

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
S02@13'	13'	11/14/2018	<0.050	<0.050	0.138	2.15	98.1	42.1	<100	8.15	0.0262
S03@13'	13'	11/14/2018	<0.050	<0.050	0.368	3.33	136	143	<100	7.98	0.0245
W02@13'	13'	11/14/2018	<0.050	<0.050	1.75	3.83	113	308	<100	8.04	0.174
W03@13'	13'	11/14/2018	<0.050	<0.050	<0.050	<0.050	275	209	<100	7.71	0.251
E02@12'	12'	11/15/2018	<0.050	0.268	0.831	10.4	114	239	<100	7.90	0.0798
E03@13'	13'	11/15/2018	<0.050	0.128	1.02	10.7	200	266	<100	7.56	0.0753
E04@13'	13'	11/16/2018	<0.050	<0.050	<0.050	<0.050	<25.0	5.50	<100	7.15	0.352
N02@13'	13'	11/19/2018	0.130	0.358	0.226	3.11	29.9	100	<100	7.86	0.0739
N03@13'	13'	11/19/2018	2.22	10.1	12.9	139	247	1870	<100	7.86	0.0892
E05@12'	12'	11/20/2018	<0.050	<0.050	<0.050	<0.050	<25.0	<5.00	<100	7.53	0.166
N04@12'	12'	11/20/2018	<0.050	<0.050	<0.050	0.260	<25.0	36.0	<100	7.47	0.229
W04@12'	12'	11/20/2018	1.70	0.508	9.03	84.3	976	1220	<100	7.88	0.155
N05@10'	10'	11/26/2018	<0.050	<0.050	<0.050	0.188	39.5	59.2	<100	7.80	0.122
W05@10'	10'	11/26/2018	0.248	0.098	4.22	54.8	211	1300	<100	8.31	0.0756
N06@10'	10'	11/27/2018	0.890	23.8	8.79	102	195	1790	<100	8.05	0.0961
S04@10'	10'	11/27/2018	0.060	0.138	1.34	20.6	99.2	547	<100	8.18	0.0998
W06@10'	10'	11/27/2018	0.210	2.64	2.42	35.3	95.1	968	<100	7.73	0.0308
E06@10'	10'	11/29/2018	<0.050	0.280	0.338	4.53	91.8	211	<100	8.19	0.118



TABLE 1 (Continued)
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)
N07@10'	10'	11/29/2018	<0.050	<0.050	<0.050	<0.050	<25.0	20.5	<100	8.34	0.0399
W07@10'	10'	11/29/2018	<0.050	<0.050	<0.050	<0.050	<25.0	<5.00	<100	8.19	0.0791
W08@12'	12'	11/29/2018	<0.050	0.214	<0.050	0.430	<25.0	11.9	<100	8.50	0.0174
S05@12'	12'	11/30/2018	0.055	3.05	1.64	27.4	175	421	<100	7.37	0.0271
W09@12'	12'	11/30/2018	<0.050	<0.050	0.923	14.1	26.4	276	<100	7.50	0.118
S06@12'	12'	12/03/2018	0.123	0.010	0.014	0.166	<25.0	0.484	<100	7.96	0.0854
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 to 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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Brian Sulzberger
Project Number: 014218228
Project: KMG - Rice #1

ORIGINS

LABORATORY, INC

www.originslaboratory.com

7811088

page 1 of 1

Client: LT Environmental

Project Manager: Brian Sulzberger

Address: _____





Project Name: Rice #1

Telephone Number: 303-433-9768

Project Number: 014218228

Email Address: KMB Team

Samples Collected By: Glenn Thompson

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summ. &	Other	BTEX	GBTEX	TPH		PH
N01e12'	11-6-08	1458	2	X					X			X	X	X	Hold SAR	1
E01e12'	↓	1502	2	X					X			X	X	X	↓	2
W01e12'		1507	2	X					X			X	X	X	↓	3
S01e9'		1513	2	X						X			X	X	↓	4
B601		1510	2	X						X			X	X	Hold	5
G601	↓	1520	3	X					X							6
																7
																8
																9
																10
Relinquished By: 	Date: 11-6-08	Time: 1617		Received By: 				Date: 11-6-08			Time: 1617			Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/>		
Relinquished By: 	Date: 11-6-08	Time: 1617		Received By: 				Date: 11-6-08			Time: 1617			48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>		

Temp Received: 9.4

Date Results Needed

Origins Laboratory, Inc.

Jeff Pellipini

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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: KMG - Rice #1

Checklist Completed by: D. Lu

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: _____

Cooler Number/Temperature: ✓ 9.4 °C ✓ _____ °C ✓ _____ °C ✓ _____ °C (Describe)

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)

Date/Time Reviewed 11-6-12

Origins Laboratory, Inc.

Jen 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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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

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 " " "

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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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

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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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

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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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

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
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
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.



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.

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			

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President

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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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			

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

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	

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

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.

Jen Pellegrini For Noelle Doyle Mathis, President



November 15, 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 14, 2018. This project is associated with Origins project number Y811227-01.

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
W02@13'	Y811227-01	Soil	November 14, 2018 15:30	11/14/2018 17:00
W03@13'	Y811227-02	Soil	November 14, 2018 15:35	11/14/2018 17:00
S02@13'	Y811227-03	Soil	November 14, 2018 15:40	11/14/2018 17:00
S03@13'	Y811227-04	Soil	November 14, 2018 15:45	11/14/2018 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.

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

ORIGINS

LABORATORY, INC




www.originslaboratory.com

Y811227

page 1 of 1

Client: LT ENVIRONMENTAL
 Address: _____
 Telephone Number: 303-433-9198
 Email Address: KMG Team

Project Manager: Brian Sulzberger
 Project Name: Rice #1
 Project Number: 014218228
 Samples Collected By: Glenn Thompson

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Alt Sample #	Other	GC/MS	TOX	PH		EC
W02 @ 13'	11-14-18	1530	2	X					X				X	X	X	Hold SAR
N03 @ 13'	↓	1535	2	X					X				X	X	X	↓
S02 @ 13'		1540	2	X					X				X	X	X	
S03 @ 13'	↓	1545	2	X					X				X	X	X	
																5
																6
																7
																8
																9
																10
Relinquished By: 	Date: 11-14-18	Time: 1700		Received By: 	Date: 11/14/18	Time: 1700		Date: 11/14/18	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"/>
Relinquished By: 	Date:	Time:		Received By:	Date:	Time:										

Temp Received: 6 | Date Results Needed

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.

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: Y811221

Client: LTE

Client Project ID: KMG - Rice #1

Checklist Completed by: JG

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

Date/time completed: 11/14/2018

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 61 °C 1 / 1 °C 1 / 1 °C 1 / 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"/>		<u>Same Day</u>
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 in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

11/14/18
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.

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

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

W02@13'

11/14/2018 3:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811227-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	113	25.0	mg/kg	1	B8K1406	JTD	11/14/2018	11/14/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 80.1 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	308	5.00	mg/kg	25	B8K1405	JTD	"	11/14/2018	
Benzene	ND	0.050	"	"	"	JTD	"	"	U
Toluene	ND	0.050	"	"	"	JTD	"	"	U
Ethylbenzene	1.75	0.050	"	"	"	JTD	"	"	
Xylenes, total	3.83	0.050	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4 103 % 70-130 " " 11/14/2018
Surrogate: Toluene-d8 99.5 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 104 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.04		pH Units	1	B8K1407	JTD	11/14/2018	11/14/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.174	0.00500	mmhos/cm	"	B8K1408	JTD	11/14/2018	"	
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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.

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

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

W03@13'

11/14/2018 3:35:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811227-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	275	25.0	mg/kg	1	B8K1406	JTD	11/14/2018	11/14/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 80.5 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	209	5.00	mg/kg	25	B8K1405	JTD	"	11/14/2018	
Benzene	ND	0.050	"	"	"	JTD	"	"	U
Toluene	ND	0.050	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.050	"	"	"	JTD	"	"	U
Xylenes, total	ND	0.050	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4 103 % 70-130 " " 11/14/2018
Surrogate: Toluene-d8 99.2 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 96.9 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.71		pH Units	1	B8K1407	JTD	11/14/2018	11/14/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.251	0.00500	mmhos/cm	"	B8K1408	JTD	11/14/2018	"	
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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.

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

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

S02@13'

11/14/2018 3:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811227-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	98.1	25.0	mg/kg	1	B8K1406	JTD	11/14/2018	11/14/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 88.4 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	42.1	5.00	mg/kg	25	B8K1405	JTD	"	11/14/2018	
Benzene	ND	0.050	"	"	"	JTD	"	"	U
Toluene	ND	0.050	"	"	"	JTD	"	"	U
Ethylbenzene	0.138	0.050	"	"	"	JTD	"	"	
Xylenes, total	2.15	0.050	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4 103 % 70-130 " " 11/14/2018
Surrogate: Toluene-d8 101 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 98.0 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.15		pH Units	1	B8K1407	JTD	11/14/2018	11/14/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0262	0.00500	mmhos/cm	"	B8K1408	JTD	11/14/2018	"	
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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.

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

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

S03@13'

11/14/2018 3:45:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811227-04 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	136	25.0	mg/kg	1	B8K1406	JTD	11/14/2018	11/14/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 76.7 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	143	5.00	mg/kg	25	B8K1405	JTD	"	11/14/2018	
Benzene	ND	0.050	"	"	"	JTD	"	"	U
Toluene	ND	0.050	"	"	"	JTD	"	"	U
Ethylbenzene	0.368	0.050	"	"	"	JTD	"	"	
Xylenes, total	3.33	0.050	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4 103 % 70-130 " " 11/14/2018
Surrogate: Toluene-d8 102 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.98		pH Units	1	B8K1407	JTD	11/14/2018	11/14/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0245	0.00500	mmhos/cm	"	B8K1408	JTD	11/14/2018	"	
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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.

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
Batch B8K1405 - EPA 5030 (soil)										
Blank (B8K1405-BLK1)					Prepared: 11/14/2018 Analyzed: 11/14/2018					
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	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		94.3	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.

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
Batch B8K1405 - EPA 5030 (soil)										
LCS (B8K1405-BS1)					Prepared: 11/14/2018 Analyzed: 11/14/2018					
Benzene	0.086	0.002	mg/kg	0.100		86.0	77.1-124			
Toluene	0.088	0.002	"	0.100		88.1	74.5-128			
Ethylbenzene	0.091	0.002	"	0.100		91.1	66.4-127			
m,p-Xylene	0.180	0.004	"	0.200		90.1	76.6-124			
o-Xylene	0.090	0.002	"	0.100		90.3	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	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 B8K1405 - EPA 5030 (soil)

Matrix Spike (B8K1405-MS1)		Source: Y811218-01			Prepared: 11/14/2018 Analyzed: 11/14/2018					
Benzene	0.086	0.002	mg/kg	0.100	ND	85.7	71.8-126			
Toluene	0.087	0.002	"	0.100	ND	86.8	65.1-130			
Ethylbenzene	0.089	0.002	"	0.100	ND	89.0	62.2-130			
m,p-Xylene	0.178	0.004	"	0.200	ND	88.8	46.5-137			
o-Xylene	0.090	0.002	"	0.100	ND	89.6	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		106	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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.

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 B8K1405 - EPA 5030 (soil)

Matrix Spike Dup (B8K1405-MSD1)		Source: Y811218-01			Prepared: 11/14/2018 Analyzed: 11/14/2018					
Benzene	0.088	0.002	mg/kg	0.100	ND	88.2	71.8-126	2.94	11.3	
Toluene	0.089	0.002	"	0.100	ND	88.6	65.1-130	2.10	15.4	
Ethylbenzene	0.092	0.002	"	0.100	ND	91.5	62.2-130	2.84	19.6	
m,p-Xylene	0.183	0.004	"	0.200	ND	91.4	46.5-137	2.77	19.2	
o-Xylene	0.091	0.002	"	0.100	ND	91.5	54.2-134	2.08	17.9	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	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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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 B8K1406 - EPA 3580

Blank (B8K1406-BLK1)

Prepared: 11/14/2018 Analyzed: 11/14/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	45		"	50.0		89.3	59-131			

LCS (B8K1406-BS1)

Prepared: 11/14/2018 Analyzed: 11/14/2018

Diesel (C10-C28)	963	50.0	mg/kg	1000		96.3	64-121			
Residual Range Organics (C28-C40)	1030	200	"	1000		103	58-124			
Surrogate: o-Terphenyl	48		"	50.0		96.5	59-131			

Matrix Spike (B8K1406-MS1)

Source: Y811218-01

Prepared: 11/14/2018 Analyzed: 11/14/2018

Diesel (C10-C28)	913	50.0	mg/kg	1000	ND	91.3	53-125			
Residual Range Organics (C28-C40)	948	200	"	1000	14.8	93.3	47-133			
Surrogate: o-Terphenyl	47		"	50.0		94.8	59-131			

Matrix Spike Dup (B8K1406-MSD1)

Source: Y811218-01

Prepared: 11/14/2018 Analyzed: 11/14/2018

Diesel (C10-C28)	951	50.0	mg/kg	1000	ND	95.1	53-125	4.06	20	
Residual Range Organics (C28-C40)	938	200	"	1000	14.8	92.3	47-133	1.08	20	
Surrogate: o-Terphenyl	46		"	50.0		92.9	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.

