Prepared For

K.P. KAUFFMAN COMPANY, INC.
10137 WELD COUNTY ROAD 19
FORT LUPTON, CO 80621

PHASE II ENVIRONMETAL SITE ASSESSMENT
MARGARET TWOMBLEY 'B'
WELD COUNTY ROAD 22
WELD COUNTY, COLORADO

Date Issued: April 4, 2014
APEX Project Number 1-0025.003.20

Prepared By

APEX CONSULTING SERVICES, INC.
P.O. BOX 369
LOUISVILLE, CO 80027-0369

APEX CONSULTING SERVICES, INC.
566 West Willow Court
Reply to: P.O. Box 369
Louisville, CO 80027-0369
Phone: 303-665-1400
Fax: 303-665-0620

April 22, 2014

Mr. Denny Kuhn
K.P. Kauffman Company, Inc.
10137 Weld County Road 19
Fort Lupton, CO 80621

RE: PHASE II ENVIRONMETAL SITE ASSESMENT, MARGARET TWOMBLEY 'B', WELD COUNTY, COLORADO

Dear Mr. Kuhn:

Apex Consulting Services, Inc. is pleased to provide the results of our Phase II Environmental Site Assessment at the Margaret Twombley 'B' Facility in Weld County, Colorado. The following report details the field methods and findings of the investigation.

We appreciate the opportunity to provide environmental services for this project. If you have any questions concerning this report, or if we can assist you in any other matter, please call.

Sincerely,

APEX CONSULTING SERVICES, INC.

Michael D. Hattel, P.G., R.E.A.
Principal

TABLE OF CONTENTS

1.0 INTRODUCTION 2

2.0 FIELD ACTIVITIES 2

2.1 Soil Sampling 2

2.2 Analytical Results 2

3.0 CONCLUSIONS AND RECOMMENDATIONS 3

APPENDIX

Apenndix A Figure

Appendix B Analytical Report & Table

1.0 INTRODUCTION

Apex Consulting Services, Inc. (APEX) was retained by K.P. Kauffman Company, Inc. (KPK) to perform a Phase II Environmental Site Assessment (ESA) at the Margaret Twombley 'B' Facility in Weld County, Colorado (Facility). The Facility is located just north of Weld County Road 22 and east of Highway 85 near Fort Lupton, Colorado. The work was requested by Colorado Oil and Gas Conservation Commission (COGCC).

2.0 FIELD ACTIVITIES

2.1 Soil and Water Sampling

Two (2) soil samples (MT-B-N and MT-B-S) were collected from an excavation located immediately north of the Facility on April 1, 2014. The samples were collected at depths of approximately five (5) feet below ground surface (BGS). Soil sample locations are illustrated on Figure 1 which is included in Appendix A. The soil samples were field screened for the presence of VOC's with a PID and for staining and/or discoloration. VOC concentrations were 15 parts per million (ppm) in sample MT-B-N and 9 ppm in sample MT-B-S. The samples did not exhibit any staining or discoloration.

Top soil was present in the excavation from the surface to a depth of 2.5 feet BGS. The top soil was underlain by sandy gravel.

A surface water sample was collected from the spring located immediately north of the Facility on February 22, 2014. Also, a groundwater sample was also collected from the excavation on April 1, 2014.

2.2 Analytical Results

The samples were handled with clean, new, nitrile gloves and placed in laboratory supplied sample containers and labeled. The samples were placed in a cooler on ice and were delivered to Accutest Laboratories (ACCUTEST) under chain-of-custody documentation. Each soil sample was analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX), and Total Petroleum Hydrocarbons (TPH) – Diesel (DRO) and Gasoline Range Organics (GRO). Each water sample was analyzed for BTEX.

The laboratory results indicate that very low to low concentrations of BTEX, GRO and DRO compounds were present in the soil samples collected from the excavation. Additional, very low concentrations of BTEX compounds were detected in the water sample collected from the excavation. The laboratory results are summarized on Tables 1 and 2 in Appendix B. The laboratory analytical reports and chain-of-custody forms provided by ACCUTEST are also included in Appendix B.

3.0 CONCLUSIONS AND RECOMMENDATIONS

A surface water sample was collected from the spring located north of the Facility. Also, 2 soil samples and a groundwater sample was collected from the excavation located immediately north of the Facility. The soil samples were analyzed for BTEX and TPH (GRO and DRO) compounds and the surface and groundwater samples were analyzed for BTEX compounds.

BTEX compounds were not detected in the surface water sample. Very low BTEX concentrations were detected in a groundwater sample collected from the excavation. The detected BTEX concentrations in the sample collected from the excavation are well below State of Colorado groundwater standards. Very low to low concentrations of BTEX, GRO and DRO compounds were present in the soil samples collected from the excavation. The detected concentrations are below COGCC cleanup standards.

Based on the analytical results, additional work at the Property is not warranted at this time.

