

TABLE 1
GROUNDWATER ANALYTICAL AND FIELD RESULTS
HUETT, JOSEPH UNIT #2
WELD COUNTY, COLORADO
KERR-MCGEE OIL & GAS ONSHORE, LP

Well Name	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water/ (Product Thickness) (ft bgs)	Relative GW Elev. (ft)
COGCC Allowable Levels		5	560	700	1400		
GW01	2/14/2019	792	<4.00	17.4	35.5	32.0	NA
GW02	2/21/2019	208	15.7	<4.00	75.6	32.0	NA
MW01	12/16/2019	6.24	<1.00	4.72	4.11	20.31	79.97
	3/9/2020	1.16	<1.00	3.81	2.83	23.30	76.98
	6/8/2020	<1.00	<1.00	11.4	7.73	26.86	73.42
MW02	12/16/2019	4.09	<1.00	<1.00	<1.00	19.98	80.43
	3/9/2020	24.1	<1.00	4.12	12.6	22.03	78.38
	6/8/2020	Destroyed				NM	NA
MW03	12/16/2019	<1.00	<1.00	<1.00	<1.00	20.66	80.16
	3/9/2020	<1.00	<1.00	<1.00	<1.00	23.86	76.96
	6/8/2020	Destroyed				NM	NA
MW04	12/16/2019	9.10	<1.00	7.88	10.7	20.17	80.50
	3/9/2020	24.4	<1.00	33.2	73.1	22.41	78.26
	6/8/2020	Destroyed				NM	NA
MW05	12/16/2019	45.4	<1.00	<1.00	<1.00	20.29	80.30
	3/9/2020	65.4	<1.00	<1.00	<1.00	22.27	78.32
	6/8/2020	113	<1.00	<1.00	<1.00	23.22	77.37

Notes: COGCC - Colorado Oil and Gas Conservation Commission µg/L - micrograms per liter
ft bgs - feet below ground surface < - less than laboratory reporting limit
NA - not analyzed/not available Excavation groundwater depth is approximate
NM - not measured
Corrected Relative GW Elev. is used when LNAPL is present.
BOLD = Analytical result is in exceedance of COGCC Table 910-1 groundwater standards.





June 15, 2020

LT Environmental, Inc.

Brian Sulzberger

4600 West 60th Avenue

Arvada CO 80003

Project Name - KMG - Joseph Huett Unit #2

Project Number - 14219004/WO #8974211

Attached are your analytical results for KMG - Joseph Huett Unit #2 received by Origins Laboratory, Inc. June 08, 2020. This project is associated with Origins project number Y006163-01.

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

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

Brian Sulzberger
Project Number: 14219004/WO #89742119
Project: KMG - Joseph Huett Unit #2

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW01	Y006163-01	Water	June 8, 2020 12:12	06/08/2020 13:47
MW05	Y006163-02	Water	June 8, 2020 12:28	06/08/2020 13:47

Origins Laboratory, Inc.



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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Brian Sulzberger
 Project Number: 14219004/WO #89742119
 Project: KMG - Joseph Huett Unit #2



Y006163

 1725 Elk Place, Denver, CO 80211
 Laboratory # - 303.433.1322

Client: LT Environmental, Inc. **Project Manager:** Brian Sulzberger
Project: KMG - Joseph Huett Unit 2 **Project Number:** 014219004/89742119

Number	Sample Identification	Matrix	Sample Date	Sample Time	Sampled By	Container	Qty	Analyses
01-001	MW01	Water	6-8-20	1212	AN	-40mL Clear Vial Cool to 4°	3	BTEX by EPA 8260D
02-001	MW02	Water				-40mL Clear Vial Cool to 4°	3	BTEX by EPA 8260D
03-001	MW03	Water				-40mL Clear Vial Cool to 4°	3	BTEX by EPA 8260D
04-001	MW04	Water				-40mL Clear Vial Cool to 4°	3	BTEX by EPA 8260D
05-001	MW05	Water		1228		-40mL Clear Vial Cool to 4°	3	BTEX by EPA 8260D

Relinquished By: *[Signature]* **Date / Time:** 6/8/20
Received By: *[Signature]* **Date / Time:** 6/8/20

Temperature on Receipt: 9.9
Turn Around Time: 1347
 Same Day: 72-hr:
 24-hr: Standard:
 48-hr:

Origins Laboratory, Inc.