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

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

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 B8K1407 - NO PREP										
Duplicate (B8K1407-DUP1)		Source: Y811205-01			Prepared: 11/14/2018 Analyzed: 11/14/2018					
pH	7.98		pH Units		8.02			0.500	25	
Batch B8K1408 - NO PREP										
Blank (B8K1408-BLK1)		Prepared: 11/14/2018 Analyzed: 11/14/2018								
Specific Conductance (EC)	0.00180	0.00500	mmhos/cm							
Duplicate (B8K1408-DUP1)		Source: Y811205-01			Prepared: 11/14/2018 Analyzed: 11/14/2018					
Specific Conductance (EC)	0.104	0.00500	mmhos/cm		0.105			1.05	25	

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

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.



November 16, 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 15, 2018. This project is associated with Origins project number Y811246-01.

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
E02@12'	Y811246-01	Soil	November 15, 2018 15:00	11/15/2018 16:22
E03@13'	Y811246-02	Soil	November 15, 2018 15:05	11/15/2018 16:22

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.

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

ORIGINS

LABORATORY, INC

www.originslaboratory.com

4611246

page 1 of 1

Client: LT Environmental

Project Manager: B Sulzberger

Address: _____





Project Name: Rice #1

Telephone Number: 303-433-4768

Project Number: 014216228

Email Address: KM/G Team

Samples Collected By: Glean Thompson

Sample ID Description	Date Sampled	Time Sampled	Preservative				Matrix			Analysis			Sample Instructions				
			Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa #	Other	GC/MS	TOX		PC			
E02 @ 12'	11-15-16	1500	X					X					X	X	X	Hold SAR	1
E03 @ 13'	11-15-16	1535	X					X					X	X	X	Hold SAR	2
																	3
																	4
																	5
																	6
																	7
																	8
																	9
																	10
Relinquished By: 	Date: 11-15-16	Time: 1622	Received By: 				Date: 11-15-16			Time: 1622			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: 11-15-16	Time: 1622	Received By: 				Date: 11-15-16			Time: 1622			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"/>				

Temp Received: 3.7

Date Results Needed

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.

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: 7811246

Client: LTE

Client Project ID: KMG - Rice #1

Checklist Completed by: [Signature]

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

Date/time completed: 11-15-12

Airbill #: PA

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

Cooler Number/Temperature: 1 / 3.5 °C 1 / _____ °C 1 / _____ °C (Describe) _____ °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 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 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 11-15-12

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.

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

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

E02@12'

11/15/2018 3:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811246-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	114	25.0	mg/kg	1	B8K1502	JTD	11/15/2018	11/15/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 85.3 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	239	5.00	mg/kg	25	B8K1504	JTD	11/15/2018	11/15/2018	
Benzene	ND	0.050	"	"	"	JTD	"	"	U
Toluene	0.268	0.050	"	"	"	JTD	"	"	
Ethylbenzene	0.831	0.050	"	"	"	JTD	"	"	
Xylenes, total	10.4	0.050	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4 105 % 70-130 " " "

Surrogate: Toluene-d8 101 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 126 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.90		pH Units	1	B8K1506	JTD	11/15/2018	11/15/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0798	0.00500	mmhos/cm	"	B8K1507	JTD	11/15/2018	"	
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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.

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

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

E03@13'

11/15/2018 3:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811246-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	200	25.0	mg/kg	1	B8K1502	JTD	11/15/2018	11/15/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 85.1 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	266	5.00	mg/kg	25	B8K1504	JTD	11/15/2018	11/15/2018	
Benzene	ND	0.050	"	"	"	JTD	"	"	U
Toluene	0.128	0.050	"	"	"	JTD	"	"	
Ethylbenzene	1.02	0.050	"	"	"	JTD	"	"	
Xylenes, total	10.7	0.050	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4 105 % 70-130 " " "

Surrogate: Toluene-d8 98.2 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.56		pH Units	1	B8K1506	JTD	11/15/2018	11/15/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0753	0.00500	mmhos/cm	"	B8K1507	JTD	11/15/2018	"	
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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.

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
Batch B8K1504 - EPA 5030 (soil)										
Blank (B8K1504-BLK1)					Prepared: 11/15/2018 Analyzed: 11/15/2018					
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	0.14		"	0.125		108	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		95.5	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 B8K1504 - EPA 5030 (soil)

LCS (B8K1504-BS1)

Prepared: 11/15/2018 Analyzed: 11/15/2018

Benzene	0.095	0.002	mg/kg	0.100		95.3	77.1-124			
Toluene	0.106	0.002	"	0.100		106	74.5-128			
Ethylbenzene	0.104	0.002	"	0.100		104	66.4-127			
m,p-Xylene	0.209	0.004	"	0.200		104	76.6-124			
o-Xylene	0.103	0.002	"	0.100		103	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		106	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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.

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 B8K1504 - EPA 5030 (soil)

Matrix Spike (B8K1504-MS1)		Source: Y811239-01			Prepared: 11/15/2018 Analyzed: 11/15/2018					
Benzene	0.107	0.002	mg/kg	0.100	ND	107	71.8-126			
Toluene	0.104	0.002	"	0.100	ND	104	65.1-130			
Ethylbenzene	0.107	0.002	"	0.100	ND	107	62.2-130			
m,p-Xylene	0.213	0.004	"	0.200	ND	106	46.5-137			
o-Xylene	0.106	0.002	"	0.100	0.0003	106	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	70-130			

Origins Laboratory, Inc.



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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 B8K1504 - EPA 5030 (soil)

Matrix Spike Dup (B8K1504-MSD1)		Source: Y811239-01			Prepared: 11/15/2018 Analyzed: 11/15/2018					
Benzene	0.110	0.002	mg/kg	0.100	ND	110	71.8-126	2.58	11.3	
Toluene	0.105	0.002	"	0.100	ND	105	65.1-130	1.45	15.4	
Ethylbenzene	0.109	0.002	"	0.100	ND	109	62.2-130	1.48	19.6	
m,p-Xylene	0.216	0.004	"	0.200	ND	108	46.5-137	1.35	19.2	
o-Xylene	0.108	0.002	"	0.100	0.0003	108	54.2-134	2.07	17.9	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130			

Origins Laboratory, Inc.



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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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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 B8K1502 - EPA 3580

Blank (B8K1502-BLK1)

Prepared: 11/15/2018 Analyzed: 11/15/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	40		"	50.0		79.9	59-131			

LCS (B8K1502-BS1)

Prepared: 11/15/2018 Analyzed: 11/15/2018

Diesel (C10-C28)	947	50.0	mg/kg	1000		94.7	64-121			
Residual Range Organics (C28-C40)	1020	200	"	1000		102	58-124			
Surrogate: o-Terphenyl	45		"	50.0		89.4	59-131			

Matrix Spike (B8K1502-MS1)

Source: Y811239-01

Prepared: 11/15/2018 Analyzed: 11/15/2018

Diesel (C10-C28)	1030	50.0	mg/kg	1000	ND	103	53-125			
Residual Range Organics (C28-C40)	1090	200	"	1000	10.9	108	47-133			
Surrogate: o-Terphenyl	49		"	50.0		98.6	59-131			

Matrix Spike Dup (B8K1502-MSD1)

Source: Y811239-01

Prepared: 11/15/2018 Analyzed: 11/15/2018

Diesel (C10-C28)	1050	50.0	mg/kg	1000	ND	105	53-125	1.77	20	
Residual Range Organics (C28-C40)	1130	200	"	1000	10.9	111	47-133	3.18	20	
Surrogate: o-Terphenyl	50		"	50.0		99.7	59-131			

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

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 B8K1506 - NO PREP										
Duplicate (B8K1506-DUP1)		Source: Y811246-01			Prepared: 11/15/2018 Analyzed: 11/15/2018					
pH	7.86		pH Units		7.90			0.508	25	
Batch B8K1507 - NO PREP										
Blank (B8K1507-BLK1)		Prepared: 11/15/2018 Analyzed: 11/15/2018								
Specific Conductance (EC)	0.00300	0.00500	mmhos/cm							
Duplicate (B8K1507-DUP1)		Source: Y811246-01			Prepared: 11/15/2018 Analyzed: 11/15/2018					
Specific Conductance (EC)	0.0785	0.00500	mmhos/cm		0.0798			1.64	25	

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

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.

Jen Pellegrini For Noelle Doyle Mathis, President



November 19, 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 16, 2018. This project is associated with Origins project number Y811268-01.

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
E04@13'	Y811268-01	Soil	November 16, 2018 12:45	11/16/2018 16:00

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.

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

ORIGINS

LABORATORY, INC

www.originslaboratory.com

page 1 of 1

Client: LT Environmental
 Address: _____
 Telephone Number: 303-433-9788
 Email Address: KMG Team




Project Manager: Brian Sulzberger
 Project Name: Rice #1
 Project Number: 014218228
 Samples Collected By: Glenn Thompson

Fax: 303.265.9645

Phone: 303.433.1322

Denver, CO 80211

1725 Elk Place

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	6BTEX	TPH		DDO/CO	EM
E04 #13'	11-16-18	1245	5	X					X				X	X	X	Hold SAM
Relinquished By: 	Date: 11-16-18	Time: 1600	Time: 1600	Received By: 				Date: 11/16/18			Time: 1600			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:	Time:	Received By:				Date:			Time:					

Temp Received- 7.7

Date Results Needed

Origins Laboratory, Inc.

Jeff Pellgrini

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.

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: 111268

Client: LTE
Client Project ID: KMG - Rice #1

Checklist Completed by: JG
Date/time completed: 11/16/2018

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 / 7.7 °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"/>		<u>Same Day</u>
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)

11/16/18
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.

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

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

E04@13'

11/16/2018 12:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811268-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8K1603	JTD	11/16/2018	11/16/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 82.1 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	5.50	5.00	mg/kg	25	B8K1602	JTD	11/16/2018	11/17/2018	
Benzene	ND	0.050	"	"	"	JTD	"	"	U
Toluene	ND	0.050	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.050	"	"	"	JTD	"	"	U
Xylenes, total	ND	0.050	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4 101 % 70-130 " " "
Surrogate: Toluene-d8 101 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 98.8 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.15		pH Units	1	B8K1606	OLAB	11/16/2018	11/16/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.352	0.00500	mmhos/cm	"	B8K1607	OLAB	11/16/2018	11/16/2018	
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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
Batch B8K1602 - EPA 5030 (soil)										
Blank (B8K1602-BLK1)					Prepared: 11/16/2018 Analyzed: 11/16/2018					
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	0.13		"	0.125		105	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.0	70-130			

Origins Laboratory, Inc.



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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
Batch B8K1602 - EPA 5030 (soil)										
Blank (B8K1602-BLK2)					Prepared: 11/16/2018 Analyzed: 11/16/2018					
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	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.1	70-130			

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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
Batch B8K1602 - EPA 5030 (soil)										
Blank (B8K1602-BLK3)					Prepared: 11/16/2018 Analyzed: 11/16/2018					
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	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.4	70-130			

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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
Batch B8K1602 - EPA 5030 (soil)										
LCS (B8K1602-BS1)					Prepared: 11/16/2018 Analyzed: 11/16/2018					
Benzene	0.105	0.002	mg/kg	0.100		105	77.1-124			
Toluene	0.102	0.002	"	0.100		102	74.5-128			
Ethylbenzene	0.112	0.002	"	0.100		112	66.4-127			
m,p-Xylene	0.221	0.004	"	0.200		110	76.6-124			
o-Xylene	0.110	0.002	"	0.100		110	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.1	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	70-130			

Origins Laboratory, Inc.



