

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
RICE #1
WELD COUNTY, COLORADO
KERR-MCGEE OIL & GAS ONSHORE LP

Soil Sample ID	Depth (bgs)	Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	DRO (mg/kg)	GRO (mg/kg)	ORO (mg/kg)	pH (su)	Specific Conductance (mmhos/cm)
E01@12'	12'	11/06/2018	0.141	0.361	12.7	152	570	2000	<100	7.73	0.110
N01@12'	12'	11/06/2018	1.60	0.260	9.72	106	332	1770	<100	7.42	0.130
S01@9'	9'	11/06/2018	<0.002	<0.002	<0.002	0.005	<25.0	<0.200	<100	8.53	0.0352
W01@12'	12'	11/06/2018	<0.050	<0.050	0.596	7.36	110	128	<100	8.19	0.102
COGCC Allowable Levels			0.17	85	100	175	500*	500*	500*	6-9	4

Notes: bgs - below ground surface
COGCC - Colorado Oil and Gas Conservation Commission
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
mmhos/cm - millimhos per centimeter

NA - not analyzed/not available
ORO - oil range organics
su - standard units
* - Standard applies to combined DRO-GRO-ORO
< - less than laboratory reporting limit
Bold indicates result exceeds allowable level



TABLE 2
GROUNDWATER ANALYTICAL AND FIELD RESULTS
RICE #1
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 Water/ (Product Thickness) (ft bgs)
GW01	11/06/2018	6.44	19.6	50.1	347	14.00
COGCC Allowable Levels		5	1000	700	1400	

Notes: COGCC - Colorado Oil and Gas Conservation Commission
ft bgs - feet below ground surface
NA - not analyzed/not available
NM - not measured

µg/L - micrograms per liter
< - less than laboratory reporting limit
Bold indicates result exceeds allowable level
Excavation groundwater depth is approximate





November 07, 2018

LT Environmental, Inc.

Brian Sulzberger

4600 West 60th Avenue

Arvada CO 80003

Project Name - KMG - Rice #1

Project Number - 014218228

Attached are your analytical results for KMG - Rice #1 received by Origins Laboratory, Inc. November 06, 2018. This project is associated with Origins project number Y811088-01.

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: 014218228
Project: KMG - Rice #1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N01@12'	Y811088-01	Soil	November 6, 2018 14:58	11/06/2018 16:47
E01@12'	Y811088-02	Soil	November 6, 2018 15:02	11/06/2018 16:47
W01@12'	Y811088-03	Soil	November 6, 2018 15:07	11/06/2018 16:47
S01@9'	Y811088-04	Soil	November 6, 2018 15:13	11/06/2018 16:47
GW01	Y811088-06	Water	November 6, 2018 15:20	11/06/2018 16:47

Origins Laboratory, Inc.



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

Brian Sulzberger
 Project Number: 014218228
 Project: KMG - Rice #1

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4611082

Client: LTE

Client Project ID: kmgr Rice #1

Checklist Completed by: DL

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

Date/time completed: 11-6-12

Airbill #: NA

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

Cooler Number/Temperature: 9.4 °C °C °C °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"/>		Sampled 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) [Signature]

Date/Time Reviewed 11-6-12

Origins Laboratory, Inc.

Jefe Pellegrini

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

Brian Sulzberger
 Project Number: 014218228
 Project: KMG - Rice #1

N01@12'
11/6/2018 2:58:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811088-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	332	25.0	mg/kg	1	B8K0602	JTD	11/06/2018	11/06/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

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

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	1770	50.0	mg/kg	250	B8K0601	KDK	"	11/06/2018	
Benzene	1.60	0.050	"	25	"	KDK	"	11/06/2018	
Toluene	0.260	0.050	"	"	"	KDK	"	"	
Ethylbenzene	9.72	0.498	"	250	"	KDK	"	11/06/2018	
Xylenes, total	106	0.498	"	"	"	KDK	"	"	

Surrogate: 1,2-Dichloroethane-d4 106 % 70-130 " " "

Surrogate: Toluene-d8 89.5 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 110 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.42		pH Units	1	B8K0607	OLAB	11/06/2018	11/06/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.130	0.00500	mmhos/cm	"	B8K0608	OLAB	"	11/06/2018	
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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Brian Sulzberger
 Project Number: 014218228
 Project: KMG - Rice #1

E01@12'

11/6/2018 3:02:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811088-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	570	25.0	mg/kg	1	B8K0602	JTD	11/06/2018	11/06/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl	77.6 %	59-131			"	"	"	"	
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	2000	50.0	mg/kg	250	B8K0601	KDK	"	11/06/2018	
Benzene	0.141	0.050	"	25	"	KDK	"	11/06/2018	
Toluene	0.361	0.050	"	"	"	KDK	"	"	
Ethylbenzene	12.7	0.498	"	250	"	KDK	"	11/06/2018	
Xylenes, total	152	0.498	"	"	"	KDK	"	"	

