0	mg/kg	1000	132	94.5	53-125	5.52	20	
Residual Range Organics (C28-C40)	1090	200	"	1000	90.5	100	47-133	5.25	20	
Surrogate: o-Terphenyl	50		"	50.0		100	59-131			
Matrix Spike Dup (B8H0704-MSD2)		Source: Y808078-01			Prepared: 08/07/2018 Analyzed: 08/07/2018					
Diesel (C10-C28)	912	50.0	mg/kg	1000	ND	91.2	53-125	2.15	20	
Residual Range Organics (C28-C40)	937	200	"	1000	11.9	92.6	47-133	1.06	20	
Surrogate: o-Terphenyl	47		"	50.0		93.9	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0707 - NO PREP										
Duplicate (B8H0707-DUP1)		Source: Y808078-01			Prepared: 08/07/2018 Analyzed: 08/07/2018					
pH	7.10		pH Units		7.29			2.64	25	
Batch B8H0708 - NO PREP										
Blank (B8H0708-BLK1)		Prepared: 08/07/2018 Analyzed: 08/07/2018								
Specific Conductance (EC)	0.00350	0.00500	mmhos/cm							
Duplicate (B8H0708-DUP1)		Source: Y808078-01			Prepared: 08/07/2018 Analyzed: 08/07/2018					
Specific Conductance (EC)	0.661	0.00500	mmhos/cm		0.700			5.73	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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.



August 10, 2018

Apex Companies, LLC
Chandler Cole
4150 Darley Avenue, Suite 1

Boulder CO 80305

Project Name - KMG - WCR Properties 41-5/Spaur 1-5 Tank Battery
Project Number - [none]

Attached are your analytical results for KMG - WCR Properties 41-5/Spaur 1-5 Tank Battery received by Origins Laboratory, Inc. August 09, 2018. This project is associated with Origins project number Y808118-01.

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

Apex Companies, LLC

4150 Darley Avenue, Suite 1

Boulder CO 80305

Chandler Cole

Project Number: [none]

Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Es02@10'	Y808118-01	Soil	August 9, 2018 14:35	08/09/2018 16:54

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

www.originslaboratory.com

page 1 of 1

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

1746 Cole Blvd, Lakewood, CO 80401

720-501-5052

Chandler.Cole@apexcos.com

Chandler Cole

WCR Properties 41-5/Spaur 1-5

WO# TBD Greg Hamilton

Caitlin Thomas

Bill to Anadarko

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative			Matrix			Analysis			Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Alt Summa #	Other	GRTEX		DRO/RRO
ES02010	8/9/18	1435	1	✓					✓			✓	✓	1
														2
														3
														4
														5
														6
														7
														8
														9
														10

Relinquished By: *Chandler Cole* Date: 8/9/18 Time: 1523

Relinquished By: *Chandler Cole* Date: 8/9/18 Time: 1523

Received By: *Chandler Cole* Date: 8/9/18 Time: 1523

Received By: *Chandler Cole* Date: 8/9/18 Time: 1523

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

Date Results Needed Next day, 7am

12.3

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 7808118

Client: Apex

Client Project ID: KMG - WCR Properties 41-5/3

Checklist Completed by: JG

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

Date/time completed: 8/9/2018

Airbill #: N/A

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

Cooler Number/Temperature: 1 12.3 °C 1 °C 1 °C 1 °C

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Same Day Sampled</u>
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 type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	
Additional Comments (if any):				

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

[Signature]
Reviewed by (Project Manager)

8/9/18
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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

Es02@10'

8/9/2018 2:35:00PM

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

Origins Laboratory, Inc.
Y808118-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	156	25.0	mg/kg	1	B8H0906	JTD	08/09/2018	08/09/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 96.0 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	62.5	5.00	mg/kg	25	B8H0905	JTD	"	08/09/2018	
Benzene	0.140	0.050	"	"	"	JTD	"	"	
Toluene	ND	0.050	"	"	"	JTD	"	"	U
Ethylbenzene	0.309	0.050	"	"	"	JTD	"	"	
Xylenes, total	2.36	0.050	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4 106 % 70-130 " " "
Surrogate: Toluene-d8 95.7 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 102 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.21		pH Units	1	B8H0907	JTD	08/09/2018	08/09/2018	
----	------	--	----------	---	---------	-----	------------	------------	--

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.130	0.00500	mmhos/cm	"	B8H0908	JTD	08/09/2018	08/09/2018	
---------------------------	-------	---------	----------	---	---------	-----	------------	------------	--

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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0905 - EPA 5030 (soil)										
Blank (B8H0905-BLK1)					Prepared: 08/09/2018 Analyzed: 08/09/2018					
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	66		ug/kg	62.5		106	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0905 - EPA 5030 (soil)										
LCS (B8H0905-BS1)					Prepared: 08/09/2018 Analyzed: 08/09/2018					
Benzene	0.114	0.002	mg/kg	0.100		114	77.1-124			
Toluene	0.114	0.002	"	0.100		114	74.5-128			
Ethylbenzene	0.113	0.002	"	0.100		113	66.4-127			
m,p-Xylene	0.224	0.004	"	0.200		112	76.6-124			
o-Xylene	0.114	0.002	"	0.100		114	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.4	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0905 - EPA 5030 (soil)

Matrix Spike (B8H0905-MS1)		Source: Y808120-01			Prepared: 08/09/2018 Analyzed: 08/09/2018					
Benzene	0.105	0.002	mg/kg	0.100	ND	105	71.8-126			
Toluene	0.102	0.002	"	0.100	ND	102	65.1-130			
Ethylbenzene	0.104	0.002	"	0.100	ND	104	62.2-130			
m,p-Xylene	0.206	0.004	"	0.200	ND	103	46.5-137			
o-Xylene	0.103	0.002	"	0.100	ND	103	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		99.2	70-130			
Surrogate: Toluene-d8	61		"	62.5		98.0	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.9	70-130			

Origins Laboratory, Inc.



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

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0905 - EPA 5030 (soil)

Matrix Spike Dup (B8H0905-MSD1)		Source: Y808120-01			Prepared: 08/09/2018 Analyzed: 08/09/2018					
Benzene	0.106	0.002	mg/kg	0.100	ND	106	71.8-126	1.08	11.3	
Toluene	0.107	0.002	"	0.100	ND	107	65.1-130	4.04	15.4	
Ethylbenzene	0.109	0.002	"	0.100	ND	109	62.2-130	3.92	19.6	
m,p-Xylene	0.217	0.004	"	0.200	ND	108	46.5-137	5.19	19.2	
o-Xylene	0.108	0.002	"	0.100	ND	108	54.2-134	4.48	17.9	
Surrogate: 1,2-Dichloroethane-d4	61		ug/kg	62.5		97.7	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.9	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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

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

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

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

Batch B8H0906 - EPA 3580

Blank (B8H0906-BLK1)

Prepared: 08/09/2018 Analyzed: 08/09/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	39		"	50.0		77.2	59-131			

LCS (B8H0906-BS1)

Prepared: 08/09/2018 Analyzed: 08/09/2018

Diesel (C10-C28)	872	50.0	mg/kg	1000		87.2	64-121			
Residual Range Organics (C28-C40)	916	200	"	1000		91.6	58-124			
Surrogate: o-Terphenyl	45		"	50.0		90.6	59-131			

Matrix Spike (B8H0906-MS1)

Source: Y808120-01

Prepared: 08/09/2018 Analyzed: 08/09/2018

Diesel (C10-C28)	989	50.0	mg/kg	1000	ND	98.9	53-125			
Residual Range Organics (C28-C40)	1010	200	"	1000	15.9	99.8	47-133			
Surrogate: o-Terphenyl	50		"	50.0		101	59-131			

Matrix Spike Dup (B8H0906-MSD1)

Source: Y808120-01

Prepared: 08/09/2018 Analyzed: 08/09/2018

Diesel (C10-C28)	943	50.0	mg/kg	1000	ND	94.3	53-125	4.80	20	
Residual Range Organics (C28-C40)	973	200	"	1000	15.9	95.7	47-133	4.19	20	
Surrogate: o-Terphenyl	50		"	50.0		101	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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 B8H0907 - NO PREP										
Duplicate (B8H0907-DUP1)		Source: Y808118-01			Prepared: 08/09/2018 Analyzed: 08/09/2018					
pH	7.92		pH Units		8.21			3.60	25	
Batch B8H0908 - NO PREP										
Blank (B8H0908-BLK1)		Prepared: 08/09/2018 Analyzed: 08/09/2018								
Specific Conductance (EC)	0.00370	0.00500	mmhos/cm							
Duplicate (B8H0908-DUP1)		Source: Y808118-01			Prepared: 08/09/2018 Analyzed: 08/09/2018					
Specific Conductance (EC)	0.130	0.00500	mmhos/cm		0.130			0.0767	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.

Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Chandler Cole
Project Number: [none]
Project: KMG - WCR Properties 41-5/Spaur 1-5
Tank Battery

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.