APPENDIX A

FIGURE

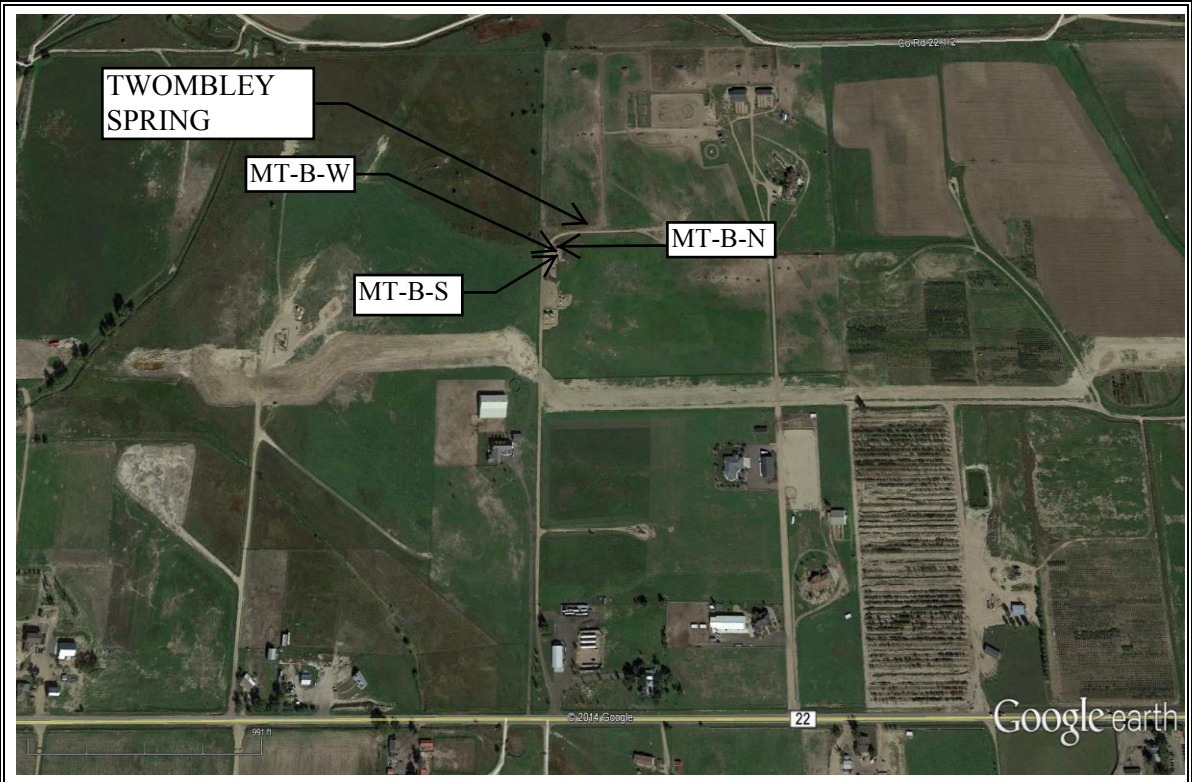

Figure 1

APPENDIX B

ANALYTICAL REPORT & TABLE

TABLE 1

PETROLEUM COMPOUND ANALYTICAL RESULTS

FOR SOIL SAMPLES COLLECTED FROM

MARGARET TWOMBLEY 'B', WELD COUNTY, COLORADO

Project No. 1-0025.003.21

Sample	Depth (ft)	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH (GRO)	TPH (DRO)
MT-B-S	5	ND	0.19	0.16	2.33	97.2	202
MT-B-N	5	.0635	0.307	0.178	2.34	128	100
Standard		.26	140	190	260	500	500

Concentrations in milligrams per kilogram (mg/kg)
Samples collected on April 1, 2014
Standard from Colorado Oil and Gas Conservation Commission
GRO – Gasoline Range Organics
DRO – Diesel Rang Organics
ND – Not Detected Above Reporting Limit
TPH – Total Petroleum Hydrocarbons

TABLE 2

PETROLEUM COMPOUND ANALYTICAL RESULTS

FOR GROUNDWATER SAMPLE COLLECTED FROM

MARGARET TWOMBLEY 'B' FACILITY, WELD COUNTY, COLORADO

Project No. 1-0025.003.21

Sample	Benzene	Toluene	Ethylbenzene	Total Xylenes
TWOMBLEY SPRING*	ND	ND	ND	ND
MT-B-W**	0.96	ND	3.3	15.4
Standard	5	100	700	10,000

Concentrations in micrograms per liter (ug/L)

* Sample collected on February 22, 2014

** Sample collected on April 1, 2014

Standard from Colorado Oil and Gas Conservation Commission

ND – Not Detected Above Reporting Limit

Mountain States ACCUTEST LABORATORIES

03/06/14

Technical Report for

K.P. Kauffmann Company, Inc.

Twombley Ditch

Accutest Job Number: D55353

Sampling Date: 02/22/14

Report to:

K.P. Kauffmann Company, Inc
1675 Broadway Suite 2800
Denver, CO 80202-4628
dkuhn@kpk.com; mhattel@msn.com

ATTN: Denny Kuhn

Total number of pages in report: **13**

NELAP ACCREDITED TNI LABORATORY

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Scott Heideman
Laboratory Director

Client Service contact: Renea Jackson 303-425-6021

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), TX (T104704511)

Sections: 1 2 3 4 5 6

Table of Contents

Section 1: Sample Summary **3**
Section 2: Case Narrative/Conformance Summary **4**
Section 3: Summary of Hits **5**
Section 4: Sample Results **6**
4.1: D55353-1: TWOMBLEY-SPRING 7
Section 5: Misc. Forms **8**
5.1: Chain of Custody 9
Section 6: GC Volatiles - QC Data Summaries **10**
6.1: Method Blank Summary 11
6.2: Blank Spike Summary 12
6.3: Matrix Spike/Matrix Spike Duplicate Summary 13

Sample Summary

K.P. Kauffmann Company, Inc.