Surrogate: 1,2-Dichloroethane-d4	105 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	89.1 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	113 %	70-130			"	"	"	"	

pH in Soil by EPA 9045D

pH	7.73		pH Units	1	B8K0607	OLAB	11/06/2018	11/06/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.110	0.00500	mmhos/cm	"	B8K0608	OLAB	"	11/06/2018	
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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Brian Sulzberger
 Project Number: 014218228
 Project: KMG - Rice #1

W01@12'
11/6/2018 3:07:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811088-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	110	25.0	mg/kg	1	B8K0602	JTD	11/06/2018	11/06/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

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

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	128	5.00	mg/kg	25	B8K0601	KDK	"	11/06/2018	
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	0.596	0.050	"	"	"	KDK	"	"	
Xylenes, total	7.36	0.050	"	"	"	KDK	"	"	

Surrogate: 1,2-Dichloroethane-d4 103 % 70-130 " " "
 Surrogate: Toluene-d8 92.8 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 110 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.19		pH Units	1	B8K0607	OLAB	11/06/2018	11/06/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.102	0.00500	mmhos/cm	"	B8K0608	OLAB	"	11/06/2018	
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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Brian Sulzberger
 Project Number: 014218228
 Project: KMG - Rice #1

S01@9'

11/6/2018 3:13:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811088-04 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8K0602	JTD	11/06/2018	11/06/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

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

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B8K0601	KDK	"	11/06/2018	U
Benzene	ND	0.002	"	"	"	KDK	"	"	U
Toluene	ND	0.002	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.002	"	"	"	KDK	"	"	U
Xylenes, total	0.005	0.002	"	"	"	KDK	"	"	

Surrogate: 1,2-Dichloroethane-d4 107 % 70-130 " " "
 Surrogate: Toluene-d8 97.2 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 107 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.53		pH Units	1	B8K0607	OLAB	11/06/2018	11/06/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0352	0.00500	mmhos/cm	"	B8K0608	OLAB	"	11/06/2018	
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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

Brian Sulzberger
 Project Number: 014218228
 Project: KMG - Rice #1

GW01

11/6/2018 3:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811088-06 (Water)

BTEX by EPA 8260C

Benzene	6.44	4.00	ug/L	4	B8K0603	ZZZ	11/06/2018	11/06/2018	
Toluene	19.6	4.00	"	"	"	ZZZ	"	"	
Ethylbenzene	50.1	4.00	"	"	"	ZZZ	"	"	
Xylenes, total	347	4.00	"	"	"	ZZZ	"	"	
Surrogate: 1,2-Dichloroethane-d4	100 %	84-121			"	"			
Surrogate: Toluene-d8	102 %	85-115			"	"			
Surrogate: 4-Bromofluorobenzene	98.2 %	84-114			"	"			

Origins Laboratory, Inc.



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

Brian Sulzberger
 Project Number: 014218228
 Project: KMG - Rice #1

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 B8K0601 - EPA 5030 (soil)

Blank (B8K0601-BLK1)

Prepared: 11/06/2018 Analyzed: 11/06/2018

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		105	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.5	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

Origins Laboratory, Inc.



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

Brian Sulzberger
 Project Number: 014218228
 Project: KMG - Rice #1

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 B8K0601 - EPA 5030 (soil)

LCS (B8K0601-BS1)

Prepared: 11/06/2018 Analyzed: 11/06/2018

Benzene	0.108	0.002	mg/kg	0.100		108	77.1-124			
Toluene	0.105	0.002	"	0.100		105	74.5-128			
Ethylbenzene	0.106	0.002	"	0.100		106	66.4-127			
m,p-Xylene	0.212	0.004	"	0.200		106	76.6-124			
o-Xylene	0.103	0.002	"	0.100		103	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	61		ug/kg	62.5		98.3	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.0	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.1	70-130			

Origins Laboratory, Inc.



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

Brian Sulzberger
 Project Number: 014218228
 Project: KMG - Rice #1

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 B8K0601 - EPA 5030 (soil)

Matrix Spike (B8K0601-MS1)	Source: Y811077-01			Prepared: 11/06/2018 Analyzed: 11/06/2018						
Benzene	0.111	0.002	mg/kg	0.100	ND	111	71.8-126			
Toluene	0.103	0.002	"	0.100	ND	103	65.1-130			
Ethylbenzene	0.112	0.002	"	0.100	ND	112	62.2-130			
m,p-Xylene	0.224	0.004	"	0.200	0.001	111	46.5-137			
o-Xylene	0.107	0.002	"	0.100	0.0006	106	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		104	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.0	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		105	70-130			

Origins Laboratory, Inc.



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

Brian Sulzberger
 Project Number: 014218228
 Project: KMG - Rice #1

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 B8K0601 - EPA 5030 (soil)

Matrix Spike Dup (B8K0601-MSD1)	Source: Y811077-01			Prepared: 11/06/2018 Analyzed: 11/06/2018						
Benzene	0.110	0.002	mg/kg	0.100	ND	110	71.8-126	0.958	11.3	
Toluene	0.102	0.002	"	0.100	ND	102	65.1-130	0.685	15.4	
Ethylbenzene	0.105	0.002	"	0.100	ND	105	62.2-130	6.29	19.6	
m,p-Xylene	0.212	0.004	"	0.200	0.001	105	46.5-137	5.47	19.2	
o-Xylene	0.101	0.002	"	0.100	0.0006	101	54.2-134	5.36	17.9	
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.4	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

Origins Laboratory, Inc.



