

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
38-0000-5193-3
ADAMS COUNTY, COLORADO
KERR-MCGEE GATHERING, LLC

COGCC Allowable Concentration (Soil) -->				Organics (mg/kg)							
				500			0.17	85	100	175	23
Sample ID:	Sample Date:	Sample Depth (feet bgs):	Photoionization Detector Reading (ppm):	TPH-GRO (C6-C10) Low Fraction	TPH-DRO (C10-C28) High Fraction	TPH-RRO (C28-C40) High Fraction	Benzene	Toluene	Ethylbenzene	Xylenes - total	Naphthalene
B01@6'	01/17/2020	6'	1.7	<5.00	<25.0	<100	<0.050	<0.050	<0.050	<0.050	<0.200
E01@5'	01/17/2020	5'	0.3	<5.00	<25.0	<100	<0.050	<0.050	<0.050	<0.050	<0.200
N01@5'	01/17/2020	5'	1.9	<5.00	<25.0	<100	<0.050	<0.050	<0.050	<0.050	<0.200
S01@5'	01/17/2020	5'	0.2	<5.00	<25.0	<100	<0.050	<0.050	<0.050	<0.050	<0.200
W01@5'	01/17/2020	5'	0.5	<5.00	<25.0	<100	<0.050	<0.050	<0.050	<0.050	<0.200

Notes: mg/kg - milligrams per kilogram
COGCC - Colorado Oil and Gas Conservation Commission
bgs - below ground surface
ppm - parts per million
TPH - total petroleum hydrocarbons

GRO - gasoline range organics
DRO - diesel range organics
RRO - residual range organics
NA - not analyzed
Bold indicates result exceeds allowable level



TABLE 2
GROUNDWATER ANALYTICAL AND FIELD RESULTS
38-0000-5193-3 GATHERING LINE
ADAMS COUNTY, COLORADO
KERR-MCGEE GATHERING, LLC

Well Name	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water/ (Product Thickness) (ft bgs)	Relative GW Elev. (ft)
COGCC Allowable Levels		5	560	700	1400		
GW01	1/15/2020	49.9	39.8	<4.00	8.52	1.5	NA
GW02	1/17/2020	<4.00	<4.00	<4.00	<4.00	1.5	NA
MW01	5/14/2020	<1.00	<1.00	<1.00	<1.00	0.73	99.47
	8/14/2020	<1.00	<1.00	<1.00	<1.00	2.83	97.37
	11/23/2020	<1.00	<1.00	<1.00	<1.00	3.35	96.85
	2/25/2021	<1.00	<1.00	<1.00	<1.00	2.45	97.75
MW02	5/14/2020	<1.00	<1.00	<1.00	<1.00	1.48	98.53
	8/14/2020	<1.00	<1.00	<1.00	<1.00	3.40	96.61
	11/23/2020	<1.00	<1.00	<1.00	<1.00	3.86	96.15
	2/25/2021	<1.00	<1.00	<1.00	<1.00	2.85	97.16
MW03	5/14/2020	<1.00	<1.00	<1.00	<1.00	0.85	97.98
	8/14/2020	<1.00	<1.00	<1.00	<1.00	2.81	96.02
	11/23/2020	<1.00	<1.00	<1.00	<1.00	3.18	95.65
	2/25/2021	<1.00	<1.00	<1.00	<1.00	2.17	96.66
MW04	5/14/2020	<1.00	<1.00	<1.00	<1.00	1.65	98.24
	8/14/2020	<1.00	<1.00	<1.00	<1.00	3.10	96.79
	11/23/2020	<1.00	<1.00	<1.00	<1.00	3.54	96.35
	2/25/2021	<1.00	<1.00	<1.00	<1.00	2.70	97.19

Notes: COGCC - Colorado Oil and Gas Conservation Commission µg/L - micrograms per liter
ft bgs - feet below ground surface < - less than laboratory reporting limit
NA - not analyzed/not available Excavation groundwater depth is approximate
NM - not measured
Corrected Relative GW Elev. is used when LNAPL is present.
BOLD = Analytical result is in exceedance of COGCC Table 915-1 groundwater standards.