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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
Batch B8K1602 - EPA 5030 (soil)										
LCS (B8K1602-BS2)					Prepared: 11/16/2018 Analyzed: 11/16/2018					
Benzene	0.113	0.002	mg/kg	0.100		113	77.1-124			
Toluene	0.110	0.002	"	0.100		110	74.5-128			
Ethylbenzene	0.116	0.002	"	0.100		116	66.4-127			
m,p-Xylene	0.230	0.004	"	0.200		115	76.6-124			
o-Xylene	0.115	0.002	"	0.100		115	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		100	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	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
Batch B8K1602 - EPA 5030 (soil)										
LCS (B8K1602-BS3)					Prepared: 11/16/2018 Analyzed: 11/16/2018					
Benzene	0.102	0.002	mg/kg	0.100		102	77.1-124			
Toluene	0.099	0.002	"	0.100		98.6	74.5-128			
Ethylbenzene	0.104	0.002	"	0.100		104	66.4-127			
m,p-Xylene	0.206	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	0.12		"	0.125		99.5	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	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 B8K1602 - EPA 5030 (soil)

Matrix Spike (B8K1602-MS1)		Source: Y811249-08			Prepared: 11/16/2018 Analyzed: 11/16/2018					
Benzene	0.099	0.002	mg/kg	0.100	ND	99.0	71.8-126			
Toluene	0.095	0.002	"	0.100	ND	94.6	65.1-130			
Ethylbenzene	0.097	0.002	"	0.100	ND	97.2	62.2-130			
m,p-Xylene	0.192	0.004	"	0.200	ND	96.2	46.5-137			
o-Xylene	0.098	0.002	"	0.100	0.0003	97.6	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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.

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 B8K1602 - EPA 5030 (soil)

Matrix Spike (B8K1602-MS2)		Source: Y811249-09			Prepared: 11/16/2018 Analyzed: 11/16/2018					
Benzene	0.110	0.002	mg/kg	0.100	ND	110	71.8-126			
Toluene	0.105	0.002	"	0.100	ND	105	65.1-130			
Ethylbenzene	0.109	0.002	"	0.100	ND	109	62.2-130			
m,p-Xylene	0.216	0.004	"	0.200	ND	108	46.5-137			
o-Xylene	0.109	0.002	"	0.100	ND	109	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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.

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 B8K1602 - EPA 5030 (soil)

Matrix Spike (B8K1602-MS3)		Source: Y811267-01			Prepared: 11/16/2018 Analyzed: 11/16/2018					
Benzene	0.112	0.002	mg/kg	0.100	ND	112	71.8-126			
Toluene	0.107	0.002	"	0.100	ND	107	65.1-130			
Ethylbenzene	0.113	0.002	"	0.100	ND	113	62.2-130			
m,p-Xylene	0.224	0.004	"	0.200	ND	112	46.5-137			
o-Xylene	0.112	0.002	"	0.100	0.0004	112	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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.

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 B8K1602 - EPA 5030 (soil)

Matrix Spike Dup (B8K1602-MSD1)		Source: Y811249-08			Prepared: 11/16/2018 Analyzed: 11/16/2018					
Benzene	0.107	0.002	mg/kg	0.100	ND	107	71.8-126	8.10	11.3	
Toluene	0.102	0.002	"	0.100	ND	102	65.1-130	7.82	15.4	
Ethylbenzene	0.107	0.002	"	0.100	ND	107	62.2-130	9.45	19.6	
m,p-Xylene	0.211	0.004	"	0.200	ND	105	46.5-137	9.15	19.2	
o-Xylene	0.106	0.002	"	0.100	0.0003	106	54.2-134	7.90	17.9	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		106	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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 B8K1602 - EPA 5030 (soil)

Matrix Spike Dup (B8K1602-MSD2)		Source: Y811249-09			Prepared: 11/16/2018 Analyzed: 11/16/2018					
Benzene	0.113	0.002	mg/kg	0.100	ND	113	71.8-126	3.07	11.3	
Toluene	0.108	0.002	"	0.100	ND	108	65.1-130	3.12	15.4	
Ethylbenzene	0.112	0.002	"	0.100	ND	112	62.2-130	2.76	19.6	
m,p-Xylene	0.221	0.004	"	0.200	ND	110	46.5-137	2.34	19.2	
o-Xylene	0.112	0.002	"	0.100	ND	112	54.2-134	2.17	17.9	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		103	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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 B8K1602 - EPA 5030 (soil)

Matrix Spike Dup (B8K1602-MSD3)		Source: Y811267-01			Prepared: 11/16/2018 Analyzed: 11/16/2018					
Benzene	0.112	0.002	mg/kg	0.100	ND	112	71.8-126	0.481	11.3	
Toluene	0.106	0.002	"	0.100	ND	106	65.1-130	1.69	15.4	
Ethylbenzene	0.111	0.002	"	0.100	ND	111	62.2-130	1.93	19.6	
m,p-Xylene	0.219	0.004	"	0.200	ND	109	46.5-137	2.38	19.2	
o-Xylene	0.110	0.002	"	0.100	0.0004	110	54.2-134	2.17	17.9	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		108	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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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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 B8K1603 - EPA 3550B

Blank (B8K1603-BLK1)

Prepared: 11/16/2018 Analyzed: 11/16/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	41		"	50.0		82.9	59-131			

Blank (B8K1603-BLK2)

Prepared: 11/16/2018 Analyzed: 11/16/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	36		"	50.0		72.0	59-131			

Blank (B8K1603-BLK3)

Prepared: 11/16/2018 Analyzed: 11/16/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	42		"	50.0		84.4	59-131			

LCS (B8K1603-BS1)

Prepared: 11/16/2018 Analyzed: 11/16/2018

Diesel (C10-C28)	885	50.0	mg/kg	1000		88.5	64-121			
Residual Range Organics (C28-C40)	975	200	"	1000		97.5	58-124			
Surrogate: o-Terphenyl	44		"	50.0		87.7	59-131			

LCS (B8K1603-BS2)

Prepared: 11/16/2018 Analyzed: 11/16/2018

Diesel (C10-C28)	891	50.0	mg/kg	1000		89.1	64-121			
Residual Range Organics (C28-C40)	936	200	"	1000		93.6	58-124			

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

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 B8K1603 - EPA 3550B										
LCS (B8K1603-BS2)					Prepared: 11/16/2018 Analyzed: 11/16/2018					
Surrogate: o-Terphenyl	42		mg/kg	50.0		84.6	59-131			
LCS (B8K1603-BS3)					Prepared: 11/16/2018 Analyzed: 11/16/2018					
Diesel (C10-C28)	931	50.0	mg/kg	1000		93.1	64-121			
Residual Range Organics (C28-C40)	1010	200	"	1000		101	58-124			
Surrogate: o-Terphenyl	45		"	50.0		90.1	59-131			
Matrix Spike (B8K1603-MS1)					Source: Y811249-08		Prepared: 11/16/2018 Analyzed: 11/16/2018			
Diesel (C10-C28)	996	50.0	mg/kg	1000	ND	99.6	53-125			
Residual Range Organics (C28-C40)	1090	200	"	1000	10.7	107	47-133			
Surrogate: o-Terphenyl	46		"	50.0		92.2	59-131			
Matrix Spike (B8K1603-MS2)					Source: Y811249-09		Prepared: 11/16/2018 Analyzed: 11/16/2018			
Diesel (C10-C28)	947	50.0	mg/kg	1000	ND	94.7	53-125			
Residual Range Organics (C28-C40)	997	200	"	1000	13.4	98.3	47-133			
Surrogate: o-Terphenyl	43		"	50.0		86.8	59-131			
Matrix Spike (B8K1603-MS3)					Source: Y811267-01		Prepared: 11/16/2018 Analyzed: 11/16/2018			
Diesel (C10-C28)	958	50.0	mg/kg	1000	ND	95.8	53-125			
Residual Range Organics (C28-C40)	1000	200	"	1000	9.23	99.1	47-133			
Surrogate: o-Terphenyl	42		"	50.0		83.3	59-131			
Matrix Spike Dup (B8K1603-MSD1)					Source: Y811249-08		Prepared: 11/16/2018 Analyzed: 11/16/2018			
Diesel (C10-C28)	895	50.0	mg/kg	1000	ND	89.5	53-125	10.8	20	
Residual Range Organics (C28-C40)	994	200	"	1000	10.7	98.3	47-133	8.87	20	
Surrogate: o-Terphenyl	42		"	50.0		83.5	59-131			
Matrix Spike Dup (B8K1603-MSD2)					Source: Y811249-09		Prepared: 11/16/2018 Analyzed: 11/16/2018			

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

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 B8K1603 - EPA 3550B										
Matrix Spike Dup (B8K1603-MSD2)		Source: Y811249-09			Prepared: 11/16/2018 Analyzed: 11/16/2018					
Diesel (C10-C28)	910	50.0	mg/kg	1000	ND	91.0	53-125	3.95	20	
Residual Range Organics (C28-C40)	964	200	"	1000	13.4	95.1	47-133	3.37	20	
Surrogate: o-Terphenyl	43		"	50.0		86.2	59-131			
Matrix Spike Dup (B8K1603-MSD3)		Source: Y811267-01			Prepared: 11/16/2018 Analyzed: 11/16/2018					
Diesel (C10-C28)	948	50.0	mg/kg	1000	ND	94.8	53-125	0.989	20	
Residual Range Organics (C28-C40)	998	200	"	1000	9.23	98.8	47-133	0.203	20	
Surrogate: o-Terphenyl	44		"	50.0		88.3	59-131			

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

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 B8K1606 - NO PREP										
Duplicate (B8K1606-DUP1)		Source: Y811268-01			Prepared: 11/16/2018 Analyzed: 11/16/2018					
pH	6.90		pH Units		7.15			3.56	25	
Batch B8K1607 - NO PREP										
Blank (B8K1607-BLK1)		Prepared: 11/16/2018 Analyzed: 11/16/2018								
Specific Conductance (EC)	0.00390	0.00500	mmhos/cm							
Duplicate (B8K1607-DUP1)		Source: Y811268-01			Prepared: 11/16/2018 Analyzed: 11/16/2018					
Specific Conductance (EC)	0.436	0.00500	mmhos/cm		0.352			21.6	25	

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

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.



November 20, 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 19, 2018. This project is associated with Origins project number Y811293-01.

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
N02@13'	Y811293-01	Soil	November 19, 2018 15:18	11/19/2018 16:50
N03@13'	Y811293-02	Soil	November 19, 2018 15:22	11/19/2018 16:50

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.

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

[illegible]

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.

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: Y 011293

Client: LTE

Client Project ID: KMG - Rice #1

Checklist Completed by: JG

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

Date/time completed: 11/19/2018

Airbill #: N/A

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

Cooler Number/Temperature: 1 5.1 °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) [Signature]

Date/Time Reviewed 11/19/18

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.

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

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

N02@13'

11/19/2018 3:18:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811293-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	29.9	25.0	mg/kg	1	B8K1904	JTD	11/19/2018	11/19/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl	85.4 %	59-131			"	"	"	"	
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	100	5.00	mg/kg	25	B8K1903	JTD	11/19/2018	11/19/2018	
Benzene	0.130	0.050	"	"	"	JTD	"	"	
Toluene	0.358	0.050	"	"	"	JTD	"	"	
Ethylbenzene	0.226	0.050	"	"	"	JTD	"	"	
Xylenes, total	3.11	0.050	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4	101 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	98.4 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	99.9 %	70-130			"	"	"	"	

pH in Soil by EPA 9045D

pH	7.86		pH Units	1	B8K1908	JTD	11/19/2018	11/19/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0739	0.00500	mmhos/cm	"	B8K1909	KDK	11/19/2018	11/19/2018	
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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

N03@13'

11/19/2018 3:22:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811293-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	247	25.0	mg/kg	1	B8K1904	JTD	11/19/2018	11/19/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 86.0 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	1870	50.0	mg/kg	250	B8K1903	JTD	11/19/2018	11/20/2018
Benzene	2.22	0.498	"	"	"	JTD	"	"
Toluene	10.1	0.498	"	"	"	JTD	"	"
Ethylbenzene	12.9	0.498	"	"	"	JTD	"	"
Xylenes, total	139	0.498	"	"	"	JTD	"	"

Surrogate: 1,2-Dichloroethane-d4 101 % 70-130 " " 11/19/2018
Surrogate: Toluene-d8 95.5 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 118 % 70-130 " " 11/20/2018

pH in Soil by EPA 9045D

pH	7.86		pH Units	1	B8K1908	JTD	11/19/2018	11/19/2018
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0892	0.00500	mmhos/cm	"	B8K1909	KDK	11/19/2018	11/19/2018
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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.