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

Brian Sulzberger
 Project Number: 014218228
 Project: KMG - Rice #1

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 B8K0603 - EPA 5030B (Water)

Blank (B8K0603-BLK1)

Prepared: 11/06/2018 Analyzed: 11/06/2018

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	63		"	62.5		100	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.6	84-114			

Origins Laboratory, Inc.



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

Brian Sulzberger
 Project Number: 014218228
 Project: KMG - Rice #1

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 B8K0603 - EPA 5030B (Water)

LCS (B8K0603-BS1)

Prepared: 11/06/2018 Analyzed: 11/06/2018

Benzene	42.2	1.00	ug/L	50.0		84.4	73.3-129			
Toluene	44.0	1.00	"	50.0		88.0	76.2-123			
Ethylbenzene	45.4	1.00	"	50.0		90.9	73.6-130			
m,p-Xylene	93.3	2.00	"	100		93.3	76.1-126			
o-Xylene	45.4	1.00	"	50.0		90.9	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		96.9	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.8	84-114			

Origins Laboratory, Inc.



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

Brian Sulzberger
 Project Number: 014218228
 Project: KMG - Rice #1

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 B8K0603 - EPA 5030B (Water)

Matrix Spike (B8K0603-MS1)	Source: Y811057-01			Prepared: 11/06/2018 Analyzed: 11/06/2018						
Benzene	50.7	1.00	ug/L	50.0	ND	101	74-130			
Toluene	53.4	1.00	"	50.0	ND	107	73-131			
Ethylbenzene	56.4	1.00	"	50.0	0.140	112	76-132			
m,p-Xylene	114	2.00	"	100	0.270	114	69-139			
o-Xylene	52.7	1.00	"	50.0	0.180	105	74-131			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		96.9	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	84-114			

Origins Laboratory, Inc.



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

Brian Sulzberger
 Project Number: 014218228
 Project: KMG - Rice #1

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 B8K0603 - EPA 5030B (Water)

Matrix Spike Dup (B8K0603-MSD1)	Source: Y811057-01			Prepared: 11/06/2018 Analyzed: 11/06/2018						
Benzene	50.1	1.00	ug/L	50.0	ND	100	74-130	1.13	20	
Toluene	52.8	1.00	"	50.0	ND	106	73-131	1.13	20	
Ethylbenzene	54.7	1.00	"	50.0	0.140	109	76-132	2.97	20	
m,p-Xylene	110	2.00	"	100	0.270	110	69-139	3.37	20	
o-Xylene	51.6	1.00	"	50.0	0.180	103	74-131	2.23	20	
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.2	84-121			
Surrogate: Toluene-d8	63		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	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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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
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Batch B8K0602 - EPA 3580

Blank (B8K0602-BLK1)

Prepared: 11/06/2018 Analyzed: 11/06/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	38		"	50.0		75.1	59-131			

LCS (B8K0602-BS1)

Prepared: 11/06/2018 Analyzed: 11/06/2018

Diesel (C10-C28)	959	50.0	mg/kg	1000		95.9	64-121			
Residual Range Organics (C28-C40)	875	200	"	1000		87.5	58-124			
Surrogate: o-Terphenyl	45		"	50.0		89.3	59-131			

Matrix Spike (B8K0602-MS1)

Source: Y811077-01

Prepared: 11/06/2018 Analyzed: 11/06/2018

Diesel (C10-C28)	1090	50.0	mg/kg	1000	66.3	102	53-125			
Residual Range Organics (C28-C40)	956	200	"	1000	107	84.9	47-133			
Surrogate: o-Terphenyl	48		"	50.0		95.4	59-131			

Matrix Spike Dup (B8K0602-MSD1)

Source: Y811077-01

Prepared: 11/06/2018 Analyzed: 11/06/2018

Diesel (C10-C28)	1070	50.0	mg/kg	1000	66.3	101	53-125	1.63	20	
Residual Range Organics (C28-C40)	953	200	"	1000	107	84.5	47-133	0.418	20	
Surrogate: o-Terphenyl	48		"	50.0		95.9	59-131			

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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 B8K0607 - NO PREP										
Duplicate (B8K0607-DUP1)		Source: Y811088-01			Prepared: 11/06/2018 Analyzed: 11/06/2018					
pH	7.46		pH Units		7.42			0.538	25	
Batch B8K0608 - NO PREP										
Blank (B8K0608-BLK1)					Prepared: 11/06/2018 Analyzed: 11/06/2018					
Specific Conductance (EC)	0.00160	0.00500	mmhos/cm							
Duplicate (B8K0608-DUP1)		Source: Y811088-01			Prepared: 11/06/2018 Analyzed: 11/06/2018					
Specific Conductance (EC)	0.153	0.00500	mmhos/cm		0.130			16.8	25	

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Project Number: 014218228
Project: KMG - Rice #1

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.



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