Job No: D55353

Twombley Ditch

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D55353-1	02/22/14	10:45	MDH	02/25/14	AQ	Water	TWOMBLEY-SPRING

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	K.P. Kauffmann Company, Inc.	**Job No**	D55353
Site:	Twombley Ditch	**Report Date**	3/5/2014 5:48:05 PM

On 02/25/2014, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 4 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D55353 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GC By Method SW846 8021B

Matrix AQ **Batch ID:** GTA1194

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D55359-1MS, D55359-1MSD were used as the QC samples indicated.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Summary of Hits

Job Number: D55353
Account: K.P. Kauffmann Company, Inc.
Project: Twombley Ditch
Collected: 02/22/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D55353-1	**TWOMBLEY-SPRING**					

No hits reported in this sample.

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: TWOMBLEY-SPRING
Lab Sample ID: D55353-1
Matrix: AQ - Water
Method: SW846 8021B
Project: Twombley Ditch

Date Sampled: 02/22/14
Date Received: 02/25/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA21215.D	1	03/03/14	EV	n/a	n/a	GTA1194
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	96%		60-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

FED-EX Tracking # | Bottle Order Control #

Accutest Quote # | Accutest Job # D55353

Client / Reporting Information

Company Name: K.P. Kauffman Company, Inc.
Address: 1675 Broadway, Suite 2800
City: Denver State: CO Zip: 80202-4628
Project Contact: Denny Kuhn dkuhn@kpk.com
Phone #: 303-665-1400
Samplers's Name: MICHAEL HATTEL (303-665-1400)

Project Information

Project Name: Twombley
Street: CR 22
City: Fort Lupton State: CO
Project #
Fax #
Client Purchase Order #: 7591

Requested Analysis

BTEX (8021)

Matrix Codes

DW- Drinking Water
GW- Ground Water
WW- Water
SW- Surface Water
SO- Soil
SL-Sludge
OI-Oil
LIQ- Other Liquid
AIR- Air
SOL-Other Solid
WP-Wipe

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	BTEX (8021)	LAB USE ONLY
	Twombley-Spray		2/22/14	1045	MDH		2	X								X	01
					MDH		2										
					MDH		2										
					MDH		2										

Turnaround Time (Business days)

X Std. 0S1
Approved By:/ Date:

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] NJ Reduced
- [ ] NJ Full
- [x] Hard Copy
- [ ] FULL CLP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] PDF

Comments / Remarks

PDF copy to Denny Kuhn with KPK at dkuhn@kpk.com

PDF copy also to Mike Hattel with APEX at mhattel@msn.com

Hard copy ALSO to Mike Hattel with APEX, P.O. Box 369,

Louisville, CO 80027-0369

Emergency T/A data available VIA Lablink

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	[signature]	2/25/14 1305	1 [signature] 225/14 1705	2		2
3			3	4		4
5			5	Custody Seal # HD	Preserved where applicable ☐	On Ice ☐ Cooler Temp. 4.0

5.1 5

D55353: Chain of Custody
Page 1 of 1

Mountain States ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D55353
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Twombley Ditch

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTA1194-MB	TA21212.D	1	03/03/14	EV	n/a	n/a	GTA1194

The QC reported here applies to the following samples: **Method:** SW846 8021B

D55353-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
120-82-1	1,2,4-Trichlorobenzene	104%	60-140%

Blank Spike Summary

Job Number: D55353
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Twombley Ditch

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTA1194-BS	TA21213.D	1	03/03/14	EV	n/a	n/a	GTA1194

The QC reported here applies to the following samples: **Method:** SW846 8021B

D55353-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	27.2	25.7	94	70-130
100-41-4	Ethylbenzene	45.6	45.1	99	70-130
108-88-3	Toluene	212	200	95	70-130
1330-20-7	Xylenes (total)	216	226	105	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	110%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D55353
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Twombley Ditch

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D55359-1MS	TA21217.D	1	03/03/14	EV	n/a	n/a	GTA1194
D55359-1MSD	TA21218.D	1	03/03/14	EV	n/a	n/a	GTA1194
D55359-1	TA21216.D	1	03/03/14	EV	n/a	n/a	GTA1194

The QC reported here applies to the following samples: **Method:** SW846 8021B

D55353-1

CAS No.	Compound	D55359-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		27.2	25.6	94	25.4	93	1	55-133/30
100-41-4	Ethylbenzene	ND		45.6	44.5	98	44.5	98	0	63-130/30
108-88-3	Toluene	ND		212	199	94	197	93	1	70-130/30
1330-20-7	Xylenes (total)	ND		216	223	103	223	103	0	64-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D55359-1	Limits
120-82-1	1,2,4-Trichlorobenzene	108%	108%	102%	60-140%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

04/09/14

Technical Report for

K.P. Kauffmann Company, Inc.

Margaret Twombley

Accutest Job Number: D56498

Sampling Date: 04/01/14

Report to:

K.P. Kauffman Company, Inc.
1675 Broadway Suite 2800
Denver, CO 80202-4628
mhattel@msn.com; slaramesa@kpk.com;
kgilbert@kpk.com; dkuhn@kpk.com
ATTN: Susana Lara-Mesa

Total number of pages in report: **14**

NELAP ACCREDITED TNI LABORATORY

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Scott Heideman
Laboratory Director

Client Service contact: Renea Jackson 303-425-6021

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), TX (T104704511)

Sections: 1 2 3 4 5 6

Table of Contents

-1-

Section 1: Sample Summary **3**
Section 2: Case Narrative/Conformance Summary **4**
Section 3: Summary of Hits **5**
Section 4: Sample Results **6**
4.1: D56498-1: ME-B-S 7
4.2: D56498-2: MT-B-N 8
Section 5: Misc. Forms **9**
5.1: Chain of Custody 10
Section 6: GC Semi-volatiles - QC Data Summaries **11**
6.1: Method Blank Summary 12
6.2: Blank Spike Summary 13
6.3: Matrix Spike/Matrix Spike Duplicate Summary 14

Sample Summary

K.P. Kauffmann Company, Inc.