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
Batch B8K1903 - EPA 5030 (soil)										
Blank (B8K1903-BLK1)					Prepared: 11/19/2018 Analyzed: 11/19/2018					
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	0.13		"	0.125		103	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.8	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
Batch B8K1903 - EPA 5030 (soil)										
Blank (B8K1903-BLK2)					Prepared: 11/19/2018 Analyzed: 11/19/2018					
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	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.4	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 B8K1903 - EPA 5030 (soil)

LCS (B8K1903-BS1)

Prepared: 11/19/2018 Analyzed: 11/19/2018

Benzene	0.097	0.002	mg/kg	0.100		97.3	77.1-124			
Toluene	0.093	0.002	"	0.100		93.1	74.5-128			
Ethylbenzene	0.098	0.002	"	0.100		98.4	66.4-127			
m,p-Xylene	0.195	0.004	"	0.200		97.7	76.6-124			
o-Xylene	0.098	0.002	"	0.100		98.0	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	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 B8K1903 - EPA 5030 (soil)

LCS (B8K1903-BS2)

Prepared: 11/19/2018 Analyzed: 11/19/2018

Benzene	0.111	0.002	mg/kg	0.100	111	77.1-124
Toluene	0.108	0.002	"	0.100	108	74.5-128
Ethylbenzene	0.113	0.002	"	0.100	113	66.4-127
m,p-Xylene	0.223	0.004	"	0.200	111	76.6-124
o-Xylene	0.111	0.002	"	0.100	111	76.6-124
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125	104	70-130
Surrogate: Toluene-d8	0.12		"	0.125	97.8	70-130
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125	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 B8K1903 - EPA 5030 (soil)

Matrix Spike (B8K1903-MS1)		Source: Y811266-04			Prepared: 11/19/2018 Analyzed: 11/19/2018					
Benzene	0.098	0.002	mg/kg	0.100	ND	97.6	71.8-126			
Toluene	0.092	0.002	"	0.100	ND	92.0	65.1-130			
Ethylbenzene	0.097	0.002	"	0.100	ND	97.3	62.2-130			
m,p-Xylene	0.193	0.004	"	0.200	ND	96.6	46.5-137			
o-Xylene	0.098	0.002	"	0.100	ND	97.9	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	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 B8K1903 - EPA 5030 (soil)

Matrix Spike (B8K1903-MS2)		Source: Y811266-05			Prepared: 11/19/2018 Analyzed: 11/19/2018					
Benzene	0.101	0.002	mg/kg	0.100	ND	101	71.8-126			
Toluene	0.096	0.002	"	0.100	ND	96.0	65.1-130			
Ethylbenzene	0.099	0.002	"	0.100	ND	98.5	62.2-130			
m,p-Xylene	0.196	0.004	"	0.200	ND	98.2	46.5-137			
o-Xylene	0.098	0.002	"	0.100	ND	98.3	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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 B8K1903 - EPA 5030 (soil)

Matrix Spike Dup (B8K1903-MSD1)		Source: Y811266-04			Prepared: 11/19/2018 Analyzed: 11/19/2018					
Benzene	0.112	0.002	mg/kg	0.100	ND	112	71.8-126	13.8	11.3	QR-02
Toluene	0.106	0.002	"	0.100	ND	106	65.1-130	13.6	15.4	
Ethylbenzene	0.108	0.002	"	0.100	ND	108	62.2-130	10.6	19.6	
m,p-Xylene	0.213	0.004	"	0.200	ND	107	46.5-137	9.82	19.2	
o-Xylene	0.107	0.002	"	0.100	ND	107	54.2-134	8.87	17.9	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		105	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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 B8K1903 - EPA 5030 (soil)

Matrix Spike Dup (B8K1903-MSD2)		Source: Y811266-05			Prepared: 11/19/2018 Analyzed: 11/19/2018					
Benzene	0.114	0.002	mg/kg	0.100	ND	114	71.8-126	12.2	11.3	QR-02
Toluene	0.114	0.002	"	0.100	ND	114	65.1-130	16.7	15.4	QR-02
Ethylbenzene	0.118	0.002	"	0.100	ND	118	62.2-130	17.9	19.6	
m,p-Xylene	0.232	0.004	"	0.200	ND	116	46.5-137	16.7	19.2	
o-Xylene	0.117	0.002	"	0.100	ND	117	54.2-134	17.5	17.9	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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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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 B8K1904 - EPA 3580

Blank (B8K1904-BLK1)

Prepared: 11/19/2018 Analyzed: 11/19/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	40		"	50.0		79.4	59-131			

LCS (B8K1904-BS1)

Prepared: 11/19/2018 Analyzed: 11/19/2018

Diesel (C10-C28)	942	50.0	mg/kg	1000		94.2	64-121			
Residual Range Organics (C28-C40)	1000	200	"	1000		100	58-124			
Surrogate: o-Terphenyl	45		"	50.0		90.5	59-131			

Matrix Spike (B8K1904-MS1)

Source: Y811266-04

Prepared: 11/19/2018 Analyzed: 11/19/2018

Diesel (C10-C28)	968	50.0	mg/kg	1000	ND	96.8	53-125			
Residual Range Organics (C28-C40)	1040	200	"	1000	10.1	103	47-133			
Surrogate: o-Terphenyl	46		"	50.0		91.6	59-131			

Matrix Spike Dup (B8K1904-MSD1)

Source: Y811266-04

Prepared: 11/19/2018 Analyzed: 11/19/2018

Diesel (C10-C28)	918	50.0	mg/kg	1000	ND	91.8	53-125	5.36	20	
Residual Range Organics (C28-C40)	996	200	"	1000	10.1	98.6	47-133	4.07	20	
Surrogate: o-Terphenyl	41		"	50.0		82.6	59-131			

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

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

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 B8K1908 - NO PREP										
Duplicate (B8K1908-DUP1)		Source: Y811288-01			Prepared: 11/19/2018 Analyzed: 11/19/2018					
pH	6.97		pH Units		7.42			6.25	25	
Batch B8K1909 - NO PREP										
Blank (B8K1909-BLK1)		Prepared: 11/19/2018 Analyzed: 11/19/2018								
Specific Conductance (EC)	0.00320	0.00500	mmhos/cm							
Duplicate (B8K1909-DUP1)		Source: Y811288-01			Prepared: 11/19/2018 Analyzed: 11/19/2018					
Specific Conductance (EC)	0.260	0.00500	mmhos/cm		0.226			14.2	25	

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

Notes and Definitions

U Sample is Non-Detect.

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

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.



November 21, 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 20, 2018. This project is associated with Origins project number Y811312-01.

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
N04@12'	Y811312-01	Soil	November 20, 2018 15:10	11/20/2018 16:49
E05@12'	Y811312-02	Soil	November 20, 2018 15:20	11/20/2018 16:49
W04@12'	Y811312-03	Soil	November 20, 2018 15:14	11/20/2018 16:49

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.

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

ORIGINS

LABORATORY, INC

www.originslaboratory.com

Y81312

page | of |

Client: LT Environmental

Project Manager: Brian Sulzberger

Address: _____



Project Name: Rice #1

Project Number: 014218228

Telephone Number: 303-433-9768

Samples Collected By: Glenn Thompson

Email Address: KM6 Team

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions		
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa #	Other	GBTEX	TM oedpko	PM		EC	
N04 @ 12'	11-10-10	1510	2	X					X				X	X	X	Hold S&E	1
E05 @ 12'	↓	1510	2	X					X				X	X	X	Hold S&E	2
W04 @ 12'	↓	1514	2	X					X				X	X	X	Hold S&E	3
																	4
																	5
																	6
																	7
																	8
																	9
																	10
Relinquished By: 	Date: <u>11-10-10</u>	Time:	Time:	Received By: 				Date: <u>11-20-10</u>				Time: <u>1649</u>				Turnaround Time: Same Day <input 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:	Time:	Received By: _____				Date: <u>11-20-10</u>				Time: <u>1649</u>					

Temp Received- 5.3

Date Results Needed

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.

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: Y811312 Client: LTE
Client Project ID: KMG - Rice #1
Checklist Completed by: JG Shipped Via: HD
(UPS, FedEx, Hand Delivered, Pick-up, etc.)
Date/time completed: 11/20/2018 Airbill #: N/A
Matrix(s) Received: (Check all that apply): X 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"/>			
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 be taken in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

11/20/18
Date/Time Reviewed

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.

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

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

N04@12'

11/20/2018 3:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811312-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8K2004	KDK	11/20/2018	11/20/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: o-Terphenyl 68.1 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	36.0	5.00	mg/kg	25	B8K2003	KDK	11/20/2018	11/20/2018	
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.050	"	"	"	KDK	"	"	U
Xylenes, total	0.260	0.050	"	"	"	KDK	"	"	

Surrogate: 1,2-Dichloroethane-d4 99.9 % 70-130 " " "
Surrogate: Toluene-d8 97.1 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 110 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.47		pH Units	1	B8K2007	OLAB	11/20/2018	11/20/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.229	0.00500	mmhos/cm	"	B8K2008	KDK	11/20/2018	11/20/2018	
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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.

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

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

E05@12'

11/20/2018 3:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811312-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8K2004	KDK	11/20/2018	11/20/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: o-Terphenyl 70.9 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B8K2003	KDK	11/20/2018	11/20/2018	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 101 % 70-130 " " "
Surrogate: Toluene-d8 98.5 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 97.0 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.53		pH Units	1	B8K2007	OLAB	11/20/2018	11/20/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.166	0.00508	mmhos/cm	"	B8K2008	KDK	11/20/2018	11/20/2018	
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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.

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

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

W04@12'

11/20/2018 3:14:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811312-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	976	25.0	mg/kg	1	B8K2004	KDK	11/20/2018	11/20/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: o-Terphenyl 79.4 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	1220	50.0	mg/kg	250	B8K2003	KDK	11/20/2018	11/20/2018	
Benzene	1.70	0.050	"	25	"	KDK	"	11/20/2018	
Toluene	0.508	0.050	"	"	"	KDK	"	"	
Ethylbenzene	9.03	0.498	"	250	"	KDK	"	11/20/2018	
Xylenes, total	84.3	0.498	"	"	"	KDK	"	"	

Surrogate: 1,2-Dichloroethane-d4 108 % 70-130 " " "

Surrogate: Toluene-d8 96.2 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 99.2 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.88		pH Units	1	B8K2007	OLAB	11/20/2018	11/20/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.155	0.00503	mmhos/cm	"	B8K2008	KDK	11/20/2018	11/20/2018	
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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.

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
Batch B8K2003 - EPA 5030 (soil)										
Blank (B8K2003-BLK1)					Prepared: 11/20/2018 Analyzed: 11/20/2018					
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	0.12		"	0.125		99.8	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.0	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.

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
Batch B8K2003 - EPA 5030 (soil)										
LCS (B8K2003-BS1)					Prepared: 11/20/2018 Analyzed: 11/20/2018					
Benzene	0.109	0.002	mg/kg	0.100		109	77.1-124			
Toluene	0.103	0.002	"	0.100		103	74.5-128			
Ethylbenzene	0.106	0.002	"	0.100		106	66.4-127			
m,p-Xylene	0.211	0.004	"	0.200		105	76.6-124			
o-Xylene	0.104	0.002	"	0.100		104	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		98.9	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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.

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 B8K2003 - EPA 5030 (soil)

Matrix Spike (B8K2003-MS1)		Source: Y811304-01			Prepared: 11/20/2018 Analyzed: 11/20/2018					
Benzene	0.097	0.002	mg/kg	0.100	ND	97.0	71.8-126			
Toluene	0.090	0.002	"	0.100	ND	90.4	65.1-130			
Ethylbenzene	0.093	0.002	"	0.100	ND	92.8	62.2-130			
m,p-Xylene	0.184	0.004	"	0.200	ND	92.1	46.5-137			
o-Xylene	0.092	0.002	"	0.100	0.0004	91.7	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.3	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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.

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
Batch B8K2003 - EPA 5030 (soil)										
Matrix Spike Dup (B8K2003-MSD1)		Source: Y811304-01			Prepared: 11/20/2018 Analyzed: 11/20/2018					
Benzene	0.101	0.002	mg/kg	0.100	ND	101	71.8-126	4.36	11.3	
Toluene	0.095	0.002	"	0.100	ND	94.9	65.1-130	4.92	15.4	
Ethylbenzene	0.097	0.002	"	0.100	ND	97.2	62.2-130	4.67	19.6	
m,p-Xylene	0.193	0.004	"	0.200	ND	96.5	46.5-137	4.68	19.2	
o-Xylene	0.096	0.002	"	0.100	0.0004	96.0	54.2-134	4.48	17.9	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		98.4	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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.