May 21, 2020

LT Environmental, Inc.

Brian Sulzberger

4600 West 60th Avenue

Arvada CO 80003

Project Name - KMG - 38-0000-5193-3

Project Number - 01422009

Attached are your analytical results for KMG - 38-0000-5193-3 received by Origins Laboratory, Inc. May 14, 2020. This project is associated with Origins project number Y005210-01.

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
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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: 01422009
Project: KMG - 38-0000-5193-3

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW01	Y005210-01	Water	May 14, 2020 14:41	05/14/2020 16:11
MW02	Y005210-02	Water	May 14, 2020 14:28	05/14/2020 16:11
MW03	Y005210-03	Water	May 14, 2020 13:56	05/14/2020 16:11
MW04	Y005210-04	Water	May 14, 2020 14:36	05/14/2020 16:11

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: 01422009
 Project: KMG - 38-0000-5193-3

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

Sample Receipt Checklist

Origins Work Order: Y0045210 ^{KDK} Client: LTE
 Checklist Completed by: JK KDK Client Project ID: KMG-38-0000-5193
 Date/time completed: 05/14/2020 Shipped Via: HD
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: N/A

Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____
 Cooler Number/Temperature: 1 / 29 °C _____ / _____ °C _____ / _____ °C (Describe)
 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 in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) Jm Date/Time Reviewed 5-15-20

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: 01422009
 Project: KMG - 38-0000-5193-3

MW01

5/14/2020 2:41:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y005210-01 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B0E1506	ZZZ	05/15/2020	05/19/2020	U
Toluene	ND	1.00	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	1.00	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	1.00	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	94.2 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	97.0 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	106 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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

Brian Sulzberger
 Project Number: 01422009
 Project: KMG - 38-0000-5193-3

MW02

5/14/2020 2:28:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y005210-02 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B0E1506	ZZZ	05/15/2020	05/19/2020	U
Toluene	ND	1.00	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	1.00	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	1.00	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	98.9 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	95.2 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	104 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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

Brian Sulzberger
 Project Number: 01422009
 Project: KMG - 38-0000-5193-3

MW03

5/14/2020 1:56:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y005210-03 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B0E1506	ZZZ	05/15/2020	05/19/2020	U
Toluene	ND	1.00	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	1.00	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	1.00	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	99.5 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	97.7 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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

Brian Sulzberger
Project Number: 01422009
Project: KMG - 38-0000-5193-3

MW04

5/14/2020 2:36:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y005210-04 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B0E1506	ZZZ	05/15/2020	05/19/2020	U
Toluene	ND	1.00	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	1.00	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	1.00	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	98.3 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	94.8 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	105 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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

Brian Sulzberger
 Project Number: 01422009
 Project: KMG - 38-0000-5193-3

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B0E1506 - EPA 5030B (Water)

Blank (B0E1506-BLK1)

Prepared: 05/15/2020 Analyzed: 05/19/2020

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		95.6	70-130			
Surrogate: Toluene-d8	60		"	62.5		95.5	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: 01422009
 Project: KMG - 38-0000-5193-3

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B0E1506 - EPA 5030B (Water)

LCS (B0E1506-BS1)

Prepared: 05/15/2020 Analyzed: 05/19/2020

Benzene	49.5	1.00	ug/L	50.0		99.0	70-130			
Toluene	47.5	1.00	"	50.0		95.1	70-130			
Ethylbenzene	59.3	1.00	"	50.0		119	70-130			
m,p-Xylene	117	2.00	"	100		117	70-130			
o-Xylene	51.5	1.00	"	50.0		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.6	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.4	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	70-130			

Origins Laboratory, Inc.