Job No: D56498

Margaret Twombley

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D56498-1	04/01/14	15:20	MH	04/02/14	SO	Soil	ME-B-S
D56498-2	04/01/14	15:30	MH	04/02/14	SO	Soil	MT-B-N

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	K.P. Kauffmann Company, Inc.	**Job No**	D56498
Site:	Margaret Twombley	**Report Date**	4/9/2014 8:25:44 AM

On 04/02/2014, 2 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 2.5 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D56498 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Extractables by GC By Method SW846-8015B

Matrix SO **Batch ID:** OP9681

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D56366-6MS, D56366-6MSD were used as the QC samples indicated.

Wet Chemistry By Method SM2540G-2011 M

Matrix SO **Batch ID:** GN24203

- The data for SM2540G-2011 M meets quality control requirements.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Summary of Hits

Job Number: D56498
Account: K.P. Kauffmann Company, Inc.
Project: Margaret Twombley
Collected: 04/01/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D56498-1	**ME-B-S**					
TPH-DRO (C10-C28)		202	8.3	6.2	mg/kg	SW846-8015B
D56498-2	**MT-B-N**					
TPH-DRO (C10-C28)		100	8.2	6.2	mg/kg	SW846-8015B

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: ME-B-S
Lab Sample ID: D56498-1
Matrix: SO - Soil
Method: SW846-8015B SW846 3546
Project: Margaret Twombley

Date Sampled: 04/01/14
Date Received: 04/02/14
Percent Solids: 80.0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI11634.D	1	04/04/14	JS	04/04/14	OP9681	GFI733
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	202	8.3	6.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	79%		20-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MT-B-N
Lab Sample ID: D56498-2
Matrix: SO - Soil
Method: SW846-8015B SW846 3546
Project: Margaret Twombley

Date Sampled: 04/01/14
Date Received: 04/02/14
Percent Solids: 81.3

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI11636.D	1	04/04/14	JS	04/04/14	OP9681	GFI733
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	100	8.2	6.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	83%		20-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

FED-EX Tracking # | Bottle Order Control #

Accutest Quote # | Accutest Job # D56498

Client / Reporting Information

Company Name: K.P. Kauffman Company, Inc.
Address: 1675 Broadway, Suite 2800
City: Denver State: CO Zip: 80202-4628
Project Contact: Susana Lara-Mesa SLaraMesa@kpk.com
Phone #: 303-665-1400
Samplers's Name: MICHAEL HATTEL (303-665-1400)

Project Information

Project Name: Margaret Twombley
Street: CR 22
City: Fort Lupton State: CO
Project #:
Fax #:
Client Purchase Order #: 7591

Requested Analysis

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	BTEX (8021)	GRO/DRO (8015)	LAB USE ONLY
	MT-B-S		4/1/14	1520		S										X	X	01
	MT-B-N		↓	1530		S										X	X	02

Matrix Codes

DW- Drinking Water
GW- Ground Water
WW- Water
SW- Surface Water
SO- Soil
SL-Sludge
OI-Oil
LIQ- Other Liquid
AIR- Air
SOL-Other Solid
WP-Wipe

Turnaround Time (Business days)

[X] Std. US I — Approved By:/ Date:

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] NJ Reduced
- [ ] NJ Full
- [x] Hard Copy
- [ ] FULL CLP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] PDF

Comments / Remarks

[redacted] SLaraMesa@kpk.com
PDF copy to Susana Lara-Mesa @ kpk.com
PDF copy also to Mike Hattel with APEX at mhattel@msn.com
Hard copy ALSO to Mike Hattel with APEX, P.O. Box 369,
Louisville, CO 80027-0369

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		1 4/2/16 1415	2 4/2/16	1615	2 4/2/14 1615
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3		3	4		4
Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp.
5		5	0	☑	☑ 2.5

D56498: Chain of Custody
Page 1 of 1

Mountain States ACCUTEST LABORATORIES

GC Semi-volatiles

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D56498
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Margaret Twombley

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9681-MB	FI11606.D	1	04/04/14	JS	04/04/14	OP9681	GFI733

The QC reported here applies to the following samples: **Method:** SW846-8015B

D56498-1, D56498-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	6.7	5.0	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	95%	20-130%

Blank Spike Summary

Job Number: D56498
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Margaret Twombley

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9681-BS	FI11608.D	1	04/04/14	JS	04/04/14	OP9681	GFI733

The QC reported here applies to the following samples: **Method:** SW846-8015B

D56498-1, D56498-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	167	115	69	42-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	98%	20-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D56498
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Margaret Twombley

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9681-MS	FI11610.D	1	04/04/14	JS	04/04/14	OP9681	GFI733
OP9681-MSD	FI11612.D	1	04/04/14	JS	04/04/14	OP9681	GFI733
D56366-6	FI11613.D	1	04/04/14	JS	04/04/14	OP9681	GFI734

The QC reported here applies to the following samples: **Method:** SW846-8015B

D56498-1, D56498-2

CAS No.	Compound	D56366-6 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	8.43		198	135	64	132	62	2	20-150/30

CAS No.	Surrogate Recoveries	MS	MSD	D56366-6	Limits
84-15-1	o-Terphenyl	88%	87%	83%	20-130%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

04/18/14

Technical Report for

K.P. Kauffmann Company, Inc.

