



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 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



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
GW02	Y808084-01	Water	August 7, 2018 15:10	08/07/2018 17:15

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President

Apex Companies, LLC  
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Tank Battery

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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 <sub>3</sub>	Other	Groundwater	Soil	Air Summa Canister #	Other	RTX	
GWOZ	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

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Chandler Cole  
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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 <sup>(1)</sup> ?	<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 <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water — is there headspace (> ¼ inch bubble) present? <b>If yes, contact client and note in narrative.</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (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 <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

<sup>(1)</sup> 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

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Project Number: [none]  
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Tank Battery

## GW02

8/7/2018 3:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## 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	"	"	"

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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 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			

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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 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

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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 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			

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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 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			

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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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