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

Brian Sulzberger
 Project Number: 01422009
 Project: KMG - 38-0000-5193-3

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B0E1506 - EPA 5030B (Water)

Matrix Spike (B0E1506-MS1)	Source: Y005213-01			Prepared: 05/15/2020 Analyzed: 05/19/2020						
Benzene	62.0	1.00	ug/L	50.0	ND	124	70-130			
Toluene	62.0	1.00	"	50.0	ND	124	70-130			
Ethylbenzene	75.6	1.00	"	50.0	ND	151	70-130			QM-07
m,p-Xylene	148	2.00	"	100	ND	148	70-130			QM-07
o-Xylene	67.1	1.00	"	50.0	ND	134	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.6	70-130			
Surrogate: Toluene-d8	64		"	62.5		103	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: 01422009
 Project: KMG - 38-0000-5193-3

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B0E1506 - EPA 5030B (Water)

Matrix Spike Dup (B0E1506-MSD1)	Source: Y005213-01			Prepared: 05/15/2020 Analyzed: 05/19/2020						
Benzene	59.9	1.00	ug/L	50.0	ND	120	70-130	3.38	20	
Toluene	56.9	1.00	"	50.0	ND	114	70-130	8.55	20	
Ethylbenzene	71.0	1.00	"	50.0	ND	142	70-130	6.15	20	QM-07
m,p-Xylene	138	2.00	"	100	ND	138	70-130	6.67	20	QM-07
o-Xylene	62.1	1.00	"	50.0	ND	124	70-130	7.74	20	
Surrogate: 1,2-Dichloroethane-d4	53		"	62.5		84.4	70-130			
Surrogate: Toluene-d8	61		"	62.5		97.5	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	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: 01422009
Project: KMG - 38-0000-5193-3

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.

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.



August 21, 2020

LT Environmental, Inc.

Brian Sulzberger

4600 West 60th Avenue

Arvada CO 80003

Project Name - KMG - 38-0000-5193-3

Project Number - 0142120009/WO #89566

Attached are your analytical results for KMG - 38-0000-5193-3 received by Origins Laboratory, Inc. August 14, 2020. This project is associated with Origins project number Y008215-01.

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: 0142120009/WO #89566539
Project: KMG - 38-0000-5193-3

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW01	Y008215-01	Water	August 14, 2020 15:10	08/14/2020 16:55
MW02	Y008215-02	Water	August 14, 2020 15:25	08/14/2020 16:55
MW03	Y008215-03	Water	August 14, 2020 15:18	08/14/2020 16:55
MW04	Y008215-04	Water	August 14, 2020 15:02	08/14/2020 16:55

Origins Laboratory, Inc.



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

Brian Sulzberger
 Project Number: 0142120009/WO #89566539
 Project: KMG - 38-0000-5193-3

1008215

Page 1 of 1

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

Client:	LT Environmental, Inc.	Project Manager:	Brian Sulzberger					
Project:	KMG - 38-0000-5193-3	Project Number:	0142120009/WO #89566539					
Number	Sample Identification	Matrix	Sample Date	Sample Time	Sampled By	Container	Qty	Analyses
01-001	MW01	Water	8-14	1510	AS	40mL Amber VOA Vial - HC	3	BTEX by EPA 8260D
02-001	MW02	Water	8-14	1525	AS	40mL Amber VOA Vial - HC	3	BTEX by EPA 8260D
03-001	MW03	Water	8-14	1518	AS	40mL Amber VOA Vial - HC	3	BTEX by EPA 8260D
04-001	MW04	Water	8-14	1502	AS	40mL Amber VOA Vial - HC	3	BTEX by EPA 8260D

Relinquished By: Andy S. Gelp Date / Time: 8/14/20 1655

Relinquished By: [Signature] Date / Time: 8/14/20 1655

Received By: _____ Date / Time: _____

Temperature on Receipt: 4.1

Turn Around Time: 72-hr Standard

Same Day: 24-hr 48-hr

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: 0142120009/WO #89566539
 Project: KMG - 38-0000-5193-3

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y008215

Client: LTE

Client Project ID: 38-0000-5193-3

Checklist Completed by: JG KDK

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

Date/time completed: 08/17/20

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 4.1 °C / °C / °C / °C (Describe)

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 type="checkbox"/>	<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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 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.