Margaret Twombley

Accutest Job Number: D56498R

Sampling Date: 04/01/14

Report to:

K.P. Kauffman Company, Inc.
1675 Broadway Suite 2800
Denver, CO 80202-4628
mhattel@msn.com; slaramesa@kpk.com;
kgilbert@kpk.com; dkuhn@kpk.com
ATTN: Susana Lara-Mesa

Total number of pages in report: **22**

NELAP ACCREDITED TNI LABORATORY

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Scott Heideman
Laboratory Director

Client Service contact: Renea Jackson 303-425-6021

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), TX (T104704511)

Sections: 1 2 3 4 5 6

Table of Contents

Section 1: Sample Summary **3**
Section 2: Case Narrative/Conformance Summary **4**
Section 3: Summary of Hits **5**
Section 4: Sample Results **6**
4.1: D56498-1R: MT-B-S 7
4.2: D56498-2R: MT-B-N 9
Section 5: Misc. Forms **11**
5.1: Chain of Custody 12
Section 6: GC Volatiles - QC Data Summaries **13**
6.1: Method Blank Summary 14
6.2: Blank Spike Summary 17
6.3: Matrix Spike/Matrix Spike Duplicate Summary 20

Sample Summary

K.P. Kauffmann Company, Inc.

Job No: D56498R

Margaret Twombley

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D56498-1R	04/01/14	15:20	MH	04/02/14	SO	Soil	MT-B-S
D56498-2R	04/01/14	15:30	MH	04/02/14	SO	Soil	MT-B-N

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	K.P. Kauffmann Company, Inc.	**Job No**	D56498R
Site:	Margaret Twombley	**Report Date**	4/18/2014 4:38:13 PM

On 04/02/2014, 2 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 2.5 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D56498R was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GC By Method SW846 8015B

Matrix SO **Batch ID:** GGB1341

- All samples were analyzed within the recommended method holding time.
- Sample(s) D56498-2RMS, D56498-2RMSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Volatiles by GC By Method SW846 8021B

Matrix SO **Batch ID:** GTB1341

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D56498-2RMS, D56498-2RMSD were used as the QC samples indicated.
- GTB1341-BS: Samples analyzed within hold, but closing CCV failed.
- D56498-2RMSD: Samples analyzed within hold, but closing CCV failed.
- D56498-2RMS: Samples analyzed within hold, but closing CCV failed.
- D56498-2R: Samples analyzed within hold, but closing CCV failed.
- D56498-1R: Samples analyzed within hold, but closing CCV failed.
- GTB1341-MB: Samples analyzed within hold, but closing CCV failed.

Matrix SO **Batch ID:** GTB1342

- Sample(s) D56498-1RMS, D56498-1RMSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- The following samples were run outside of holding time for method SW846 8021B: D56498-1R, D56498-2R Confirmed by reanalysis beyond hold time.
- D56498-2R: Confirmed by reanalysis beyond hold time.
- D56498-1R: Confirmed by reanalysis beyond hold time.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Summary of Hits

Job Number: D56498R
Account: K.P. Kauffmann Company, Inc.
Project: Margaret Twombley
Collected: 04/01/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D56498-1R	**MT-B-S**					
TPH-GRO (C6-C10)		97.2	15	7.5	mg/kg	SW846 8015B
Toluene [a]		190	150	75	ug/kg	SW846 8021B
Toluene [b]		196	150	75	ug/kg	SW846 8021B
Ethylbenzene [b]		161	150	75	ug/kg	SW846 8021B
Ethylbenzene [a]		160	150	75	ug/kg	SW846 8021B
Xylenes (total) [a]		2330	150	150	ug/kg	SW846 8021B
Xylenes (total) [b]		2360	150	150	ug/kg	SW846 8021B
D56498-2R	**MT-B-N**					
TPH-GRO (C6-C10)		128	15	7.3	mg/kg	SW846 8015B
Benzene [a]		55.4 J	73	23	ug/kg	SW846 8021B
Benzene [b]		63.5 J	73	23	ug/kg	SW846 8021B
Toluene [a]		307	150	73	ug/kg	SW846 8021B
Toluene [b]		358	150	73	ug/kg	SW846 8021B
Ethylbenzene [b]		189	150	73	ug/kg	SW846 8021B
Ethylbenzene [a]		178	150	73	ug/kg	SW846 8021B
Xylenes (total) [a]		2340	150	150	ug/kg	SW846 8021B
Xylenes (total) [b]		2560	150	150	ug/kg	SW846 8021B

(a) Confirmed by reanalysis beyond hold time.
(b) Samples analyzed within hold, but closing CCV failed.

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MT-B-S		
Lab Sample ID:	D56498-1R	**Date Sampled:**	04/01/14
Matrix:	SO - Soil	**Date Received:**	04/02/14
Method:	SW846 8015B	**Percent Solids:**	80.0
Project:	Margaret Twombley		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB24453.D	1	04/15/14	EV	n/a	n/a	GGB1341
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	97.2	15	7.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	100%		60-140%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MT-B-S		
Lab Sample ID:	D56498-1R	**Date Sampled:**	04/01/14
Matrix:	SO - Soil	**Date Received:**	04/02/14
Method:	SW846 8021B	**Percent Solids:**	80.0
Project:	Margaret Twombley		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	TB24453.D	1	04/15/14	EV	n/a	n/a	GTB1341
Run #2 [b]	TB24462.D	1	04/16/14	EV	n/a	n/a	GTB1342