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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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 B8K2004 - EPA 3580

Blank (B8K2004-BLK1)

Prepared: 11/20/2018 Analyzed: 11/20/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	40		"	50.0		79.7	59-131			

LCS (B8K2004-BS1)

Prepared: 11/20/2018 Analyzed: 11/20/2018

Diesel (C10-C28)	1010	50.0	mg/kg	1000		101	64-121			
Residual Range Organics (C28-C40)	1070	200	"	1000		107	58-124			
Surrogate: o-Terphenyl	49		"	50.0		98.2	59-131			

Matrix Spike (B8K2004-MS1)

Source: Y811304-01

Prepared: 11/20/2018 Analyzed: 11/20/2018

Diesel (C10-C28)	940	50.0	mg/kg	1000	ND	94.0	53-125			
Residual Range Organics (C28-C40)	1020	200	"	1000	4.77	101	47-133			
Surrogate: o-Terphenyl	43		"	50.0		86.0	59-131			

Matrix Spike Dup (B8K2004-MSD1)

Source: Y811304-01

Prepared: 11/20/2018 Analyzed: 11/20/2018

Diesel (C10-C28)	880	50.0	mg/kg	1000	ND	88.0	53-125	6.62	20	
Residual Range Organics (C28-C40)	960	200	"	1000	4.77	95.5	47-133	5.80	20	
Surrogate: o-Terphenyl	40		"	50.0		80.4	59-131			

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

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 B8K2007 - NO PREP										
Duplicate (B8K2007-DUP1)		Source: Y811312-01			Prepared: 11/20/2018 Analyzed: 11/20/2018					
pH	7.19		pH Units		7.47			3.82	25	
Batch B8K2008 - NO PREP										
Blank (B8K2008-BLK1)		Prepared: 11/20/2018 Analyzed: 11/20/2018								
Specific Conductance (EC)	0.00310	0.00500	mmhos/cm							
Duplicate (B8K2008-DUP1)		Source: Y811312-01			Prepared: 11/20/2018 Analyzed: 11/20/2018					
Specific Conductance (EC)	0.232	0.00500	mmhos/cm		0.229			1.08	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.

LT Environmental, Inc.

4600 West 60th Avenue

Arvada CO 80003

Brian Sulzberger

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.



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.



November 27, 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 26, 2018. This project is associated with Origins project number Y811351-01.

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
W05@10'	Y811351-01	Soil	November 26, 2018 15:00	11/26/2018 16:30
N05@10'	Y811351-02	Soil	November 26, 2018 15:05	11/26/2018 16:30

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.

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

ORIGINS

LABORATORY, INC



www.originslaboratory.com

Y811351

page 1 of 1

Client: LT Environmental
 Address: _____
 Telephone Number: 303-433-9768
 Email Address: KMG Team

Project Manager: Brian Salzberger
 Project Name: Rice #1
 Project Number: 014218228
 Samples Collected By: Glenn Thompson

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions		
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa #	Other	GC/MS	THM	PH		EC	
W05 @ 10'	11-26-18	1500	2	X						X				X	X	X	Hold SAR
N05 @ 10'	11-26-18	1505	2	X						X				X	X	X	Hold SAR
Relinquished By: 	Date: 11-26-18	Time: 1630	Received By: 					Date: 11/26/18	Time: 1630	Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/>		Turnaround Time: 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>					
Relinquished By: _____	Date: _____	Time: _____	Received By: _____					Date: _____	Time: _____								

Temp Received: 5.4

Date Results Needed

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.

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: Y811351

Client: LTE
Client Project ID: KMG - Rice #1

Checklist Completed by: JG
Date/time completed: 11/26/2018

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 °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 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)

11/26/18
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.

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

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

W05@10'

11/26/2018 3:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811351-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	211	25.0	mg/kg	1	B8K2605	JTD	11/26/2018	11/26/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl	77.2 %	59-131			"	"	"
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	1300	500	mg/kg	2500	B8K2610	JTD	11/26/2018	11/26/2018
Benzene	0.248	0.050	"	25	"	JTD	"	11/27/2018
Toluene	0.098	0.050	"	"	"	JTD	"	"
Ethylbenzene	4.22	0.050	"	"	"	JTD	"	"
Xylenes, total	54.8	4.98	"	2500	"	JTD	"	11/26/2018

Surrogate: 1,2-Dichloroethane-d4	107 %	70-130			"	"	"
Surrogate: Toluene-d8	96.6 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"

pH in Soil by EPA 9045D

pH	8.31		pH Units	1	B8K2611	OLAB	11/26/2018	11/26/2018
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0756	0.00500	mmhos/cm	"	B8K2612	JTD	"	11/26/2018
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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.

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

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

N05@10'

11/26/2018 3:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811351-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	39.5	25.0	mg/kg	1	B8K2605	JTD	11/26/2018	11/26/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 80.6 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	59.2	5.00	mg/kg	25	B8K2610	JTD	11/26/2018	11/27/2018	
Benzene	ND	0.050	"	"	"	JTD	"	"	U
Toluene	ND	0.050	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.050	"	"	"	JTD	"	"	U
Xylenes, total	0.188	0.050	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4 94.5 % 70-130 " " "
Surrogate: Toluene-d8 99.0 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 108 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.80		pH Units	1	B8K2611	OLAB	11/26/2018	11/26/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.122	0.00500	mmhos/cm	"	B8K2612	JTD	"	11/26/2018	
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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
Batch B8K2610 - EPA 5030 (soil)										
Blank (B8K2610-BLK1)					Prepared: 11/26/2018 Analyzed: 11/26/2018					
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	0.12		"	0.125		96.7	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	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
Batch B8K2610 - EPA 5030 (soil)										
Blank (B8K2610-BLK2)					Prepared: 11/26/2018 Analyzed: 11/26/2018					
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	0.13		"	0.125		105	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		100	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
Batch B8K2610 - EPA 5030 (soil)										
LCS (B8K2610-BS1)					Prepared: 11/26/2018 Analyzed: 11/26/2018					
Benzene	0.091	0.002	mg/kg	0.100		91.3	77.1-124			
Toluene	0.090	0.002	"	0.100		89.6	74.5-128			
Ethylbenzene	0.087	0.002	"	0.100		86.5	66.4-127			
m,p-Xylene	0.171	0.004	"	0.200		85.7	76.6-124			
o-Xylene	0.093	0.002	"	0.100		93.2	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		92.6	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		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
Batch B8K2610 - EPA 5030 (soil)										
LCS (B8K2610-BS2)					Prepared: 11/26/2018 Analyzed: 11/26/2018					
Benzene	0.106	0.002	mg/kg	0.100		106	77.1-124			
Toluene	0.092	0.002	"	0.100		91.6	74.5-128			
Ethylbenzene	0.085	0.002	"	0.100		85.1	66.4-127			
m,p-Xylene	0.168	0.004	"	0.200		84.2	76.6-124			
o-Xylene	0.095	0.002	"	0.100		94.7	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		97.1	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.0	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 B8K2610 - EPA 5030 (soil)

Matrix Spike (B8K2610-MS1)		Source: Y811349-01			Prepared: 11/26/2018 Analyzed: 11/26/2018					
Benzene	0.105	0.002	mg/kg	0.100	ND	105	71.8-126			
Toluene	0.092	0.002	"	0.100	ND	92.0	65.1-130			
Ethylbenzene	0.090	0.002	"	0.100	ND	90.1	62.2-130			
m,p-Xylene	0.178	0.004	"	0.200	ND	88.9	46.5-137			
o-Xylene	0.099	0.002	"	0.100	ND	98.8	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		97.1	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.9	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 B8K2610 - EPA 5030 (soil)

Matrix Spike (B8K2610-MS2)		Source: Y811349-02			Prepared: 11/26/2018 Analyzed: 11/26/2018					
Benzene	0.103	0.002	mg/kg	0.100	ND	103	71.8-126			
Toluene	0.088	0.002	"	0.100	ND	87.7	65.1-130			
Ethylbenzene	0.081	0.002	"	0.100	ND	80.8	62.2-130			
m,p-Xylene	0.158	0.004	"	0.200	ND	79.0	46.5-137			
o-Xylene	0.090	0.002	"	0.100	ND	90.0	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.6	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 B8K2610 - EPA 5030 (soil)

Matrix Spike Dup (B8K2610-MSD1)		Source: Y811349-01			Prepared: 11/26/2018 Analyzed: 11/26/2018					
Benzene	0.099	0.002	mg/kg	0.100	ND	98.9	71.8-126	6.27	11.3	
Toluene	0.087	0.002	"	0.100	ND	86.6	65.1-130	6.02	15.4	
Ethylbenzene	0.083	0.002	"	0.100	ND	82.8	62.2-130	8.42	19.6	
m,p-Xylene	0.163	0.004	"	0.200	ND	81.6	46.5-137	8.53	19.2	
o-Xylene	0.091	0.002	"	0.100	ND	90.8	54.2-134	8.38	17.9	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		96.2	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.8	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 B8K2610 - EPA 5030 (soil)

Matrix Spike Dup (B8K2610-MSD2)		Source: Y811349-02			Prepared: 11/26/2018 Analyzed: 11/26/2018					
Benzene	0.087	0.002	mg/kg	0.100	ND	86.9	71.8-126	16.6	11.3	QR-02
Toluene	0.074	0.002	"	0.100	ND	73.7	65.1-130	17.4	15.4	QR-02
Ethylbenzene	0.068	0.002	"	0.100	ND	67.8	62.2-130	17.4	19.6	
m,p-Xylene	0.133	0.004	"	0.200	ND	66.3	46.5-137	17.5	19.2	
o-Xylene	0.076	0.002	"	0.100	ND	75.8	54.2-134	17.1	17.9	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.8	70-130			

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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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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 B8K2605 - EPA 3580

Blank (B8K2605-BLK1)

Prepared: 11/26/2018 Analyzed: 11/26/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	43		"	50.0		86.1	59-131			

Blank (B8K2605-BLK2)

Prepared: 11/26/2018 Analyzed: 11/26/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	43		"	50.0		86.6	59-131			

LCS (B8K2605-BS1)

Prepared: 11/26/2018 Analyzed: 11/26/2018

Diesel (C10-C28)	913	50.0	mg/kg	1000		91.3	64-121			
Residual Range Organics (C28-C40)	974	200	"	1000		97.4	58-124			
Surrogate: o-Terphenyl	44		"	50.0		87.7	59-131			

LCS (B8K2605-BS2)

Prepared: 11/26/2018 Analyzed: 11/26/2018

Diesel (C10-C28)	1070	50.0	mg/kg	1000		107	64-121			
Residual Range Organics (C28-C40)	1020	200	"	1000		102	58-124			
Surrogate: o-Terphenyl	52		"	50.0		103	59-131			

Matrix Spike (B8K2605-MS1)

Source: Y811342-01

Prepared: 11/26/2018 Analyzed: 11/26/2018

Diesel (C10-C28)	1140	50.0	mg/kg	1000	49.8	109	53-125			
Residual Range Organics (C28-C40)	1070	200	"	1000	26.1	104	47-133			

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

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 B8K2605 - EPA 3580										
Matrix Spike (B8K2605-MS1)		Source: Y811342-01			Prepared: 11/26/2018 Analyzed: 11/26/2018					
Surrogate: o-Terphenyl	49		mg/kg	50.0		98.3	59-131			
Matrix Spike (B8K2605-MS2)		Source: Y811349-02			Prepared: 11/26/2018 Analyzed: 11/26/2018					
Diesel (C10-C28)	1080	50.0	mg/kg	1000	ND	108	53-125			
Residual Range Organics (C28-C40)	1100	200	"	1000	4.82	110	47-133			
Surrogate: o-Terphenyl	56		"	50.0		112	59-131			
Matrix Spike Dup (B8K2605-MSD1)		Source: Y811342-01			Prepared: 11/26/2018 Analyzed: 11/26/2018					
Diesel (C10-C28)	1670	50.0	mg/kg	1000	49.8	162	53-125	39.2	20	QM-07, QR-03
Residual Range Organics (C28-C40)	1330	200	"	1000	26.1	130	47-133	22.3	20	QR-02
Surrogate: o-Terphenyl	45		"	50.0		90.4	59-131			
Matrix Spike Dup (B8K2605-MSD2)		Source: Y811349-02			Prepared: 11/26/2018 Analyzed: 11/26/2018					
Diesel (C10-C28)	1100	50.0	mg/kg	1000	ND	110	53-125	2.00	20	
Residual Range Organics (C28-C40)	1120	200	"	1000	4.82	112	47-133	1.85	20	
Surrogate: o-Terphenyl	56		"	50.0		112	59-131			

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

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 B8K2611 - NO PREP										
Duplicate (B8K2611-DUP1)		Source: Y811351-01			Prepared: 11/26/2018 Analyzed: 11/26/2018					
pH	8.30		pH Units		8.31			0.120	25	
Batch B8K2612 - NO PREP										
Blank (B8K2612-BLK1)		Prepared: 11/26/2018 Analyzed: 11/26/2018								
Specific Conductance (EC)	0.00410	0.00500	mmhos/cm							
Duplicate (B8K2612-DUP1)		Source: Y811351-01			Prepared: 11/26/2018 Analyzed: 11/26/2018					
Specific Conductance (EC)	0.0756	0.00500	mmhos/cm		0.0756			0.00	25	

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

Notes and Definitions

U Sample is Non-Detect.

QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

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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November 28, 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 27, 2018. This project is associated with Origins project number Y811374-01.

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
W06@10'	Y811374-01	Soil	November 27, 2018 15:07	11/27/2018 16:37
S04@10'	Y811374-02	Soil	November 27, 2018 15:12	11/27/2018 16:37
N06@10'	Y811374-03	Soil	November 27, 2018 15:16	11/27/2018 16:37

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.

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

ORIGINS

LABORATORY, INC



www.originslaboratory.com

Y811374

page 1 of 1

Client: LT Environmental
 Address: _____
 Telephone Number: 303 433 9788
 Email Address: KW6 Team

Project Manager: B Sulzberger
 Project Name: Rice #1
 Project Number: 014218228
 Samples Collected By: Gleann Thompson

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis			Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Sampling Container #	Other	GBTEX	TDH		OTO/OTO
W06 @ 10'	11-27-18	1507	2	X					X			X	X	X	Hold STAR
S04 @ 10'	↓	1512	2	X					X			X	X	X	↓
N06 @ 10'	↓	1516	2	X					X			X	X	X	
															4
															5
															6
															7
															8
															9
															10
Relinquished By: 	Date: 11-27-18	Time:	Time:	Received By: 	Date: 11-27-18	Time: 1637	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:	Time:	Received By:	Date:	Time:									

Temp Received: 3.2

Date Results Needed

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.

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: Y811374

Client: LTE

Client Project ID: KMG - Rice #1

Checklist Completed by: JG

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

Date/time completed: 11/27/2018

Airbill #: N/A

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

Cooler Number/Temperature: 1, 3.2 °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 (> 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 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)

Date/Time Reviewed 11/27/18

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.

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

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

W06@10'

11/27/2018 3:07:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811374-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	95.1	25.0	mg/kg	1	B8K2704	JTD	11/27/2018	11/27/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 99.6 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	968	50.0	mg/kg	250	B8K2603	JTD	11/27/2018	11/27/2018	
Benzene	0.210	0.050	"	25	"	JTD	"	11/28/2018	
Toluene	2.64	0.498	"	250	"	JTD	"	11/27/2018	
Ethylbenzene	2.42	0.498	"	"	"	JTD	"	"	
Xylenes, total	35.3	0.498	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4 105 % 70-130 " " "

Surrogate: Toluene-d8 94.3 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 104 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.73		pH Units	1	B8K2705	OLAB	11/27/2018	11/27/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0308	0.00500	mmhos/cm	"	B8K2706	KDK	11/27/2018	11/27/2018	
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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

S04@10'

11/27/2018 3:12:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811374-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	99.2	25.0	mg/kg	1	B8K2704	JTD	11/27/2018	11/27/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl	96.7 %	59-131			"	"	"
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	547	50.0	mg/kg	250	B8K2603	JTD	11/27/2018	11/27/2018
Benzene	0.060	0.050	"	25	"	JTD	"	11/28/2018
Toluene	0.138	0.050	"	"	"	JTD	"	"
Ethylbenzene	1.34	0.498	"	250	"	JTD	"	11/27/2018
Xylenes, total	20.6	0.498	"	"	"	JTD	"	"

Surrogate: 1,2-Dichloroethane-d4	106 %	70-130			"	"	"
Surrogate: Toluene-d8	95.6 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	104 %	70-130			"	"	"

pH in Soil by EPA 9045D

pH	8.18		pH Units	1	B8K2705	OLAB	11/27/2018	11/27/2018
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0998	0.00500	mmhos/cm	"	B8K2706	KDK	11/27/2018	11/27/2018
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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

N06@10'

11/27/2018 3:16:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811374-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	195	25.0	mg/kg	1	B8K2704	JTD	11/27/2018	11/27/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl	96.3 %	59-131			"	"	"	
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	1790	50.0	mg/kg	250	B8K2603	JTD	11/27/2018	11/28/2018
Benzene	0.890	0.498	"	"	"	JTD	"	"
Toluene	23.8	0.498	"	"	"	JTD	"	"
Ethylbenzene	8.79	0.498	"	"	"	JTD	"	"
Xylenes, total	102	0.498	"	"	"	JTD	"	"

Surrogate: 1,2-Dichloroethane-d4	104 %	70-130			"	"	11/27/2018
Surrogate: Toluene-d8	92.4 %	70-130			"	"	11/28/2018
Surrogate: 4-Bromofluorobenzene	97.3 %	70-130			"	"	"

pH in Soil by EPA 9045D

pH	8.05	pH Units	1	B8K2705	OLAB	11/27/2018	11/27/2018
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0961	0.00500	mmhos/cm	"	B8K2706	KDK	11/27/2018	11/27/2018
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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
Batch B8K2603 - EPA 5030 (soil)										
Blank (B8K2603-BLK1)					Prepared: 11/26/2018 Analyzed: 11/27/2018					
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	0.14		"	0.125		112	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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
Batch B8K2603 - EPA 5030 (soil)										
Blank (B8K2603-BLK2)					Prepared: 11/26/2018 Analyzed: 11/28/2018					
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	0.12		"	0.125		95.2	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		106	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 B8K2603 - EPA 5030 (soil)

LCS (B8K2603-BS1)

Prepared: 11/26/2018 Analyzed: 11/27/2018

Benzene	0.116	0.002	mg/kg	0.100		116	77.1-124			
Toluene	0.109	0.002	"	0.100		109	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	0.112	0.002	"	0.100		112	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		94.8	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.6	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 B8K2603 - EPA 5030 (soil)

LCS (B8K2603-BS2)

Prepared: 11/26/2018 Analyzed: 11/28/2018

Benzene	0.114	0.002	mg/kg	0.100	114	77.1-124
Toluene	0.101	0.002	"	0.100	101	74.5-128
Ethylbenzene	0.092	0.002	"	0.100	92.0	66.4-127
m,p-Xylene	0.180	0.004	"	0.200	90.0	76.6-124
o-Xylene	0.103	0.002	"	0.100	103	76.6-124
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125	100	70-130
Surrogate: Toluene-d8	0.12		"	0.125	97.9	70-130
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	96.7	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 B8K2603 - EPA 5030 (soil)

Matrix Spike (B8K2603-MS1)		Source: Y811332-03			Prepared: 11/26/2018 Analyzed: 11/27/2018					
Benzene	0.109	0.002	mg/kg	0.100	ND	109	71.8-126			
Toluene	0.094	0.002	"	0.100	ND	94.4	65.1-130			
Ethylbenzene	0.088	0.002	"	0.100	0.0006	87.7	62.2-130			
m,p-Xylene	0.175	0.004	"	0.200	0.001	86.9	46.5-137			
o-Xylene	0.096	0.002	"	0.100	ND	95.6	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.2	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 B8K2603 - EPA 5030 (soil)

Matrix Spike (B8K2603-MS2)		Source: Y811332-04			Prepared: 11/26/2018 Analyzed: 11/27/2018					
Benzene	0.105	0.002	mg/kg	0.100	ND	105	71.8-126			
Toluene	0.090	0.002	"	0.100	ND	89.9	65.1-130			
Ethylbenzene	0.086	0.002	"	0.100	ND	86.5	62.2-130			
m,p-Xylene	0.167	0.004	"	0.200	0.0009	83.1	46.5-137			
o-Xylene	0.094	0.002	"	0.100	ND	94.0	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	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 B8K2603 - EPA 5030 (soil)

Matrix Spike Dup (B8K2603-MSD1)		Source: Y811332-03			Prepared: 11/26/2018 Analyzed: 11/27/2018					
Benzene	0.107	0.002	mg/kg	0.100	ND	107	71.8-126	1.67	11.3	
Toluene	0.091	0.002	"	0.100	ND	90.8	65.1-130	3.87	15.4	
Ethylbenzene	0.085	0.002	"	0.100	0.0006	83.9	62.2-130	4.47	19.6	
m,p-Xylene	0.168	0.004	"	0.200	0.001	83.2	46.5-137	4.33	19.2	
o-Xylene	0.092	0.002	"	0.100	ND	91.7	54.2-134	4.17	17.9	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.3	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 B8K2603 - EPA 5030 (soil)

Matrix Spike Dup (B8K2603-MSD2)		Source: Y811332-04			Prepared: 11/26/2018 Analyzed: 11/27/2018					
Benzene	0.105	0.002	mg/kg	0.100	ND	105	71.8-126	0.191	11.3	
Toluene	0.088	0.002	"	0.100	ND	88.3	65.1-130	1.80	15.4	
Ethylbenzene	0.084	0.002	"	0.100	ND	83.6	62.2-130	3.32	19.6	
m,p-Xylene	0.159	0.004	"	0.200	0.0009	79.3	46.5-137	4.69	19.2	
o-Xylene	0.090	0.002	"	0.100	ND	89.9	54.2-134	4.50	17.9	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	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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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 B8K2704 - EPA 3580

Blank (B8K2704-BLK1)

Prepared: 11/27/2018 Analyzed: 11/27/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	45		"	50.0		90.1	59-131			

Blank (B8K2704-BLK2)

Prepared: 11/27/2018 Analyzed: 11/28/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	47		"	50.0		94.9	59-131			

LCS (B8K2704-BS1)

Prepared: 11/27/2018 Analyzed: 11/27/2018

Diesel (C10-C28)	1090	50.0	mg/kg	1000		109	64-121			
Residual Range Organics (C28-C40)	1100	200	"	1000		110	58-124			
Surrogate: o-Terphenyl	51		"	50.0		103	59-131			

LCS (B8K2704-BS2)

Prepared: 11/27/2018 Analyzed: 11/27/2018

Diesel (C10-C28)	695	50.0	mg/kg	1000		69.5	64-121			
Residual Range Organics (C28-C40)	615	200	"	1000		61.5	58-124			
Surrogate: o-Terphenyl	30		"	50.0		61.0	59-131			

Matrix Spike (B8K2704-MS1)

Source: Y811358-01

Prepared: 11/27/2018 Analyzed: 11/27/2018

Diesel (C10-C28)	1010	50.0	mg/kg	1000	13.8	99.6	53-125			
Residual Range Organics (C28-C40)	1010	200	"	1000	14.2	99.5	47-133			

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

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 B8K2704 - EPA 3580										
Matrix Spike (B8K2704-MS1)		Source: Y811358-01			Prepared: 11/27/2018 Analyzed: 11/27/2018					
Surrogate: o-Terphenyl	45		mg/kg	50.0		89.5	59-131			
Matrix Spike (B8K2704-MS2)		Source: Y811373-01			Prepared: 11/27/2018 Analyzed: 11/27/2018					
Diesel (C10-C28)	1140	50.0	mg/kg	1000	17.2	112	53-125			
Residual Range Organics (C28-C40)	1120	200	"	1000	17.3	110	47-133			
Surrogate: o-Terphenyl	53		"	50.0		106	59-131			
Matrix Spike Dup (B8K2704-MSD1)		Source: Y811358-01			Prepared: 11/27/2018 Analyzed: 11/27/2018					
Diesel (C10-C28)	970	50.0	mg/kg	1000	13.8	95.6	53-125	4.10	20	
Residual Range Organics (C28-C40)	970	200	"	1000	14.2	95.6	47-133	4.01	20	
Surrogate: o-Terphenyl	44		"	50.0		87.7	59-131			
Matrix Spike Dup (B8K2704-MSD2)		Source: Y811373-01			Prepared: 11/27/2018 Analyzed: 11/27/2018					
Diesel (C10-C28)	1110	50.0	mg/kg	1000	17.2	109	53-125	2.80	20	
Residual Range Organics (C28-C40)	1080	200	"	1000	17.3	106	47-133	3.92	20	
Surrogate: o-Terphenyl	52		"	50.0		104	59-131			

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

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 B8K2705 - NO PREP										
Duplicate (B8K2705-DUP1)		Source: Y811372-01			Prepared: 11/27/2018 Analyzed: 11/27/2018					
pH	6.77		pH Units		7.71			13.0	25	
Batch B8K2706 - NO PREP										
Blank (B8K2706-BLK1)		Prepared: 11/27/2018 Analyzed: 11/27/2018								
Specific Conductance (EC)	0.00380	0.00500	mmhos/cm							
Duplicate (B8K2706-DUP1)		Source: Y811372-01			Prepared: 11/27/2018 Analyzed: 11/27/2018					
Specific Conductance (EC)	0.202	0.00500	mmhos/cm		0.200			0.997	25	

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

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.