JM
 Reviewed by (Project Manager)

8-18-20
 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: 0142120009/WO #89566539
 Project: KMG - 38-0000-5193-3

MW01

8/14/2020 3:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y008215-01 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B0H1416	ZZZ	08/14/2020	08/18/2020	U
Toluene	ND	1.00	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	1.00	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	1.00	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	103 %	70-130			"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	94.7 %	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: 0142120009/WO #89566539
 Project: KMG - 38-0000-5193-3

MW02

8/14/2020 3:25:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
---------	--------	-----------------	-------	----------	-------	---------	----------	----------	-------

Origins Laboratory, Inc.
Y008215-02 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B0H1416	ZZZ	08/14/2020	08/18/2020	U
Toluene	ND	1.00	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	1.00	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	1.00	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	104 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	103 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	94.1 %	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: 0142120009/WO #89566539
 Project: KMG - 38-0000-5193-3

MW03

8/14/2020 3:18:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y008215-03 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B0H1416	ZZZ	08/14/2020	08/18/2020	U
Toluene	ND	1.00	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	1.00	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	1.00	"	"	"	ZZZ	"	"	U
Surrogate: 1,2-Dichloroethane-d4	104 %	70-130			"	"		"	
Surrogate: Toluene-d8	101 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	94.7 %	70-130			"	"		"	

Origins Laboratory, Inc.



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

Brian Sulzberger
 Project Number: 0142120009/WO #89566539
 Project: KMG - 38-0000-5193-3

MW04

8/14/2020 3:02:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y008215-04 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B0H1416	ZZZ	08/14/2020	08/18/2020	U
Toluene	ND	1.00	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	1.00	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	1.00	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	105 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	103 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	93.9 %	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: 0142120009/WO #89566539
 Project: KMG - 38-0000-5193-3

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B0H1416 - EPA 5030B (Water)

Blank (B0H1416-BLK1)

Prepared: 08/14/2020 Analyzed: 08/18/2020

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5	97.1		70-130			
Surrogate: Toluene-d8	61		"	62.5	97.5		70-130			
Surrogate: 4-Bromofluorobenzene	59		"	62.5	95.0		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: 0142120009/WO #89566539
 Project: KMG - 38-0000-5193-3

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B0H1416 - EPA 5030B (Water)

LCS (B0H1416-BS1)

Prepared: 08/14/2020 Analyzed: 08/18/2020

Benzene	46.5	1.00	ug/L	50.0		93.0	70-130			
Toluene	52.8	1.00	"	50.0		106	70-130			
Ethylbenzene	51.4	1.00	"	50.0		103	70-130			
m,p-Xylene	105	2.00	"	100		105	70-130			
o-Xylene	51.4	1.00	"	50.0		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		102	70-130			
Surrogate: Toluene-d8	62		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.3	70-130			

Origins Laboratory, Inc.



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

Brian Sulzberger
 Project Number: 0142120009/WO #89566539
 Project: KMG - 38-0000-5193-3

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

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

Batch B0H1416 - EPA 5030B (Water)

Matrix Spike (B0H1416-MS1)	Source: Y008205-29			Prepared: 08/14/2020 Analyzed: 08/18/2020						
Benzene	52.1	1.00	ug/L	50.0	ND	104	70-130			
Toluene	61.3	1.00	"	50.0	ND	123	70-130			
Ethylbenzene	58.7	1.00	"	50.0	ND	117	70-130			
m,p-Xylene	118	2.00	"	100	ND	118	70-130			
o-Xylene	59.3	1.00	"	50.0	ND	119	70-130			
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5		100	70-130			
Surrogate: Toluene-d8	66		"	62.5		106	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.2	70-130			

Origins Laboratory, Inc.



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

Brian Sulzberger
 Project Number: 0142120009/WO #89566539
 Project: KMG - 38-0000-5193-3

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B0H1416 - EPA 5030B (Water)

Matrix Spike Dup (B0H1416-MSD1)	Source: Y008205-29			Prepared: 08/14/2020 Analyzed: 08/18/2020						
Benzene	48.3	1.00	ug/L	50.0	ND	96.6	70-130	7.63	20	
Toluene	57.6	1.00	"	50.0	ND	115	70-130	6.33	20	
Ethylbenzene	55.8	1.00	"	50.0	ND	112	70-130	4.98	20	
m,p-Xylene	112	2.00	"	100	ND	112	70-130	5.57	20	
o-Xylene	56.7	1.00	"	50.0	ND	113	70-130	4.47	20	
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.2	70-130			
Surrogate: Toluene-d8	67		"	62.5		107	70-130			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		95.6	70-130			

Origins Laboratory, Inc.