Jordan A. Merrill

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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Brian Sulzberger
 Project Number: 14219004/WO #89742119
 Project: KMG - Joseph Huett Unit #2

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

Sample Receipt Checklist

Origins Work Order: Y006163 Client: LTE
 Client Project ID: KMG- Joseph Huett
 Checklist Completed by: JK KOK Shipped Via: HD
 Date/time completed: 06/09/2020 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: N/A
 Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____
 Cooler Number/Temperature: 1, 9.9 °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 HNO3, HCL, H2SO4) / (pH > 10 for samples preserved with NaAsO2+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: Jm (Project Manager) Date/Time Reviewed: 6-10-20

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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Brian Sulzberger
 Project Number: 14219004/WO #89742119
 Project: KMG - Joseph Huett Unit #2

MW01

6/8/2020 12:12:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y006163-01 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B0F0903	ZZZ	06/09/2020	06/10/2020	U
Toluene	ND	1.00	"	"	"	KDK	"	06/10/2020	U
Ethylbenzene	11.4	1.00	"	"	"	ZZZ	"	06/10/2020	
Xylenes, total	7.73	1.00	"	"	"	KDK	"	06/10/2020	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>108 %</i>			<i>70-130</i>		<i>"</i>	<i>"</i>	<i>06/10/2020</i>	
<i>Surrogate: Toluene-d8</i>	<i>110 %</i>			<i>70-130</i>		<i>"</i>	<i>"</i>	<i>"</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>112 %</i>			<i>70-130</i>		<i>"</i>	<i>"</i>	<i>"</i>	

Origins Laboratory, Inc.



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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Brian Sulzberger
 Project Number: 14219004/WO #89742119
 Project: KMG - Joseph Huett Unit #2

MW05

6/8/2020 12:28:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y006163-02 (Water)

BTEX by EPA 8260D

Benzene	113	1.00	ug/L	1	B0F0903	ZZZ	06/09/2020	06/10/2020	
Toluene	ND	1.00	"	"	"	KDK	"	06/10/2020	U
Ethylbenzene	ND	1.00	"	"	"	ZZZ	"	06/10/2020	U
Xylenes, total	ND	1.00	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	116 %	70-130			"	"		"	
Surrogate: Toluene-d8	114 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	111 %	70-130			"	"		"	

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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Brian Sulzberger
 Project Number: 14219004/WO #89742119
 Project: KMG - Joseph Huett Unit #2

Volatile Organic Compounds by GC/MS SW846 8260D - 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 B0F0903 - EPA 5030B (Water)

Blank (B0F0903-BLK1)

Prepared: 06/09/2020 Analyzed: 06/10/2020

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	62		"	62.5	99.8		70-130			
Surrogate: Toluene-d8	69		"	62.5	110		70-130			
Surrogate: 4-Bromofluorobenzene	68		"	62.5	109		70-130			

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 Project: KMG - Joseph Huett Unit #2

Volatile Organic Compounds by GC/MS SW846 8260D - 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 B0F0903 - EPA 5030B (Water)

LCS (B0F0903-BS1)

Prepared: 06/09/2020 Analyzed: 06/10/2020

Benzene	47.2	1.00	ug/L	50.0		94.3	70-130			
Toluene	58.3	1.00	"	50.0		117	70-130			
Ethylbenzene	56.2	1.00	"	50.0		112	70-130			
m,p-Xylene	112	2.00	"	100		112	70-130			
o-Xylene	55.1	1.00	"	50.0		110	70-130			
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		108	70-130			
Surrogate: Toluene-d8	64		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260D - 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 B0F0903 - EPA 5030B (Water)

Matrix Spike (B0F0903-MS1)	Source: Y006163-01			Prepared: 06/09/2020 Analyzed: 06/10/2020						
Benzene	43.6	1.00	ug/L	50.0	0.920	85.5	70-130			
Toluene	57.1	1.00	"	50.0	0.220	114	70-130			
Ethylbenzene	64.4	1.00	"	50.0	11.4	106	70-130			
m,p-Xylene	116	2.00	"	100	7.73	108	70-130			
o-Xylene	55.3	1.00	"	50.0	ND	111	70-130			
Surrogate: 1,2-Dichloroethane-d4	69		"	62.5		110	70-130			
Surrogate: Toluene-d8	66		"	62.5		106	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	70-130			

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 Arvada CO 80003

Brian Sulzberger
 Project Number: 14219004/WO #89742119
 Project: KMG - Joseph Huett Unit #2

Volatile Organic Compounds by GC/MS SW846 8260D - 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 B0F0903 - EPA 5030B (Water)

Matrix Spike Dup (B0F0903-MSD1)	Source: Y006163-01			Prepared: 06/09/2020 Analyzed: 06/10/2020						
Benzene	41.2	1.00	ug/L	50.0	0.920	80.6	70-130	5.68	20	
Toluene	53.4	1.00	"	50.0	0.220	106	70-130	6.66	20	
Ethylbenzene	58.3	1.00	"	50.0	11.4	93.7	70-130	9.95	20	
m,p-Xylene	107	2.00	"	100	7.73	99.6	70-130	7.89	20	
o-Xylene	52.1	1.00	"	50.0	ND	104	70-130	5.98	20	
Surrogate: 1,2-Dichloroethane-d4	69		"	62.5		110	70-130			
Surrogate: Toluene-d8	67		"	62.5		108	70-130			
Surrogate: 4-Bromofluorobenzene	70		"	62.5		112	70-130			

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Arvada CO 80003

Brian Sulzberger
Project Number: 14219004/WO #89742119
Project: KMG - Joseph Huett Unit #2

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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