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2	5.0 g	5.0 ml	100 ul

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	75	24	ug/kg	
71-43-2	Benzene	ND [c]	75	24	ug/kg	
108-88-3	Toluene	196	150	75	ug/kg	
108-88-3	Toluene	190 [c]	150	75	ug/kg	
100-41-4	Ethylbenzene	161	150	75	ug/kg	
100-41-4	Ethylbenzene	160 [c]	150	75	ug/kg	
1330-20-7	Xylenes (total)	2360	150	150	ug/kg	
1330-20-7	Xylenes (total)	2330 [c]	150	150	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	81%	86%	60-140%

(a) Samples analyzed within hold, but closing CCV failed.
(b) Confirmed by reanalysis beyond hold time.
(c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MT-B-N		
Lab Sample ID:	D56498-2R	**Date Sampled:**	04/01/14
Matrix:	SO - Soil	**Date Received:**	04/02/14
Method:	SW846 8015B	**Percent Solids:**	81.3
Project:	Margaret Twombley		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB24454.D	1	04/15/14	EV	n/a	n/a	GGB1341
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	128	15	7.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	103%		60-140%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MT-B-N
Lab Sample ID: D56498-2R
Matrix: SO - Soil
Method: SW846 8021B
Project: Margaret Twombley

Date Sampled: 04/01/14
Date Received: 04/02/14
Percent Solids: 81.3

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	TB24454.D	1	04/15/14	EV	n/a	n/a	GTB1341
Run #2 [b]	TB24465.D	1	04/16/14	EV	n/a	n/a	GTB1342

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2	5.0 g	5.0 ml	100 ul

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	63.5	73	23	ug/kg	J
71-43-2	Benzene	55.4 [c]	73	23	ug/kg	J
108-88-3	Toluene	358	150	73	ug/kg	
108-88-3	Toluene	307 [c]	150	73	ug/kg	
100-41-4	Ethylbenzene	189	150	73	ug/kg	
100-41-4	Ethylbenzene	178 [c]	150	73	ug/kg	
1330-20-7	Xylenes (total)	2560	150	150	ug/kg	
1330-20-7	Xylenes (total)	2340 [c]	150	150	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	84%	86%	60-140%

(a) Samples analyzed within hold, but closing CCV failed.
(b) Confirmed by reanalysis beyond hold time.
(c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: D56498

Client / Reporting Information

Company Name: K.P. Kauffman Company, Inc.
Address: 1675 Broadway, Suite 2800
City: Denver State: CO Zip: 80202-4628
Project Contact: Susana Lara-Mesa SLaraMesa@kpk.com
Phone #: 303-665-1400
Samplers's Name: MICHAEL HATTEL (303-665-1400)

Project Information

Project Name: Margaret Twombley
Street: CR 22
City: Fort Lupton State: CO
Project #:
Fax #:
Client Purchase Order #: 7591

Requested Analysis

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	BTEX (8021)	GRO/DRO (8015)	LAB USE ONLY
	MT-B-S		4/1/14	1520		S										X	X	01
	MT-B-N		↓	1530		S										X	X	02

Matrix Codes

DW- Drinking Water
GW- Ground Water
WW- Water
SW- Surface Water
SO- Soil
SL-Sludge
OI-Oil
LIQ- Other Liquid
AIR- Air
SOL-Other Solid
WP-Wipe

Turnaround Time (Business days)

X Std. US I — Approved By:/ Date:

Emergency T/A data available VIA Lablink

Data Deliverable Information

- Commercial "A"
- Commercial "B"
- NJ Reduced
- NJ Full
- x Hard Copy
- FULL CLP
- NYASP Category A
- NYASP Category B
- State Forms
- x PDF

Comments / Remarks

[redacted] SLaraMesa@kpk.com
PDF copy to Susana Lara-Mesa @ kpk.com
PDF copy also to Mike Hattel with APEX at mhattel@msn.com
Hard copy ALSO to Mike Hattel with APEX, P.O. Box 369,
Louisville, CO 80027-0369

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		1 4/2/16 1415	2 4/2/16	1615	2 4/2/14 1615
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3		3	4		4
Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp.
5		5	0	☑	☑ 2.5

D56498R: Chain of Custody
Page 1 of 1

Mountain States ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D56498R
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Margaret Twombley

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1341-MB	GB24451.D	1	04/15/14	EV	n/a	n/a	GGB1341

The QC reported here applies to the following samples: **Method:** SW846 8015B

D56498-1R, D56498-2R

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	9.8	4.9	mg/kg	

CAS No.	Surrogate Recoveries		Limits
120-82-1	1,2,4-Trichlorobenzene	94%	60-140%

Method Blank Summary

Job Number: D56498R
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Margaret Twombley

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB1341-MB [a]	TB24451.D	1	04/15/14	EV	n/a	n/a	GTB1341

The QC reported here applies to the following samples: **Method:** SW846 8021B

D56498-1R, D56498-2R

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	49	16	ug/kg	
100-41-4	Ethylbenzene	ND	98	49	ug/kg	
108-88-3	Toluene	ND	98	49	ug/kg	
1330-20-7	Xylenes (total)	ND	98	98	ug/kg	

CAS No.	Surrogate Recoveries		Limits
120-82-1	1,2,4-Trichlorobenzene	81%	60-140%

(a) Samples analyzed within hold, but closing CCV failed.

Method Blank Summary

Job Number: D56498R
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Margaret Twombley

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB1342-MB	TB24461.D	1	04/16/14	EV	n/a	n/a	GTB1342

The QC reported here applies to the following samples: **Method:** SW846 8021B

D56498-1R, D56498-2R

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	49	16	ug/kg	
100-41-4	Ethylbenzene	ND	98	49	ug/kg	
108-88-3	Toluene	ND	98	49	ug/kg	
1330-20-7	Xylenes (total)	ND	98	98	ug/kg	

CAS No.	Surrogate Recoveries		Limits
120-82-1	1,2,4-Trichlorobenzene	73%	60-140%

Blank Spike Summary

Job Number: D56498R
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Margaret Twombley

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB1341-BS	GB24452.D	1	04/15/14	EV	n/a	n/a	GGB1341

The QC reported here applies to the following samples: **Method:** SW846 8015B

D56498-1R, D56498-2R

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	108	105	97	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	101%	60-140%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: D56498R
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Margaret Twombley

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB1341-BS [a]	TB24452.D	1	04/15/14	EV	n/a	n/a	GTB1341

The QC reported here applies to the following samples: **Method:** SW846 8021B

D56498-1R, D56498-2R

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	1340	1150	86	70-130
100-41-4	Ethylbenzene	2240	1900	85	70-130
108-88-3	Toluene	10400	8300	80	70-130
1330-20-7	Xylenes (total)	10600	9390	89	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	85%	60-140%

(a) Samples analyzed within hold, but closing CCV failed.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: D56498R
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Margaret Twombley

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB1342-BS	TB24460.D	1	04/16/14	EV	n/a	n/a	GTB1342

The QC reported here applies to the following samples: **Method:** SW846 8021B

D56498-1R, D56498-2R

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	1340	1200	90	70-130
100-41-4	Ethylbenzene	2240	1940	87	70-130
108-88-3	Toluene	10400	8490	82	70-130
1330-20-7	Xylenes (total)	10600	9620	91	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	83%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D56498R
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Margaret Twombley

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D56498-2RMS	GB24455.D	1	04/15/14	EV	n/a	n/a	GGB1341
D56498-2RMSD	GB24456.D	1	04/15/14	EV	n/a	n/a	GGB1341
D56498-2R	GB24454.D	1	04/15/14	EV	n/a	n/a	GGB1341

The QC reported here applies to the following samples: **Method:** SW846 8015B

D56498-1R, D56498-2R

CAS No.	Compound	D56498-2R mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	128		160	251	77	160	256	80	2	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D56498-2R	Limits
120-82-1	1,2,4-Trichlorobenzene	104%	101%	103%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D56498R
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Margaret Twombley

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D56498-2RMS [a]	TB24455.D	1	04/15/14	EV	n/a	n/a	GTB1341
D56498-2RMSD [a]	TB24456.D	1	04/15/14	EV	n/a	n/a	GTB1341
D56498-2R [a]	TB24454.D	1	04/15/14	EV	n/a	n/a	GTB1341

The QC reported here applies to the following samples: **Method:** SW846 8021B

D56498-1R, D56498-2R

CAS No.	Compound	D56498-2R ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	63.5	J	1970	1710	83	1970	1710	83	0	70-130/30
100-41-4	Ethylbenzene	189		3310	3010	85	3310	2980	84	1	70-130/30
108-88-3	Toluene	358		15400	12000	76	15400	11800	75	2	70-130/30
1330-20-7	Xylenes (total)	2560		15700	15500	83	15700	15400	82	1	66-142/30

CAS No.	Surrogate Recoveries	MS	MSD	D56498-2R	Limits
120-82-1	1,2,4-Trichlorobenzene	85%	82%	84%	60-140%

(a) Samples analyzed within hold, but closing CCV failed.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D56498R
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Margaret Twombley

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D56498-1RMS	TB24463.D	1	04/16/14	EV	n/a	n/a	GTB1342
D56498-1RMSD	TB24464.D	1	04/16/14	EV	n/a	n/a	GTB1342
D56498-1R [a]	TB24462.D	1	04/16/14	EV	n/a	n/a	GTB1342

The QC reported here applies to the following samples: **Method:** SW846 8021B

D56498-1R, D56498-2R

CAS No.	Compound	D56498-1R ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		2040	1870	92	2040	1790	88	4	70-130/30
100-41-4	Ethylbenzene	160		3410	3510	98	3410	3200	89	9	70-130/30
108-88-3	Toluene	190		15800	13300	83	15800	12700	79	5	70-130/30
1330-20-7	Xylenes (total)	2330		16200	18600	101	16200	16200	86	14	66-142/30

CAS No.	Surrogate Recoveries	MS	MSD	D56498-1R	Limits
120-82-1	1,2,4-Trichlorobenzene	103%	89%	86%	60-140%

(a) Confirmed by reanalysis beyond hold time.

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

04/16/14

Technical Report for

K.P. Kauffmann Company, Inc.

Margaret Twombley

Accutest Job Number: D56497

Sampling Date: 04/01/14

Report to:

K.P. Kauffman Company, Inc.
1675 Broadway Suite 2800
Denver, CO 80202-4628
mhattel@msn.com; slaramesa@kpk.com;
kgilbert@kpk.com; dkuhn@kpk.com
ATTN: Susana Lara-Mesa

Total number of pages in report: **13**

NELAP ACCREDITED TNI LABORATORY

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Scott Heideman
Laboratory Director

Client Service contact: Renea Jackson 303-425-6021

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), TX (T104704511)

Sections: 1 2 3 4 5 6

Table of Contents

-1-

Section 1: Sample Summary **3**
Section 2: Case Narrative/Conformance Summary **4**
Section 3: Summary of Hits **5**
Section 4: Sample Results **6**
4.1: D56497-1: MT-B-W 7
Section 5: Misc. Forms **8**
5.1: Chain of Custody 9
Section 6: GC/MS Volatiles - QC Data Summaries **10**
6.1: Method Blank Summary 11
6.2: Blank Spike Summary 12
6.3: Matrix Spike/Matrix Spike Duplicate Summary 13

Sample Summary

K.P. Kauffmann Company, Inc.