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

Brian Sulzberger
Project Number: 0142120009/WO #89566539
Project: KMG - 38-0000-5193-3

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.



December 03, 2020

WSP USA

Brian Sulzberger

4600 W. 60th Ave.

Arvada

CO 80003

Project Name - KMG - 38-0000-5193-3

Project Number - 0142120009/WO#89566!

Attached are your analytical results for KMG - 38-0000-5193-3 received by Origins Laboratory, Inc. November 23, 2020. This project is associated with Origins project number Y011349-01.

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

WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 0142120009/WO#89566539
Project: KMG - 38-0000-5193-3

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW01	Y011349-01	Water	November 23, 2020 11:30	11/23/2020 17:10
MW02	Y011349-02	Water	November 23, 2020 11:38	11/23/2020 17:10
MW03	Y011349-03	Water	November 23, 2020 11:45	11/23/2020 17:10
MW04	Y011349-04	Water	November 23, 2020 11:52	11/23/2020 17:10

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.

WSP USA
 4600 W. 60th Ave.
 Arvada CO 80003

Brian Sulzberger
 Project Number: 0142120009/WO#89566539
 Project: KMG - 38-0000-5193-3



7011349

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

Client: LT Environmental, Inc. Project Manager: Brian Sulzberger
 Project: KMG - 38-0000-5193-3 Project Number: 0142120009/WO #89566539

Number	Sample Identification	Matrix	Sample Date	Sample Time	Sampled By	Container	Qty	Analyses
01-001	MW01	Water	11-23-20	1130	BS	40mL Amber VOA Vial - HC	3	BTEX by EPA 8260D
02-001	MW02	Water		1138		40mL Amber VOA Vial - HC	3	BTEX by EPA 8260D
03-001	MW03	Water		1145		40mL Amber VOA Vial - HC	3	BTEX by EPA 8260D
04-001	MW04	Water		1152		40mL Amber VOA Vial - HC	2	BTEX by EPA 8260D

Requisitioned By: *Brian Sulzberger* Date / Time: 11-23-20 1710
 Requisitioned By: *[Signature]* Date / Time: 11/23/20 1710
 Received By: *[Signature]* Date / Time:
 Received By: *[Signature]* Date / Time:
 Temperature on Receipt: 7.3
 Turn Around Time: Same Day, 24-hr, 72-hr, Standard, 48-hr

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.

WSP USA
 4600 W. 60th Ave.
 Arvada CO 80003

Brian Sulzberger
 Project Number: 0142120009/WO#89566539
 Project: KMG - 38-0000-5193-3

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y011349

Client: WSP

Client Project ID: 38-0000-5193-3

Checklist Completed by: SG

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

Date/time completed: 11/24/20

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 7.3 °C 1 / 1 °C 1 / 1 °C (Describe)

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 JM (Project Manager)

11-25-20
 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.

WSP USA
 4600 W. 60th Ave.
 Arvada CO 80003

Brian Sulzberger
 Project Number: 0142120009/WO#89566539
 Project: KMG - 38-0000-5193-3

MW01
11/23/2020 11:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y011349-01 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B0K2404	TEM	11/24/2020	11/30/2020	U
Toluene	ND	1.00	"	"	"	TEM	"	"	U
Ethylbenzene	ND	1.00	"	"	"	TEM	"	"	U
Xylenes, total	ND	1.00	"	"	"	TEM	"	"	U
Surrogate: 1,2-Dichloroethane-d4	100 %	70-130			"	"		"	
Surrogate: Toluene-d8	102 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	93.4 %	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.

WSP USA
 4600 W. 60th Ave.
 Arvada CO 80003

Brian Sulzberger
 Project Number: 0142120009/WO#89566539
 Project: KMG - 38-0000-5193-3

MW02
11/23/2020 11:38:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
---------	--------	-----------------	-------	----------	-------	---------	----------	----------	-------

Origins Laboratory, Inc.
Y011349-02 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B0K2404	TEM	11/24/2020	11/30/2020	U
Toluene	ND	1.00	"	"	"	TEM	"	"	U
Ethylbenzene	ND	1.00	"	"	"	TEM	"	"	U
Xylenes, total	ND	1.00	"	"	"	TEM	"	"	U
Surrogate: 1,2-Dichloroethane-d4	102 %	70-130			"	"		"	
Surrogate: Toluene-d8	101 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	95.5 %	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.