November 30, 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 29, 2018. This project is associated with Origins project number Y811430-01.

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
N07@10'	Y811430-01	Soil	November 29, 2018 16:00	11/29/2018 17:45
E06@10'	Y811430-02	Soil	November 29, 2018 16:07	11/29/2018 17:45
W07@10'	Y811430-03	Soil	November 29, 2018 15:40	11/29/2018 17:45
W08@12'	Y811430-04	Soil	November 29, 2018 15:50	11/29/2018 17:45

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.

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: Y611430

Client: LTE

Client Project ID: KMG - Rice #1

Checklist Completed by: JG

Shipped Via: HD

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

Date/time completed: 11/29/2018

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 5.5 °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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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"/>	
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 checked="" type="checkbox"/>	<input 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 NaAcO ₂ +NaOH, ZnAc+NaOH).	<input checked="" type="checkbox"/>	<input 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) [Signature]

Date/Time Reviewed 11/29/18

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.

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

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

N07@10'

11/29/2018 4:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811430-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8K2910	JTD	11/29/2018	11/29/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 78.6 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	20.5	5.00	mg/kg	25	B8K2909	KDK	11/29/2018	11/30/2018	
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 91.5 % 70-130 " " "
Surrogate: Toluene-d8 101 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 105 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.34		pH Units	1	B8K2906	OLAB	11/29/2018	11/29/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0399	0.00500	mmhos/cm	"	B8K2907	OLAB	11/29/2018	"	
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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.

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

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

E06@10'

11/29/2018 4:07:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811430-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	91.8	25.0	mg/kg	1	B8K2910	JTD	11/29/2018	11/29/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 79.2 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	211	5.00	mg/kg	25	B8K2909	KDK	11/29/2018	11/30/2018	
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	0.280	0.050	"	"	"	KDK	"	"	
Ethylbenzene	0.338	0.050	"	"	"	KDK	"	"	
Xylenes, total	4.53	0.050	"	"	"	KDK	"	"	

Surrogate: 1,2-Dichloroethane-d4 101 % 70-130 " " "

Surrogate: Toluene-d8 93.0 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 107 % 70-130 " " 11/29/2018

pH in Soil by EPA 9045D

pH	8.19		pH Units	1	B8K2906	OLAB	11/29/2018	11/29/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.118	0.00500	mmhos/cm	"	B8K2907	OLAB	11/29/2018	"	
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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

W07@10'

11/29/2018 3:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811430-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8K2910	JTD	11/29/2018	11/29/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 77.8 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B8K2909	KDK	11/29/2018	11/29/2018	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 95.8 % 70-130 " " "
Surrogate: Toluene-d8 98.9 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 102 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.19		pH Units	1	B8K2906	OLAB	11/29/2018	11/29/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0791	0.00500	mmhos/cm	"	B8K2907	OLAB	11/29/2018	"	
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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

W08@12'

11/29/2018 3:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811430-04 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8K2910	JTD	11/29/2018	11/29/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 77.7 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	11.9	5.00	mg/kg	25	B8K2909	KDK	11/29/2018	11/30/2018	
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	0.214	0.050	"	"	"	KDK	"	"	
Ethylbenzene	ND	0.050	"	"	"	KDK	"	"	U
Xylenes, total	0.430	0.050	"	"	"	KDK	"	"	

Surrogate: 1,2-Dichloroethane-d4 95.5 % 70-130 " " "
Surrogate: Toluene-d8 99.5 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 102 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.50		pH Units	1	B8K2906	OLAB	11/29/2018	11/29/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0174	0.00500	mmhos/cm	"	B8K2907	OLAB	11/29/2018	"	
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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.

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
Batch B8K2909 - EPA 5030 (soil)										
Blank (B8K2909-BLK1)					Prepared: 11/29/2018 Analyzed: 11/29/2018					
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	0.13		"	0.125		103	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	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
Batch B8K2909 - EPA 5030 (soil)										
LCS (B8K2909-BS1)					Prepared: 11/29/2018 Analyzed: 11/29/2018					
Benzene	0.117	0.002	mg/kg	0.100		117	77.1-124			
Toluene	0.108	0.002	"	0.100		108	74.5-128			
Ethylbenzene	0.108	0.002	"	0.100		108	66.4-127			
m,p-Xylene	0.212	0.004	"	0.200		106	76.6-124			
o-Xylene	0.114	0.002	"	0.100		114	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		90.0	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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 B8K2909 - EPA 5030 (soil)

Matrix Spike (B8K2909-MS1)		Source: Y811398-01			Prepared: 11/29/2018 Analyzed: 11/29/2018					
Benzene	0.109	0.002	mg/kg	0.100	ND	109	71.8-126			
Toluene	0.094	0.002	"	0.100	ND	93.8	65.1-130			
Ethylbenzene	0.086	0.002	"	0.100	0.0006	84.9	62.2-130			
m,p-Xylene	0.169	0.004	"	0.200	0.001	83.6	46.5-137			
o-Xylene	0.095	0.002	"	0.100	ND	95.2	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		106	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.5	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 B8K2909 - EPA 5030 (soil)

Matrix Spike Dup (B8K2909-MSD1)		Source: Y811398-01			Prepared: 11/29/2018 Analyzed: 11/29/2018					
Benzene	0.112	0.002	mg/kg	0.100	ND	112	71.8-126	3.19	11.3	
Toluene	0.104	0.002	"	0.100	ND	104	65.1-130	10.7	15.4	
Ethylbenzene	0.105	0.002	"	0.100	0.0006	105	62.2-130	20.7	19.6	QR-02
m,p-Xylene	0.208	0.004	"	0.200	0.001	103	46.5-137	20.9	19.2	QR-02
o-Xylene	0.112	0.002	"	0.100	ND	112	54.2-134	16.0	17.9	
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		89.0	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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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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 B8K2910 - EPA 3550B

Blank (B8K2910-BLK1)

Prepared: 11/29/2018 Analyzed: 11/29/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	46		"	50.0		91.1	59-131			

LCS (B8K2910-BS1)

Prepared: 11/29/2018 Analyzed: 11/29/2018

Diesel (C10-C28)	1000	50.0	mg/kg	1000		100	64-121			
Residual Range Organics (C28-C40)	910	200	"	1000		91.0	58-124			
Surrogate: o-Terphenyl	42		"	50.0		83.4	59-131			

Matrix Spike (B8K2910-MS1)

Source: Y811393-01

Prepared: 11/29/2018 Analyzed: 11/29/2018

Diesel (C10-C28)	1210	50.0	mg/kg	1000	56.9	115	53-125			
Residual Range Organics (C28-C40)	1090	200	"	1000	23.9	106	47-133			
Surrogate: o-Terphenyl	54		"	50.0		108	59-131			

Matrix Spike Dup (B8K2910-MSD1)

Source: Y811393-01

Prepared: 11/29/2018 Analyzed: 11/29/2018

Diesel (C10-C28)	1240	50.0	mg/kg	1000	56.9	118	53-125	2.28	20	
Residual Range Organics (C28-C40)	1170	200	"	1000	23.9	114	47-133	7.29	20	
Surrogate: o-Terphenyl	57		"	50.0		114	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.

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

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

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 B8K2906 - NO PREP										
Duplicate (B8K2906-DUP1)		Source: Y811390-01			Prepared: 11/29/2018 Analyzed: 11/29/2018					
pH	7.87		pH Units		7.59			3.62	25	
Batch B8K2907 - NO PREP										
Blank (B8K2907-BLK1)		Prepared: 11/29/2018 Analyzed: 11/29/2018								
Specific Conductance (EC)	0.00180	0.00500	mmhos/cm							
Duplicate (B8K2907-DUP1)		Source: Y811390-01			Prepared: 11/29/2018 Analyzed: 11/29/2018					
Specific Conductance (EC)	0.0907	0.00500	mmhos/cm		0.0977			7.43	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.

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

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

Notes and Definitions

U Sample is Non-Detect.

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

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.



December 03, 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 30, 2018. This project is associated with Origins project number Y811459-01.

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
S05@12'	Y811459-01	Soil	November 30, 2018 14:50	11/30/2018 16:45
W09@12'	Y811459-02	Soil	November 30, 2018 15:15	11/30/2018 16:45

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.

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

ORIGINS

LABORATORY, INC

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Y811459

page 1 of 1

Client: LT Environmental
 Address: _____
 Telephone Number: 303-433-4786
 Email Address: LM@Team

Project Manager: Brian Sulzberger
 Project Name: Pice #1
 Project Number: 014216228
 Samples Collected By: Glenn Thompson

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

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	68TEX	TPH		PC	
SOS 012'	11-30-16	1450	2	X					X			X	X	X	Hold S&K	1
WOS 012'	11-30-16	1515	2	X					X			X	X	X	Hold S&K	2
																3
																4
																5
																6
																7
																8
																9
																10
Requisitioned By: 	Date: 11-30-16	Time: 1645		Received By: 				Date: 11/30/16	Time: 1645	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"/>						
Requisitioned By: 	Date: 11-30-16	Time: 1645		Received By: _____				Date: _____	Time: _____							

Temp Received- 5.3 Date Results Needed

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.

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: Y01459

Client: LTE
Client Project ID: KMG - Rice #1

Checklist Completed by: JG

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

Date/time completed: 11/30/2018

Airbill #: N/A

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

Cooler Number/Temperature: 1 / _____ °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⁾ ?				
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)

Date/Time Reviewed 11/30/18

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.

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

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

S05@12'

11/30/2018 2:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811459-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	175	25.0	mg/kg	1	B8K3005	JTD	11/30/2018	12/02/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl	83.0 %	59-131			"	"	"
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GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	421	50.0	mg/kg	250	B8K3004	JTD	"	12/03/2018
Benzene	0.055	0.050	"	25	"	JTD	"	11/30/2018
Toluene	3.05	0.050	"	"	"	JTD	"	"
Ethylbenzene	1.64	0.050	"	"	"	JTD	"	"
Xylenes, total	27.4	0.498	"	250	"	JTD	"	12/03/2018

Surrogate: 1,2-Dichloroethane-d4	89.3 %	70-130			"	"	11/30/2018
Surrogate: Toluene-d8	86.8 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	127 %	70-130			"	"	"

pH in Soil by EPA 9045D

pH	7.37		pH Units	1	B8K3006	OLAB	11/30/2018	11/30/2018
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0271	0.00500	mmhos/cm	"	B8K3007	OLAB	11/30/2018	"
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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.

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

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

W09@12'

11/30/2018 3:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y811459-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	26.4	25.0	mg/kg	1	B8K3005	JTD	11/30/2018	12/02/2018	
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 77.4 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	276	5.00	mg/kg	25	B8K3004	JTD	"	12/01/2018	
Benzene	ND	0.050	"	"	"	JTD	"	"	U
Toluene	ND	0.050	"	"	"	JTD	"	"	U
Ethylbenzene	0.923	0.050	"	"	"	JTD	"	"	
Xylenes, total	14.1	0.498	"	250	"	JTD	"	11/30/2018	

Surrogate: 1,2-Dichloroethane-d4 98.4 % 70-130 " " "
Surrogate: Toluene-d8 97.4 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 106 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.50		pH Units	1	B8K3006	OLAB	11/30/2018	11/30/2018	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.118	0.00500	mmhos/cm	"	B8K3007	OLAB	11/30/2018	"	
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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.

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
Batch B8K3004 - EPA 5030 (soil)										
Blank (B8K3004-BLK1)					Prepared: 11/30/2018 Analyzed: 11/30/2018					
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	0.13		"	0.125		105	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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.

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
Batch B8K3004 - EPA 5030 (soil)										
LCS (B8K3004-BS1)					Prepared: 11/30/2018 Analyzed: 11/30/2018					
Benzene	0.108	0.002	mg/kg	0.100		108	77.1-124			
Toluene	0.098	0.002	"	0.100		98.4	74.5-128			
Ethylbenzene	0.094	0.002	"	0.100		94.4	66.4-127			
m,p-Xylene	0.187	0.004	"	0.200		93.6	76.6-124			
o-Xylene	0.104	0.002	"	0.100		104	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		88.9	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		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.

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 B8K3004 - EPA 5030 (soil)

Matrix Spike (B8K3004-MS1)		Source: Y811458-02			Prepared: 11/30/2018 Analyzed: 11/30/2018					
Benzene	0.103	0.002	mg/kg	0.100	0.003	99.8	71.8-126			
Toluene	0.087	0.002	"	0.100	0.003	84.8	65.1-130			
Ethylbenzene	0.076	0.002	"	0.100	ND	76.3	62.2-130			
m,p-Xylene	0.151	0.004	"	0.200	ND	75.7	46.5-137			
o-Xylene	0.087	0.002	"	0.100	ND	86.8	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		110	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.4	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.