Job No: D56497

Margaret Twombley

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D56497-1	04/01/14	15:15	MH	04/02/14	AQ	Water	MT-B-W

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	K.P. Kauffmann Company, Inc.	**Job No**	D56497
Site:	Margaret Twombley	**Report Date**	4/16/2014 1:23:22 PM

On 04/02/2014, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 2.5 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D56497 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ **Batch ID:** V6V1370

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D56909-1MS, D56909-1MSD were used as the QC samples indicated.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Summary of Hits

Job Number: D56497
Account: K.P. Kauffmann Company, Inc.
Project: Margaret Twombley
Collected: 04/01/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D56497-1	**MT-B-W**					
Benzene		0.96 J	1.0	0.25	ug/l	SW846 8260B
Ethylbenzene		3.3	2.0	0.31	ug/l	SW846 8260B
Xylene (total)		15.4	3.0	1.5	ug/l	SW846 8260B

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MT-B-W
Lab Sample ID: D56497-1
Matrix: AQ - Water
Method: SW846 8260B
Project: Margaret Twombley

Date Sampled: 04/01/14
Date Received: 04/02/14
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V24288.D	1	04/15/14	BR	n/a	n/a	V6V1370
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.96	1.0	0.25	ug/l	J
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	3.3	2.0	0.31	ug/l	
1330-20-7	Xylene (total)	15.4	3.0	1.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	99%		62-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	91%		69-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

FED-EX Tracking # | Bottle Order Control #

Accutest Quote # | Accutest Job # DS6497

Client / Reporting Information

Company Name: K.P. Kauffman Company, Inc.
Address: 1675 Broadway, Suite 2800
City: Denver | State: CO | Zip: 80202-4628
Project Contact: Susana Lara-Mesa | SLaraMesa@kpk.com
Phone #: 303-665-1400
Samplers's Name: MICHAEL HATTEL (303-665-1400)

Project Information

Project Name: Margaret Twombley
Street: CR 22
City: Fort Lupton | State: CO
Project #:
Fax #:
Client Purchase Order #: 7591

Requested Analysis

BTEX (8021)

Matrix Codes

DW- Drinking Water
GW- Ground Water
WW- Water
SW- Surface Water
SO- Soil
SL-Sludge
OI-Oil
LIQ- Other Liquid
AIR- Air
SOL-Other Solid
WP-Wipe

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	AsNaO2	NaHSO4	MEOH	ENCORE	LAB USE ONLY
	MT-B-W		4/1/14	1515		GW WW	3	X								01
																02
																03

4/2/14

Turnaround Time (Business days)

X Std. US1
Approved By:/ Date:

Data Deliverable Information

- Commercial "A"
- Commercial "B"
- NJ Reduced
- NJ Full
- X Hard Copy
- FULL CLP
- NYASP Category A
- NYASP Category B
- State Forms
- X PDF

Comments / Remarks

PDF copy to [redacted] Susana Lara-Mesa @ KpK.com

PDF copy also to Mike Hattel with APEX at mhattel@msn.com

Hard copy ALSO to Mike Hattel with APEX, P.O. Box 369,

Louisville, CO 80027-0369

Emergency T/A data available VIA Lablink

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Michael Hattel	4/2/14	1	4/2/14 1445	4/2/14 1615	2 4/2/14 1615
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal # CV	Preserved where applicable	On Ice / Cooler Temp. 2.5

D56497: Chain of Custody
Page 1 of 1

Mountain States ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D56497
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Margaret Twombley

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6V1370-MB	6V24283.D	1	04/15/14	BR	n/a	n/a	V6V1370

The QC reported here applies to the following samples: **Method:** SW846 8260B

D56497-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.31	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.5	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	101%	62-130%
2037-26-5	Toluene-D8	100%	70-130%
460-00-4	4-Bromofluorobenzene	84%	69-130%

Blank Spike Summary

Job Number: D56497
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Margaret Twombley

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6V1370-BS	6V24284.D	1	04/15/14	BR	n/a	n/a	V6V1370

The QC reported here applies to the following samples: **Method:** SW846 8260B

D56497-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	48.0	96	70-130
100-41-4	Ethylbenzene	50	47.1	94	70-130
108-88-3	Toluene	50	46.9	94	70-130
1330-20-7	Xylene (total)	150	151	101	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	100%	62-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	100%	69-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D56497
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Margaret Twombley

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D56909-1MS	6V24290A.D	25	04/15/14	BR	n/a	n/a	V6V1370
D56909-1MSD	6V24291A.D	25	04/15/14	BR	n/a	n/a	V6V1370
D56909-1	6V24289A.D	25	04/15/14	BR	n/a	n/a	V6V1370

The QC reported here applies to the following samples: **Method:** SW846 8260B

D56497-1

CAS No.	Compound	D56909-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		1250	1190	95	1220	98	2	62-130/30
100-41-4	Ethylbenzene	ND		1250	1170	94	1210	97	3	63-130/30
108-88-3	Toluene	ND		1250	1170	94	1200	96	3	60-130/30
1330-20-7	Xylene (total)	ND		3750	3760	100	3820	102	2	67-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D56909-1	Limits
17060-07-0	1,2-Dichloroethane-D4	99%	95%	98%	62-130%
2037-26-5	Toluene-D8	101%	98%	98%	70-130%
460-00-4	4-Bromofluorobenzene	103%	103%	88%	69-130%

* = Outside of Control Limits.