



Analytical Report

AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #298931; FSI	Date Sampled: 05/01/13
		Date Received: 05/01/13
	Client Contact: Jeremy Smith	Date Reported: 05/08/13
	Client P.O.: #WC084092	Date Completed: 05/08/13

WorkOrder: 1305019

May 08, 2013



Dear Jeremy:

Enclosed within are:

- 1) The results of the **2** analyzed samples from your project: **#298931; FSI**,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
 Laboratory Manager
 McC Campbell Analytical, Inc.

The analytical results relate only to the items tested.

1305019

McCAMPBELL ANALYTICAL INC.

1534 Willow Pass Road
Pittsburg, CA 94565-1701
www.main@mccampbell.com

Telephone: (925) 252-9262

Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH 24 HR 48 HR 72 HR 5 DAY

EDF Required? No Yes

Report To: Jeremy Smith Bill To: PO# WC084092
Company: AEI Consultants
2500 Camino Diablo, Walnut Creek, California 94597
E-Mail: jasmith@aeiconsultants.com
Tele: (925) 746-6000, ext. 128 Fax: (925) 746-6099
Project #: 298931 Project Name: FSI
Project Location: 1630 Park St., Alameda, California

Lab Use Only

Pressurized By

Date

Pressurization Gas

N2

He

Sampler Signature:

Notes: Helium is leak check using McCampbell Provided Helium Shroud

Field Sample ID (Location)	Collection		Canister SN#	Sampler Kit SN#	Analysis Requested	Indoor Air	Soil Gas	Canister Pressure/Vacuum			
	Date	Time						Initial	Final	Receipt	Final (psi)
SV-5	5-1-13	913	6167	316T-776	TO-17 - TPH(g), BTEX, naphthalene D1946-90 (O ₂ , CO ₂ , CH ₄)		X	-30	-5		
SV-5 DUP	5-1-13	913	6164	316T-776	TO-17 - TPH(g), BTEX, naphthalene D1946-90 (O ₂ , CO ₂ , CH ₄)		X	-30	-5		

Relinquished By:

Date:

5-1-13

Time:

1019

Received By:

Relinquished By:

Date:

Time:

Received By:

Temp (°C): _____ Work Order #: _____

Condition: _____

Custody Seals Intact?: Yes _____ No _____ None _____



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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1305019

ClientCode: AEL

WaterTrax
 WriteOn
 EDF
 Excel
 EQuIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Jeremy Smith
AEI Consultants
2500 Camino Diablo, Ste.#200
Walnut Creek, CA 94597
(925) 283-6000 FAX: (925) 944-2895

Email: jasmith@aeiconsultants.com
cc:
PO: #WC084092
ProjectNo: #298931; FSI

Bill to:

Sara Guerin
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
AccountsPayable@AEIConsultants.c

Requested TAT: 5 days

Date Received: 05/01/2013

Date Printed: 05/01/2013

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1305019-001	SV-5	Soil Gas	5/1/2013 9:13	<input type="checkbox"/>	A	A	A										
1305019-002	SV-5 Dup	Soil Gas	5/1/2013 9:13	<input type="checkbox"/>	A	A	A										

Test Legend:

1	TMOSPHERICGAS_SG(UL/	2	PRHELIUM SHROUD	3	TO17_ST(UGM3)	4		5	
6		7		8		9		10	
11		12							

The following SamplIDs: 001A, 002A contain testgroup.

Prepared by: Maria Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



Sample Receipt Checklist

Client Name: **AEI Consultants** Date and Time Received: **5/1/2013 2:18:54 PM**
 Project Name: **#298931; FSI** LogIn Reviewed by: **Maria Venegas**
 WorkOrder N°: **1305019** Matrix: Soil Gas Carrier: Client Drop-In

Chain of Custody (COC) Information

Chain of custody present? Yes No
 Chain of custody signed when relinquished and received? Yes No
 Chain of custody agrees with sample labels? Yes No
 Sample IDs noted by Client on COC? Yes No
 Date and Time of collection noted by Client on COC? Yes No
 Sampler's name noted on COC? Yes No

Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes No NA
 Shipping container/cooler in good condition? Yes No
 Samples in proper containers/bottles? Yes No
 Sample containers intact? Yes No
 Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No
 Container/Temp Blank temperature Cooler Temp: 7.2°C NA
 Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
 Sample labels checked for correct preservation? Yes No
 Metal - pH acceptable upon receipt (pH<2)? Yes No NA
 Samples Received on Ice? Yes No

(Ice Type: WET ICE)

* NOTE: If the "No" box is checked, see comments below.

 Comments: Sorbent Tube on ICE



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AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #298931; FSI	Date Sampled: 05/01/13
	Client Contact: Jeremy Smith	Date Received: 05/01/13
	Client P.O.: #WC084092	Date Extracted: 05/02/13
		Date Analyzed: 05/02/13

Light Gases, Atmospheric*

Extraction Method: ASTM D 1946-90

Analytical Method: ASTM D 1946-90

Work Order: 1305019

Lab ID	1305019-001A	1305019-002A			Reporting Limit for DF = 1 and Pressure Ratio (Final/Initial) = 2
Client ID	SV-5	SV-5 Dup			
Matrix	Soil Gas	Soil Gas			
Initial Pressure (psia)	13.31	13.43			
Final Pressure (psia)	26.52	26.76			
DF	1	1			

Compound	Concentration				µL/L	ug/L
Carbon Dioxide	12,000	12,000			20	NA
Methane	ND	ND			2.0	NA
Oxygen	170,000	170,000			500	NA

Surrogate Recoveries (%)

%SS:	N/A	N/A		
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Comments

* vapor samples are reported in µL/L.