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 B8K3004 - EPA 5030 (soil)

Matrix Spike Dup (B8K3004-MSD1)		Source: Y811458-02			Prepared: 11/30/2018 Analyzed: 11/30/2018					
Benzene	0.110	0.002	mg/kg	0.100	0.003	107	71.8-126	6.40	11.3	
Toluene	0.099	0.002	"	0.100	0.003	96.5	65.1-130	12.6	15.4	
Ethylbenzene	0.092	0.002	"	0.100	ND	91.9	62.2-130	18.5	19.6	
m,p-Xylene	0.181	0.004	"	0.200	ND	90.4	46.5-137	17.7	19.2	
o-Xylene	0.102	0.002	"	0.100	ND	102	54.2-134	15.6	17.9	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		94.3	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		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.

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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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 B8K3005 - EPA 3550B

Blank (B8K3005-BLK1)

Prepared: 11/30/2018 Analyzed: 12/02/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	38		"	50.0		76.4	59-131			

LCS (B8K3005-BS1)

Prepared: 11/30/2018 Analyzed: 12/02/2018

Diesel (C10-C28)	983	50.0	mg/kg	1000		98.3	64-121			
Residual Range Organics (C28-C40)	924	200	"	1000		92.4	58-124			
Surrogate: o-Terphenyl	47		"	50.0		94.1	59-131			

Matrix Spike (B8K3005-MS1)

Source: Y811458-02

Prepared: 11/30/2018 Analyzed: 12/02/2018

Diesel (C10-C28)	1040	50.0	mg/kg	1000	45.4	99.5	53-125			
Residual Range Organics (C28-C40)	967	200	"	1000	21.9	94.5	47-133			
Surrogate: o-Terphenyl	51		"	50.0		102	59-131			

Matrix Spike Dup (B8K3005-MSD1)

Source: Y811458-02

Prepared: 11/30/2018 Analyzed: 12/02/2018

Diesel (C10-C28)	996	50.0	mg/kg	1000	45.4	95.0	53-125	4.58	20	
Residual Range Organics (C28-C40)	897	200	"	1000	21.9	87.5	47-133	7.70	20	
Surrogate: o-Terphenyl	49		"	50.0		97.5	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.

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

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

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 B8K3006 - NO PREP										
Duplicate (B8K3006-DUP1)		Source: Y811459-01			Prepared: 11/30/2018 Analyzed: 11/30/2018					
pH	7.32		pH Units		7.37			0.681	25	
Batch B8K3007 - NO PREP										
Blank (B8K3007-BLK1)		Prepared: 11/30/2018 Analyzed: 11/30/2018								
Specific Conductance (EC)	0.00280	0.00500	mmhos/cm							
Duplicate (B8K3007-DUP1)		Source: Y811459-01			Prepared: 11/30/2018 Analyzed: 11/30/2018					
Specific Conductance (EC)	0.0268	0.00500	mmhos/cm		0.0271			1.11	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.

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

Brian Sulzberger
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.



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



December 04, 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. December 03, 2018. This project is associated with Origins project number Y812010-01.

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
S06@12'	Y812010-01	Soil	December 3, 2018 14:40	12/03/2018 15:40

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.

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

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

www.originslaboratory.com


12/3/18

ORIGINS
LABORATORY, INC

page 1 of 1

Client: LT Environmental
Project Manager: Brian Sulzberger
Address: _____
Project Name: Rice #1
Project Number: 014218228
Telephone Number: 303-433-9186
Email Address: KMG Team
Samples Collected By: Glenn Thompson

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

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	GC/MS	TOC	PC		EC
506012	12/3/18	1440	2	X					X				X	X	X	Hold S&C
Relinquished By: 	Date: 12-3-18	Time: 1540														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: _____														

Temp Received: 5.2 Date Results Needed

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.

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: Y812010

Client: LTE

Client Project ID: KMG - Rice #1

Checklist Completed by: JG

Shipped Via: HD

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

Date/time completed: 12/3/2018

Airbill #: N/A

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

Cooler Number/Temperature: 1 5.2 °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 ≤ 5°C ⁽¹⁾ ?				
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)

12/3/18
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.

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

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

S06@12'

12/3/2018 2:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y812010-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25.0	mg/kg	1	B8L0303	JTD	12/03/2018	12/03/2018	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 78.3 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	0.484	0.200	mg/kg	1	B8L0310	JTD	12/03/2018	12/03/2018
Benzene	0.123	0.002	"	"	"	JTD	"	"
Toluene	0.010	0.002	"	"	"	JTD	"	"
Ethylbenzene	0.014	0.002	"	"	"	JTD	"	"
Xylenes, total	0.166	0.002	"	"	"	JTD	"	"

Surrogate: 1,2-Dichloroethane-d4 84.5 % 70-130 " " "

Surrogate: Toluene-d8 102 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 108 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.96		pH Units	1	B8L0304	OLAB	12/03/2018	12/03/2018
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0854	0.00500	mmhos/cm	"	B8L0305	OLAB	"	"
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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
Batch B8L0310 - EPA 5030 (soil)										
Blank (B8L0310-BLK1)					Prepared: 12/03/2018 Analyzed: 12/03/2018					
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	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130			

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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 B8L0310 - EPA 5030 (soil)

LCS (B8L0310-BS1)

Prepared: 12/03/2018 Analyzed: 12/03/2018

Benzene	0.116	0.002	mg/kg	0.100		116	77.1-124			
Toluene	0.096	0.002	"	0.100		96.4	74.5-128			
Ethylbenzene	0.090	0.002	"	0.100		89.8	66.4-127			
m,p-Xylene	0.170	0.004	"	0.200		85.0	76.6-124			
o-Xylene	0.095	0.002	"	0.100		94.5	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		96.2	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.2	70-130			

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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 B8L0310 - EPA 5030 (soil)

Matrix Spike (B8L0310-MS1)		Source: Y812010-01			Prepared: 12/03/2018 Analyzed: 12/03/2018					
Benzene	0.284	0.002	mg/kg	0.100	0.123	161	71.8-126			QM-07
Toluene	0.142	0.002	"	0.100	0.010	132	65.1-130			QM-07
Ethylbenzene	0.109	0.002	"	0.100	0.014	94.7	62.2-130			
m,p-Xylene	0.371	0.004	"	0.200	0.146	113	46.5-137			
o-Xylene	0.164	0.002	"	0.100	0.021	144	54.2-134			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.6	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.6	70-130			

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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 B8L0310 - EPA 5030 (soil)

Matrix Spike Dup (B8L0310-MSD1)		Source: Y812010-01			Prepared: 12/03/2018 Analyzed: 12/03/2018					
Benzene	0.199	0.002	mg/kg	0.100	0.123	76.0	71.8-126	35.1	11.3	QM-07
Toluene	0.118	0.002	"	0.100	0.010	108	65.1-130	18.0	15.4	QM-07
Ethylbenzene	0.103	0.002	"	0.100	0.014	89.3	62.2-130	5.05	19.6	
m,p-Xylene	0.293	0.004	"	0.200	0.146	73.7	46.5-137	23.4	19.2	QM-07
o-Xylene	0.139	0.002	"	0.100	0.021	118	54.2-134	16.8	17.9	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		96.1	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.8	70-130			

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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 B8L0303 - EPA 3550B

Blank (B8L0303-BLK1)

Prepared: 12/03/2018 Analyzed: 12/03/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	35		"	50.0		70.6	59-131			

Blank (B8L0303-BLK2)

Prepared: 12/03/2018 Analyzed: 12/03/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	40		"	50.0		79.7	59-131			

Blank (B8L0303-BLK3)

Prepared: 12/03/2018 Analyzed: 12/03/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	42		"	50.0		83.6	59-131			

LCS (B8L0303-BS1)

Prepared: 12/03/2018 Analyzed: 12/03/2018

Diesel (C10-C28)	916	50.0	mg/kg	1000		91.6	64-121			
Residual Range Organics (C28-C40)	846	200	"	1000		84.6	58-124			
Surrogate: o-Terphenyl	43		"	50.0		86.0	59-131			

LCS (B8L0303-BS2)

Prepared: 12/03/2018 Analyzed: 12/03/2018

Diesel (C10-C28)	778	50.0	mg/kg	1000		77.8	64-121			
Residual Range Organics (C28-C40)	725	200	"	1000		72.5	58-124			

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LT Environmental, Inc.
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Brian Sulzberger
Project Number: 014218228
Project: KMG - Rice #1

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 B8L0303 - EPA 3550B										
LCS (B8L0303-BS2)					Prepared: 12/03/2018 Analyzed: 12/03/2018					
Surrogate: o-Terphenyl	36		mg/kg	50.0		71.6	59-131			
LCS (B8L0303-BS3)					Prepared: 12/03/2018 Analyzed: 12/03/2018					
Diesel (C10-C28)	1020	50.0	mg/kg	1000		102	64-121			
Residual Range Organics (C28-C40)	927	200	"	1000		92.7	58-124			
Surrogate: o-Terphenyl	48		"	50.0		95.5	59-131			
Matrix Spike (B8L0303-MS1)					Source: Y811425-01		Prepared: 12/03/2018 Analyzed: 12/03/2018			
Diesel (C10-C28)	1200	50.0	mg/kg	1000	ND	120	53-125			
Residual Range Organics (C28-C40)	1120	200	"	1000	23.6	110	47-133			
Surrogate: o-Terphenyl	55		"	50.0		109	59-131			
Matrix Spike (B8L0303-MS2)					Source: Y811425-02		Prepared: 12/03/2018 Analyzed: 12/03/2018			
Diesel (C10-C28)	1100	50.0	mg/kg	1000	43.7	105	53-125			
Residual Range Organics (C28-C40)	974	200	"	1000	24.0	95.1	47-133			
Surrogate: o-Terphenyl	50		"	50.0		99.1	59-131			
Matrix Spike (B8L0303-MS3)					Source: Y812010-01		Prepared: 12/03/2018 Analyzed: 12/03/2018			
Diesel (C10-C28)	962	50.0	mg/kg	1000	ND	96.2	53-125			
Residual Range Organics (C28-C40)	853	200	"	1000	6.77	84.6	47-133			
Surrogate: o-Terphenyl	43		"	50.0		86.1	59-131			
Matrix Spike Dup (B8L0303-MSD1)					Source: Y811425-01		Prepared: 12/03/2018 Analyzed: 12/03/2018			
Diesel (C10-C28)	1170	50.0	mg/kg	1000	ND	117	53-125	2.49	20	
Residual Range Organics (C28-C40)	1110	200	"	1000	23.6	108	47-133	1.43	20	
Surrogate: o-Terphenyl	51		"	50.0		102	59-131			
Matrix Spike Dup (B8L0303-MSD2)					Source: Y811425-02		Prepared: 12/03/2018 Analyzed: 12/03/2018			

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

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 B8L0303 - EPA 3550B										
Matrix Spike Dup (B8L0303-MSD2)		Source: Y811425-02			Prepared: 12/03/2018 Analyzed: 12/03/2018					
Diesel (C10-C28)	1080	50.0	mg/kg	1000	43.7	104	53-125	1.55	20	
Residual Range Organics (C28-C40)	984	200	"	1000	24.0	96.0	47-133	0.997	20	
Surrogate: o-Terphenyl	49		"	50.0		98.5	59-131			
Matrix Spike Dup (B8L0303-MSD3)		Source: Y812010-01			Prepared: 12/03/2018 Analyzed: 12/03/2018					
Diesel (C10-C28)	956	50.0	mg/kg	1000	ND	95.6	53-125	0.538	20	
Residual Range Organics (C28-C40)	851	200	"	1000	6.77	84.4	47-133	0.268	20	
Surrogate: o-Terphenyl	42		"	50.0		84.7	59-131			

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Project: KMG - Rice #1

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 B8L0304 - NO PREP										
Duplicate (B8L0304-DUP1)		Source: Y811441-01			Prepared: 12/03/2018 Analyzed: 12/03/2018					
pH	7.73		pH Units		7.91			2.30	25	
Batch B8L0305 - NO PREP										
Blank (B8L0305-BLK1)		Prepared: 12/03/2018 Analyzed: 12/03/2018								
Specific Conductance (EC)	0.00270	0.00500	mmhos/cm							
Duplicate (B8L0305-DUP1)		Source: Y811441-01			Prepared: 12/03/2018 Analyzed: 12/03/2018					
Specific Conductance (EC)	0.0807	0.00500	mmhos/cm		0.0842			4.24	25	

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Project: KMG - Rice #1

Notes and Definitions

U Sample is Non-Detect.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

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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