WSP USA
 4600 W. 60th Ave.
 Arvada CO 80003

Brian Sulzberger
 Project Number: 0142120009/WO#89566539
 Project: KMG - 38-0000-5193-3

MW03

11/23/2020 11:45:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y011349-03 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B0K2404	TEM	11/24/2020	11/30/2020	U
Toluene	ND	1.00	"	"	"	TEM	"	"	U
Ethylbenzene	ND	1.00	"	"	"	TEM	"	"	U
Xylenes, total	ND	1.00	"	"	"	TEM	"	"	U
Surrogate: 1,2-Dichloroethane-d4	102 %	70-130			"	"		"	
Surrogate: Toluene-d8	98.3 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	94.9 %	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.

WSP USA
 4600 W. 60th Ave.
 Arvada CO 80003

Brian Sulzberger
 Project Number: 0142120009/WO#89566539
 Project: KMG - 38-0000-5193-3

MW04

11/23/2020 11:52:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y011349-04 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B0K2404	TEM	11/24/2020	11/30/2020	U
Toluene	ND	1.00	"	"	"	TEM	"	"	U
Ethylbenzene	ND	1.00	"	"	"	TEM	"	"	U
Xylenes, total	ND	1.00	"	"	"	TEM	"	"	U
Surrogate: 1,2-Dichloroethane-d4	103 %	70-130			"	"		"	
Surrogate: Toluene-d8	99.7 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	94.0 %	70-130			"	"		"	

Origins Laboratory, Inc.



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WSP USA
 4600 W. 60th Ave.
 Arvada CO 80003

Brian Sulzberger
 Project Number: 0142120009/WO#89566539
 Project: KMG - 38-0000-5193-3

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B0K2404 - EPA 5030B (Water)

Blank (B0K2404-BLK1)

Prepared: 11/24/2020 Analyzed: 11/30/2020

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5	97.9		70-130			
Surrogate: Toluene-d8	62		"	62.5	98.9		70-130			
Surrogate: 4-Bromofluorobenzene	59		"	62.5	94.4		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.

WSP USA
 4600 W. 60th Ave.
 Arvada CO 80003

Brian Sulzberger
 Project Number: 0142120009/WO#89566539
 Project: KMG - 38-0000-5193-3

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B0K2404 - EPA 5030B (Water)

LCS (B0K2404-BS1)

Prepared: 11/24/2020 Analyzed: 11/30/2020

Benzene	45.4	1.00	ug/L	50.0		90.7	70-130			
Toluene	47.4	1.00	"	50.0		94.8	70-130			
Ethylbenzene	49.1	1.00	"	50.0		98.2	70-130			
m,p-Xylene	99.1	2.00	"	100		99.1	70-130			
o-Xylene	50.0	1.00	"	50.0		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		102	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		95.2	70-130			

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Brian Sulzberger
 Project Number: 0142120009/WO#89566539
 Project: KMG - 38-0000-5193-3

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B0K2404 - EPA 5030B (Water)

Matrix Spike (B0K2404-MS1)	Source: Y011346-02			Prepared: 11/24/2020 Analyzed: 11/30/2020						
Benzene	47.1	1.00	ug/L	50.0	ND	94.1	70-130			
Toluene	50.4	1.00	"	50.0	0.360	100	70-130			
Ethylbenzene	54.4	1.00	"	50.0	3.53	102	70-130			
m,p-Xylene	103	2.00	"	100	1.71	102	70-130			
o-Xylene	53.4	1.00	"	50.0	0.630	105	70-130			
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		105	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.7	70-130			

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Brian Sulzberger
 Project Number: 0142120009/WO#89566539
 Project: KMG - 38-0000-5193-3

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B0K2404 - EPA 5030B (Water)