%SS = Percent Recovery of Surrogate Standard
 DF = Dilution Factor



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AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #298931; FSI	Date Sampled: 05/01/13
	Client Contact: Jeremy Smith	Date Received: 05/01/13
	Client P.O.: #WC084092	Date Extracted: 05/02/13
		Date Analyzed: 05/02/13

Helium*

Extraction method: ASTM D 1946-90

Analytical methods: ASTM D 1946-90

Work Order: 1305019

Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure	Helium	DF	% SS	Comments
001A	SV-5	Soil Gas	13.31	26.52	0.0076	1	N/A	
002A	SV-5 Dup	Soil Gas	13.43	26.76	ND	1	N/A	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	psia	psia	NA	NA
	SoilGas	psia	psia	0.005	%

* vapor samples are reported in %.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



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AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #298931; FSI	Date Sampled: 05/01/13
		Date Received: 05/01/13
	Client Contact: Jeremy Smith	Date Extracted: 05/03/13-05/06/13
	Client P.O.: #WC084092	Date Analyzed: 05/03/13-05/06/13

Volatile Organic Compounds in µg/m³*

Extraction Method: TO17

Analytical Method: TO17

Work Order: 1305019

Lab ID	1305019-001A	1305019-002A			Reporting Limit for DF=1
Client ID	SV-5	SV-5 Dup			
Matrix	Soil Gas	Soil Gas			
DF	1	1			
Sample Volume (L)	1.00	1.00			Soil Gas W

Compound	Concentration				µg/m ³	ug/L
	TPH-Gas (C6-C12)	ND	ND			2500
Benzene	ND	ND			25	NA
Ethylbenzene	ND	ND			25	NA
Naphthalene	ND	ND			25	NA
Toluene	ND	ND			25	NA
Xylenes, Total	ND	ND			25	NA

Surrogate Recoveries (%)

%SS3:	107	106			
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Comments

*Samples reported in µg/m³; reporting limit may change due to variable volume of air.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.



QC SUMMARY REPORT FOR ASTM D 1946-90

W.O. Sample Matrix: SoilGas

QC Matrix: SoilGas

BatchID: 76915

WorkOrder: 1305019

EPA Method: ASTM D 1946-90		Extraction: ASTM D 1946-90					Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µL/L	µL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
Carbon Dioxide	N/A	100	N/A	N/A	N/A	104	N/A	N/A	70 - 130	
Methane	N/A	100	N/A	N/A	N/A	107	N/A	N/A	70 - 130	
Oxygen	N/A	7000	N/A	N/A	N/A	83.1	N/A	N/A	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 76915 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1305019-001A	05/01/13 9:13 AM	05/02/13	05/02/13 1:56 PM	1305019-001A	05/01/13 9:13 AM	05/02/13	05/02/13 2:38 PM
1305019-001A	05/01/13 9:13 AM	05/02/13	05/02/13 5:27 PM	1305019-002A	05/01/13 9:13 AM	05/02/13	05/02/13 2:21 PM
1305019-002A	05/01/13 9:13 AM	05/02/13	05/02/13 3:03 PM	1305019-002A	05/01/13 9:13 AM	05/02/13	05/02/13 5:49 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked})$; $\text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2)$.
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



QC SUMMARY REPORT FOR ASTM D 1946-90

W.O. Sample Matrix: Soilgas

QC Matrix: Soilgas

BatchID: 76916

WorkOrder: 1305019

EPA Method: ASTM D 1946-90		Extraction: ASTM D 1946-90					Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	%	%	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
Helium	N/A	0.010	N/A	N/A	N/A	97.8	N/A	N/A	60 - 140	
All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE										

BATCH 76916 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1305019-001A	05/01/13 9:13 AM	05/02/13	05/02/13 10:43 AM	1305019-002A	05/01/13 9:13 AM	05/02/13	05/02/13 10:56 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS-Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



QC SUMMARY REPORT FOR TO17

W.O. Sample Matrix: Sorbent Tube

QC Matrix: Sorbent Tube

BatchID: 77120

WorkOrder: 1305019

EPA Method: TO17		Extraction: TO17					Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/m ³	µg/m ³	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
Benzene	N/A	100	N/A	N/A	N/A	118	N/A	N/A	60 - 140	
Ethylbenzene	N/A	100	N/A	N/A	N/A	82.5	N/A	N/A	60 - 140	
Naphthalene	N/A	100	N/A	N/A	N/A	88.4	N/A	N/A	60 - 140	
Toluene	N/A	100	N/A	N/A	N/A	83.5	N/A	N/A	60 - 140	
%SS2:	N/A	100	N/A	N/A	N/A	103	N/A	N/A	60 - 140	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 77120 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1305019-001A	05/01/13 9:13 AM	05/06/13	05/06/13 3:05 PM	1305019-002A	05/01/13 9:13 AM	05/03/13	05/03/13 6:00 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked})$; $\text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2)$.

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.