



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



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
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.



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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

708066

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 Gage Haul 10N
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	DRO/RRO	
Gw01	8/6/18	0935	3	X				X			X		1
													2
													3
													4
													5
													6
													7
													8
													9
													10
Relinquished By: Ryan Finley	Date: 8/6/2018	Time: 1645	Received By: [Signature]	Date: 8/6/18	Time: 1645	Received By: [Signature]	Date: 8/6/18	Time: 1645	Received By: [Signature]	Date: 8/6/18	Time: 1645	Lunarround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard	
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Received By:	Date:	Time:	Received By:	Date:	Time:	Lunarround Time:	

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5.3

Date Results Needed 7am.

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Jeff Pellipini

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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

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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
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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	"	"	"

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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
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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			

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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			

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

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

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Origins Laboratory, Inc.

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

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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.

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