Matrix Spike Dup (B0K2404-MSD1)	Source: Y011346-02		Prepared: 11/24/2020 Analyzed: 11/30/2020							
Benzene	40.1	1.00	ug/L	50.0	ND	80.1	70-130	16.1	20	
Toluene	43.5	1.00	"	50.0	0.360	86.2	70-130	14.7	20	
Ethylbenzene	46.1	1.00	"	50.0	3.53	85.1	70-130	16.6	20	
m,p-Xylene	86.8	2.00	"	100	1.71	85.1	70-130	17.5	20	
o-Xylene	46.0	1.00	"	50.0	0.630	90.8	70-130	14.7	20	
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		104	70-130			
Surrogate: Toluene-d8	66		"	62.5		105	70-130			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.4	70-130			

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Arvada CO 80003

Brian Sulzberger
Project Number: 0142120009/WO#89566539
Project: KMG - 38-0000-5193-3

Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

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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.



March 04, 2021

WSP USA

Brian Sulzberger

4600 W. 60th Ave.

Arvada

CO 80003

Project Name - KMG - 38-0000-5193-3

Project Number - 0142120009/WO #89566

Attached are your analytical results for KMG - 38-0000-5193-3 received by Origins Laboratory, Inc. February 25, 2021. This project is associated with Origins project number Y102492-01.

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

WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 0142120009/WO #89566539
Project: KMG - 38-0000-5193-3

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW01	Y102492-01	Water	February 25, 2021 11:40	02/25/2021 16:45
MW02	Y102492-02	Water	February 25, 2021 11:50	02/25/2021 16:45
MW03	Y102492-03	Water	February 25, 2021 12:00	02/25/2021 16:45
MW04	Y102492-04	Water	February 25, 2021 12:08	02/25/2021 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.

Jen Pellegrini, Project Manager

WSP USA

4600 W. 60th Ave.

Arvada CO 80003

Brian Sulzberger

Project Number: 0142120009/WO #89566539

Project: KMG - 38-0000-5193-3

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4102492

Client: WSP

Client Project ID: 38-0000-5193-3

Checklist Completed by: JP

Shipped Via: 140
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 2/25/21

Airbill #: NA

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

Cooler Number/Temperature: 1 / 7.2 °C / °C / °C / °C

Thermometer ID: TC05

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?		X		sampled same day
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		X		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		X		
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCl, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			X	
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) JP

Date/Time Reviewed 3-1-21

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.

WSP USA
 4600 W. 60th Ave.
 Arvada CO 80003

Brian Sulzberger
 Project Number: 0142120009/WO #89566539
 Project: KMG - 38-0000-5193-3

MW01

2/25/2021 11:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y102492-01 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B1B2508	TEM	02/25/2021	03/02/2021	U
Toluene	ND	1.00	"	"	"	TEM	"	"	U
Ethylbenzene	ND	1.00	"	"	"	TEM	"	"	U
Xylenes, total	ND	1.00	"	"	"	TEM	"	"	U

Surrogate: 1,2-Dichloroethane-d4	114 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	89.4 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	104 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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WSP USA
 4600 W. 60th Ave.
 Arvada CO 80003

Brian Sulzberger
 Project Number: 0142120009/WO #89566539
 Project: KMG - 38-0000-5193-3

MW02

2/25/2021 11:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y102492-02 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B1B2508	TEM	02/25/2021	03/02/2021	U
Toluene	ND	1.00	"	"	"	TEM	"	"	U
Ethylbenzene	ND	1.00	"	"	"	TEM	"	"	U
Xylenes, total	ND	1.00	"	"	"	TEM	"	"	U
Surrogate: 1,2-Dichloroethane-d4	117 %	70-130			"	"		"	
Surrogate: Toluene-d8	88.0 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	102 %	70-130			"	"		"	

Origins Laboratory, Inc.



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 Arvada CO 80003

Brian Sulzberger
 Project Number: 0142120009/WO #89566539
 Project: KMG - 38-0000-5193-3

MW03

2/25/2021 12:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y102492-03 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B1B2508	TEM	02/25/2021	03/02/2021	U
Toluene	ND	1.00	"	"	"	TEM	"	"	U
Ethylbenzene	ND	1.00	"	"	"	TEM	"	"	U
Xylenes, total	ND	1.00	"	"	"	TEM	"	"	U
Surrogate: 1,2-Dichloroethane-d4	117 %	70-130			"	"		"	
Surrogate: Toluene-d8	89.4 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	104 %	70-130			"	"		"	

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

WSP USA
 4600 W. 60th Ave.
 Arvada CO 80003

Brian Sulzberger
 Project Number: 0142120009/WO #89566539
 Project: KMG - 38-0000-5193-3

MW04

2/25/2021 12:08:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y102492-04 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B1B2508	TEM	02/25/2021	03/02/2021	U
Toluene	ND	1.00	"	"	"	TEM	"	"	U
Ethylbenzene	ND	1.00	"	"	"	TEM	"	"	U
Xylenes, total	ND	1.00	"	"	"	TEM	"	"	U
Surrogate: 1,2-Dichloroethane-d4	120 %	70-130			"	"		"	
Surrogate: Toluene-d8	90.0 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	99.7 %	70-130			"	"		"	

Origins Laboratory, Inc.



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Brian Sulzberger
 Project Number: 0142120009/WO #89566539
 Project: KMG - 38-0000-5193-3

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B1B2508 - EPA 5030B (Water)

Blank (B1B2508-BLK1)

Prepared: 02/25/2021 Analyzed: 03/01/2021

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	72		"	62.5	115		70-130			
Surrogate: Toluene-d8	57		"	62.5	90.9		70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5	101		70-130			

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 Project: KMG - 38-0000-5193-3

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B1B2508 - EPA 5030B (Water)

LCS (B1B2508-BS1)

Prepared: 02/25/2021 Analyzed: 03/01/2021

Benzene	58.3	1.00	ug/L	50.0		117	70-130			
Toluene	50.8	1.00	"	50.0		102	70-130			
Ethylbenzene	52.3	1.00	"	50.0		105	70-130			
m,p-Xylene	102	2.00	"	100		102	70-130			
o-Xylene	50.8	1.00	"	50.0		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	77		"	62.5		123	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.1	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	70-130			

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 Project: KMG - 38-0000-5193-3

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B1B2508 - EPA 5030B (Water)

Matrix Spike (B1B2508-MS1)	Source: Y102456-02			Prepared: 02/25/2021 Analyzed: 03/01/2021						
Benzene	57.5	1.00	ug/L	50.0	115	70-130				
Toluene	51.6	1.00	"	50.0	103	70-130				
Ethylbenzene	54.3	1.00	"	50.0	109	70-130				
m,p-Xylene	109	2.00	"	100	109	70-130				
o-Xylene	54.0	1.00	"	50.0	108	70-130				
Surrogate: 1,2-Dichloroethane-d4	75		"	62.5	121	70-130				
Surrogate: Toluene-d8	60		"	62.5	96.2	70-130				
Surrogate: 4-Bromofluorobenzene	67		"	62.5	107	70-130				

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Brian Sulzberger
 Project Number: 0142120009/WO #89566539
 Project: KMG - 38-0000-5193-3

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B1B2508 - EPA 5030B (Water)

Matrix Spike Dup (B1B2508-MSD1)	Source: Y102456-02			Prepared: 02/25/2021 Analyzed: 03/01/2021						
Benzene	53.4	1.00	ug/L	50.0	107	70-130	7.43	20		
Toluene	47.7	1.00	"	50.0	95.4	70-130	7.91	20		
Ethylbenzene	48.2	1.00	"	50.0	96.4	70-130	12.0	20		
m,p-Xylene	97.2	2.00	"	100	97.2	70-130	11.7	20		
o-Xylene	50.7	1.00	"	50.0	101	70-130	6.36	20		
Surrogate: 1,2-Dichloroethane-d4	74		"	62.5	119	70-130				
Surrogate: Toluene-d8	60		"	62.5	95.8	70-130				
Surrogate: 4-Bromofluorobenzene	68		"	62.5	108	70-130				

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 0142120009/WO #89566539
Project: KMG - 38-0000-5193-3

Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager