

Environmental Resource Group, Inc.

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March 25, 2013

Mr. James Fish
Alaska Department of Environmental Conservation
Northern Regional Office
Contaminated Sites Program
610 University Avenue
Fairbanks, Alaska 99709-3643

**RE: INDOOR AIR SAMPLING REPORT
EAST SATELLITE BUILDING
BENTLEYMALL, FAIRBANKS, ALASKA**

Dear Mr. Fish:

On behalf of Rawson, Blum and Leon, Inc. and Krausze Companies Inc., Environmental Resource Group, Inc. (ERG) has conducted indoor air sampling as requested at the Bentley Mall East Satellite Building located in the southern portion of the Bentley Mall, 32 College Road in Fairbanks, Alaska (*subject site*). The attached Acumen Industrial Hygiene report summarizes the result of the sampling.

If you have any questions or concerns please do not hesitate to call Environmental Resource Group, Inc. to discuss.

Sincerely,



Benjamin Wells
President



ACUMEN

INDUSTRIAL HYGIENE INC

1032 IRVING ST. #922 SAN FRANCISCO CA 94122

TEL 415 242 6060 FAX 415 242 6006

WWW.ACUMEN-IH.COM

March 21, 2013

Mr. Ben Wells
Environmental Resource Group, Inc.
1038 Redwood Highway, Suite 1
Mill Valley, CA 94941

RE: Review of Air Sampling Data
Volatile Organic Compounds: Indoor Air
East Satellite Building - The Bentley Mall
Fairbanks, Alaska
Acumen Project ERG 1328

Dear Ben:

The purpose of this letter is to provide a professional review of the above referenced environmental analytical reports for Bentley Mall (East Satellite) in Fairbanks (Alaska). Samples were recently collected for airborne concentrations of several volatile organic compounds (VOCs) in ambient air on February 27-28, 2013.

Seven (7) Summa canister air samples were submitted by Environmental Resource Group, Inc. to Analytical Sciences (Petaluma, CA) for analysis in accordance with US EPA method TO-15. This facility holds accreditation from the California Department of Health Services. Three (3) of the indoor samples were collected with the ventilation running in a recycled air (economizer) mode. Then Three (3) additional samples were collected using mixed air (mixed indoor and return air). One (1) sample was collected outdoors as a background sample.

Findings and Discussion

Attached in Table 1 are the results, which are compared with applicable standard found in Appendix D, Vapor Intrusion Guidance for Contaminated Sites: Alaska Department of Environmental Conservation (ADEC, October 2012). Appendix A contains the laboratory data.

The data indicate ambient air levels on February 27-28, 2013 were less than the target levels for a commercial building per the ADEC. The concentrations were also below the residential limits except for benzene and perchloroethylene (PCE). Comparing the indoor the outdoor data, the benzene levels were comparatively similar. Outdoor benzene was measured at $4.1 \mu\text{g}/\text{m}^3$, while the average of the six (6) indoor samples was $4.5 \mu\text{g}/\text{m}^3$. Outdoor PCE levels averaged only $2.9 \mu\text{g}/\text{m}^3$, while the average of the six (6) indoor samples was $31.7 \mu\text{g}/\text{m}^3$.

We noted however that the indoor concentrations were reduced by at least 30% by mixing building ventilation. Based on the data, by blending both indoor air and return air (recycled air), the contaminant levels for benzene decreased from 5.4 $\mu\text{g}/\text{m}^3$ to 3.6 $\mu\text{g}/\text{m}^3$ (33% reduction) and for toluene from 28.3 $\mu\text{g}/\text{m}^3$ to 17 $\mu\text{g}/\text{m}^3$ (30% reduction). The greatest reduction was for PCE. Using the mixed air ventilation mode, PCE concentrations were reduced from an average of 54.7 $\mu\text{g}/\text{m}^3$ to 8.7 $\mu\text{g}/\text{m}^3$, (84% reduction), which is below the residential target level of 42 $\mu\text{g}/\text{m}^3$ (ADEC target level for residential buildings).

Conclusions

The data reviewed indicate that the indoor contaminant levels at the Bentley Mall - East Satellite, on February 27-28, 2013 were below the Alaska target screening levels for commercial settings for the six indoor samples. The contaminant levels were further reduced by using mixed ventilation. For PCE the average contaminant levels were reduced by 84% by using mixed ventilation rather than recycled air only.

Please call if you have any questions related to this report, or if we can help you with any other industrial hygiene and safety issues.

Sincerely,
Acumen Industrial Hygiene, Inc.



Paul M. Spillane, CIH, CAC
Principal Industrial Hygienist



Table 1: Indoor Air Sampling Results for February 2013
East Satellite Building, The Bentley Mall, Fairbanks, Alaska

Appendix A: Laboratory Data for February 2013
East Satellite Building, The Bentley Mall, Fairbanks, Alaska

**Table 1: Indoor Air Sampling Results for February 2013,
East Satellite Building, The Bentley Mall, Fairbanks, Alaska**

Sample	Sample Date	Volatile Organic Compounds, VOCs												
		Benzene	Toluene	Ethylbenzene	Total Xylenes	PCE	TCE	Carbon Tetrachloride	Freon-11	Freon-12	1,1-DCE	1,1-DCA	Chloroform	Other VOCs
		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³
Outdoor Ambient Air¹														
Outside-Test-1	02/27/13	4.1	18	2.8	9.8	2.9	ND (<0.21)	ND (<4.9)	ND (<5.6)	ND (<4.9)	ND (<4.0)	ND (<1.2)	ND (<0.39)	ND (<0.03 to <11)
Building Indoor Ventilation Mode: Recycled Indoor Air Only														
EST-TEST-1-1	02/27/13	5.5	28	7.1	29.4	53	ND (<0.21)	0.41	42	ND (<4.9)	ND (<4.0)	ND (<1.2)	ND (<0.39)	ND (<0.03 to <11)
EST-TEST-1-2	02/27/13	5.4	28	7.5	32.1	54	ND (<0.21)	0.39	41	ND (<4.9)	ND (<4.0)	ND (<1.2)	ND (<0.39)	ND (<0.03 to <11)
EST-TEST-1-3	02/27/13	5.3	29	7.1	30.7	57	ND (<0.21)	0.39	41	ND (<4.9)	ND (<4.0)	ND (<1.2)	ND (<0.39)	ND (<0.03 to <11)
Building Indoor Ventilation Mode: Ambient Outdoor and Recycled Indoor Air Blend														
EST-TEST-2-1	02/28/13	3.6	17	3.5	11	8.3	ND (<0.21)	0.42	ND (<5.6)	ND (<4.9)	ND (<4.0)	ND (<1.2)	ND (<0.39)	ND (<0.03 to <11)
EST-TEST-2-2	02/28/13	3.6	17	3.4	11	8.5	ND (<0.21)	0.41	ND (<5.6)	ND (<4.9)	ND (<4.0)	ND (<1.2)	ND (<0.39)	ND (<0.03 to <11)
EST-TEST-2-3	02/28/13	3.6	17	ND (<0.87)	ND (<4.3)	9.3	ND (<0.21)	0.39	ND (<5.6)	ND (<4.9)	ND (<4.0)	ND (<1.2)	ND (<0.39)	ND (<0.03 to <11)
Target Levels for Indoor Air														
Residential Indoor Air		3.1	5,210	9.7	100	42	2.1	4.1	730	100	210	15	1.1	Varies by Compound
Commercial Indoor Air		16	21,900	49	440	180	8.8	20	3,070	440	880	77	5.3	Varies by Compound

Table Notes:

General

µg/m³: Micrograms per cubic meter by volume
 ND (<0.21): Not detected at or above the laboratory reporting limit
 VOCs: Volatile organic compounds by Environmental Protection Agency (EPA) Method T015 (GC/MS)
 PCE: Tetrachloroethene
 TCE: Trichloroethene
 Xylenes: Total of m,p-xylene and o-xylene
 Freon-11: Trichlorofluoromethane
 Freon-12: Dichlorodifluoromethane
 1,1-DCE: 1,1-Dichloroethene
 1,1-DCA: 1,1-Dichloroethane

Target Levels for Indoor Air:

Target levels for indoor air were taken from Appendix D in Alaska Department of Environmental Conservation (ADEC, October 2012):
Vapor Intrusion Guidance for Contaminated Sites, published by ADEC's Division of Spill Prevention and Response Contaminated Sites Program, October 2012.

¹ Target levels for indoor air in ADEC(October 2012) apply to indoor building space and not to outdoor conditions.

Appendix A

Laboratory Reports

Volatile Organic Compounds: Indoor Air
Bentley Mall - East Satellite
Anchorage, Alaska

February 27-28, 2013

Acumen Project No. ERG 1328

Prepared For:

Environmental Resource Group, Inc.
1038 Redwood Highway, Suite 1
Mill Valley, CA 94941



March 08, 2013

Ben Wells
Environmental Resource Group
1038 Old Redwood Highway, Suite 1
Mill Valley, CA 94941

Dear Ben,

Enclosed you will find Analytical Sciences' final report 3030406 for your Bentley Mall project. An invoice for this work is enclosed.

Should you or your client have any questions regarding this report please contact me at your convenience. We appreciate you selecting Analytical Sciences for this work and look forward to serving your analytical chemistry needs on projects in the future.

Sincerely,

Analytical Sciences

Mark A. Valentini, Ph.D.

Laboratory Director



Report Date: March 08, 2013

Laboratory Report

Ben Wells
Environmental Resource Group
1038 Old Redwood Highway, Suite 1
Mill Valley, CA 94941

Project Name: **Bentley Mall**

East Satellite

Lab Project: **3030406**

This 12 page report of analytical data has been reviewed and approved for release.

Mark A. Valentini, Ph.D.

Laboratory Director



Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Lab#	Sample ID	Compound Name	Result ($\mu\text{g}/\text{m}^3$)	RDL ($\mu\text{g}/\text{m}^3$)
3030406-01	ES-Test-1-1	Dichlorodifluoromethane (F-12)	ND	4.9
		Chlorodifluoromethane (F-22)	ND	3.5
		Dichlorotetrafluoroethane (F-114)	ND	7.0
		Chloromethane	ND	2.1
		Vinyl chloride	ND	0.03
		Chloroethane (CE)	ND	2.6
		Trichlorofluoromethane (F-11)	42	5.6
		1,1-Dichloroethene (1,1-DCE)	ND	4.0
		Trichlorotrifluoroethane (F-113)	ND	7.7
		Methylene chloride	ND	3.5
		trans-1,2-Dichloroethene	ND	4.0
		1,1-Dichloroethane (1,1-DCA)	ND	1.2
		cis-1,2-Dichloroethene (c1,2-DCE)	ND	4.0
		Chloroform (THM1)	ND	0.39
		1,1,1-Trichloroethane (TCA)	ND	5.5
		1,2-Dichloroethane (EDC)	ND	0.08
		Carbon tetrachloride	0.41	0.02
		Benzene	5.5	0.06
		Trichloroethene (TCE)	ND	0.21
		1,2-Dichloropropane (DCP)	ND	0.23
		cis-1,3-Dichloropropene	ND	0.14
		trans-1,3-Dichloropropene	ND	0.14
		Toluene	28	3.8
		1,1,2-Trichloroethane	ND	0.11
		Tetrachloroethene (PCE)	53	0.41
		Chlorobenzene	ND	4.6
		Ethylbenzene	7.1	0.87
		m,p-Xylene	21	4.3



Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Lab#	Sample ID	Compound Name	Result ($\mu\text{g}/\text{m}^3$)	RDL ($\mu\text{g}/\text{m}^3$)
3030406-01	ES-Test-1-1	o-Xylene	8.4	4.3
		1,1,2,2-Tetrachloroethane	ND	0.04
		1,3,5-Trimethylbenzene	ND	4.9
		1,2,4-Trimethylbenzene	ND	4.9
		1,2,4-Trichlorobenzene	ND	0.74
		1,3-Dichlorobenzene	ND	6.0
		Benzyl chloride	ND	5.2
		1,4-Dichlorobenzene	ND	0.18
		1,2-Dichlorobenzene	ND	6.0
		Hexachloro-1,3-butadiene	ND	11
		Naphthalene	ND	0.05
		Methyl tert-Butyl Ether (MTBE)	ND	3.6
		Tertiary Butyl Alcohol (TBA)	ND	6.1
		Di-isopropyl Ether (DIPE)	ND	4.2
		Ethyl tert-Butyl Ether (ETBE)	ND	4.2
		Tert-Amyl Methyl Ether (TAME)	ND	4.2
	Surrogates	Result ($\mu\text{g}/\text{m}^3$)	% Recovery	Acceptance Range (%)
		4.43	91	70-130
		5.03	104	70-130
Date Sampled: 02/27/13		Date Analyzed: 03/04/13		QC Batch: B011798
Date Received: 03/04/13		Method: EPA TO-15		



Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Lab#	Sample ID	Compound Name	Result ($\mu\text{g}/\text{m}^3$)	RDL ($\mu\text{g}/\text{m}^3$)
3030406-02	ES-Test-1-2	Dichlorodifluoromethane (F-12)	ND	4.9
		Chlorodifluoromethane (F-22)	ND	3.5
		Dichlorotetrafluoroethane (F-114)	ND	7.0
		Chloromethane	ND	2.1
		Vinyl chloride	ND	0.03
		Chloroethane (CE)	ND	2.6
		Trichlorofluoromethane (F-11)	41	5.6
		1,1-Dichloroethene (1,1-DCE)	ND	4.0
		Trichlorotrifluoroethane (F-113)	ND	7.7
		Methylene chloride	ND	3.5
		trans-1,2-Dichloroethene	ND	4.0
		1,1-Dichloroethane (1,1-DCA)	ND	1.2
		cis-1,2-Dichloroethene (c1,2-DCE)	ND	4.0
		Chloroform (THM1)	ND	0.39
		1,1,1-Trichloroethane (TCA)	ND	5.5
		1,2-Dichloroethane (EDC)	ND	0.08
		Carbon tetrachloride	0.39	0.02
		Benzene	5.4	0.06
		Trichloroethene (TCE)	ND	0.21
		1,2-Dichloropropane (DCP)	ND	0.23
		cis-1,3-Dichloropropene	ND	0.14
		trans-1,3-Dichloropropene	ND	0.14
		Toluene	28	3.8
		1,1,2-Trichloroethane	ND	0.11
		Tetrachloroethene (PCE)	54	0.41
		Chlorobenzene	ND	4.6
		Ethylbenzene	7.5	0.87
		m,p-Xylene	23	4.3



Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Lab#	Sample ID	Compound Name	Result ($\mu\text{g}/\text{m}^3$)	RDL ($\mu\text{g}/\text{m}^3$)
3030406-02	ES-Test-1-2	o-Xylene	9.1	4.3
		1,1,2,2-Tetrachloroethane	ND	0.04
		1,3,5-Trimethylbenzene	ND	4.9
		1,2,4-Trimethylbenzene	ND	4.9
		1,2,4-Trichlorobenzene	ND	0.74
		1,3-Dichlorobenzene	ND	6.0
		Benzyl chloride	ND	5.2
		1,4-Dichlorobenzene	ND	0.18
		1,2-Dichlorobenzene	ND	6.0
		Hexachloro-1,3-butadiene	ND	11
		Naphthalene	ND	0.05
		Methyl tert-Butyl Ether (MTBE)	ND	3.6
		Tertiary Butyl Alcohol (TBA)	ND	6.1
		Di-isopropyl Ether (DIPE)	ND	4.2
		Ethyl tert-Butyl Ether (ETBE)	ND	4.2
		Tert-Amyl Methyl Ether (TAME)	ND	4.2
	Surrogates	Result ($\mu\text{g}/\text{m}^3$)	% Recovery	Acceptance Range (%)
		4.14	85	70-130
		5.35	110	70-130

Date Sampled:	02/27/13	Date Analyzed:	03/04/13	QC Batch: B011798
Date Received:	03/04/13	Method:	EPA TO-15	



Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Lab#	Sample ID	Compound Name	Result ($\mu\text{g}/\text{m}^3$)	RDL ($\mu\text{g}/\text{m}^3$)
3030406-03	ES-Test-1-3	Dichlorodifluoromethane (F-12)	ND	4.9
		Chlorodifluoromethane (F-22)	ND	3.5
		Dichlorotetrafluoroethane (F-114)	ND	7.0
		Chloromethane	ND	2.1
		Vinyl chloride	ND	0.03
		Chloroethane (CE)	ND	2.6
		Trichlorofluoromethane (F-11)	41	5.6
		1,1-Dichloroethene (1,1-DCE)	ND	4.0
		Trichlorotrifluoroethane (F-113)	ND	7.7
		Methylene chloride	ND	3.5
		trans-1,2-Dichloroethene	ND	4.0
		1,1-Dichloroethane (1,1-DCA)	ND	1.2
		cis-1,2-Dichloroethene (c1,2-DCE)	ND	4.0
		Chloroform (THM1)	ND	0.39
		1,1,1-Trichloroethane (TCA)	ND	5.5
		1,2-Dichloroethane (EDC)	ND	0.08
		Carbon tetrachloride	0.39	0.02
		Benzene	5.3	0.06
		Trichloroethene (TCE)	ND	0.21
		1,2-Dichloropropane (DCP)	ND	0.23
		cis-1,3-Dichloropropene	ND	0.14
		trans-1,3-Dichloropropene	ND	0.14
		Toluene	29	3.8
		1,1,2-Trichloroethane	ND	0.11
		Tetrachloroethene (PCE)	57	0.41
		Chlorobenzene	ND	4.6
		Ethylbenzene	7.1	0.87
		m,p-Xylene	22	4.3



Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Lab#	Sample ID	Compound Name	Result ($\mu\text{g}/\text{m}^3$)	RDL ($\mu\text{g}/\text{m}^3$)	
3030406-03	ES-Test-1-3	o-Xylene	8.7	4.3	
		1,1,2,2-Tetrachloroethane	ND	0.04	
		1,3,5-Trimethylbenzene	ND	4.9	
		1,2,4-Trimethylbenzene	ND	4.9	
		1,2,4-Trichlorobenzene	ND	0.74	
		1,3-Dichlorobenzene	ND	6.0	
		Benzyl chloride	ND	5.2	
		1,4-Dichlorobenzene	ND	0.18	
		1,2-Dichlorobenzene	ND	6.0	
		Hexachloro-1,3-butadiene	ND	11	
		Naphthalene	ND	0.05	
		Methyl tert-Butyl Ether (MTBE)	ND	3.6	
		Tertiary Butyl Alcohol (TBA)	ND	6.1	
		Di-isopropyl Ether (DIPE)	ND	4.2	
		Ethyl tert-Butyl Ether (ETBE)	ND	4.2	
		Tert-Amyl Methyl Ether (TAME)	ND	4.2	
	Surrogates	Result ($\mu\text{g}/\text{m}^3$)	% Recovery	Acceptance Range (%)	
		Dibromofluoromethane	4.16	85	70-130
		4-Bromofluorobenzene	4.49	93	70-130

Date Sampled:	02/27/13	Date Analyzed:	03/04/13	QC Batch: B011798
Date Received:	03/04/13	Method:	EPA TO-15	



Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Lab#	Sample ID	Compound Name	Result ($\mu\text{g}/\text{m}^3$)	RDL ($\mu\text{g}/\text{m}^3$)
3030406-04	Outside-Test-1	Dichlorodifluoromethane (F-12)	ND	4.9
		Chlorodifluoromethane (F-22)	ND	3.5
		Dichlorotetrafluoroethane (F-114)	ND	7.0
		Chloromethane	ND	2.1
		Vinyl chloride	ND	0.03
		Chloroethane (CE)	ND	2.6
		Trichlorofluoromethane (F-11)	ND	5.6
		1,1-Dichloroethene (1,1-DCE)	ND	4.0
		Trichlorotrifluoroethane (F-113)	ND	7.7
		Methylene chloride	ND	3.5
		trans-1,2-Dichloroethene	ND	4.0
		1,1-Dichloroethane (1,1-DCA)	ND	1.2
		cis-1,2-Dichloroethene (c1,2-DCE)	ND	4.0
		Chloroform (THM1)	ND	0.39
		1,1,1-Trichloroethane (TCA)	ND	5.5
		1,2-Dichloroethane (EDC)	ND	0.08
		Carbon tetrachloride	0.41	0.02
		Benzene	4.1	0.06
		Trichloroethene (TCE)	ND	0.21
		1,2-Dichloropropane (DCP)	ND	0.23
		cis-1,3-Dichloropropene	ND	0.14
		trans-1,3-Dichloropropene	ND	0.14
		Toluene	18	3.8
		1,1,2-Trichloroethane	ND	0.11
		Tetrachloroethene (PCE)	2.9	0.41
		Chlorobenzene	ND	4.6
		Ethylbenzene	2.8	0.87
		m,p-Xylene	9.8	4.3



Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Lab#	Sample ID	Compound Name	Result ($\mu\text{g}/\text{m}^3$)	RDL ($\mu\text{g}/\text{m}^3$)
3030406-04	Outside-Test-1	o-Xylene	ND	4.3
		1,1,2,2-Tetrachloroethane	ND	0.04
		1,3,5-Trimethylbenzene	ND	4.9
		1,2,4-Trimethylbenzene	ND	4.9
		1,2,4-Trichlorobenzene	ND	0.74
		1,3-Dichlorobenzene	ND	6.0
		Benzyl chloride	ND	5.2
		1,4-Dichlorobenzene	ND	0.18
		1,2-Dichlorobenzene	ND	6.0
		Hexachloro-1,3-butadiene	ND	11
		Naphthalene	ND	0.05
		Methyl tert-Butyl Ether (MTBE)	ND	3.6
		Tertiary Butyl Alcohol (TBA)	ND	6.1
		Di-isopropyl Ether (DIPE)	ND	4.2
		Ethyl tert-Butyl Ether (ETBE)	ND	4.2
		Tert-Amyl Methyl Ether (TAME)	ND	4.2
	Surrogates	Result ($\mu\text{g}/\text{m}^3$)	% Recovery	Acceptance Range (%)
		4.06	83	70-130
		5.19	107	70-130
Date Sampled:	02/27/13	Date Analyzed:	03/04/13	QC Batch: B011798
Date Received:	03/04/13	Method:	EPA TO-15	



Quality Assurance Report

Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Notes
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Batch B011798 - Air prep GC/MS

Blank (B011798-BLK1)

Prepared & Analyzed: 03/05/13

Dichlorodifluoromethane (F-12)	ND	4.9	$\mu\text{g}/\text{m}^3$
Chlorodifluoromethane (F-22)	ND	3.5	$\mu\text{g}/\text{m}^3$
Dichlorotetrafluoroethane (F-114)	ND	7.0	$\mu\text{g}/\text{m}^3$
Chloromethane	ND	2.1	$\mu\text{g}/\text{m}^3$
Vinyl chloride	ND	0.03	$\mu\text{g}/\text{m}^3$
Chloroethane (CE)	ND	2.6	$\mu\text{g}/\text{m}^3$
Trichlorofluoromethane (F-11)	ND	5.6	$\mu\text{g}/\text{m}^3$
1,1-Dichloroethene (1,1-DCE)	ND	4.0	$\mu\text{g}/\text{m}^3$
Trichlorotrifluoroethane (F-113)	ND	7.7	$\mu\text{g}/\text{m}^3$
Methylene chloride	ND	3.5	$\mu\text{g}/\text{m}^3$
trans-1,2-Dichloroethene	ND	4.0	$\mu\text{g}/\text{m}^3$
1,1-Dichloroethane (1,1-DCA)	ND	1.2	$\mu\text{g}/\text{m}^3$
cis-1,2-Dichloroethene (c1,2-DCE)	ND	4.0	$\mu\text{g}/\text{m}^3$
Chloroform (THM1)	ND	0.39	$\mu\text{g}/\text{m}^3$
1,1,1-Trichloroethane (TCA)	ND	5.5	$\mu\text{g}/\text{m}^3$
1,2-Dichloroethane (EDC)	ND	0.08	$\mu\text{g}/\text{m}^3$
Carbon tetrachloride	ND	0.02	$\mu\text{g}/\text{m}^3$
Benzene	ND	0.06	$\mu\text{g}/\text{m}^3$
Trichloroethene (TCE)	ND	0.21	$\mu\text{g}/\text{m}^3$
1,2-Dichloropropane (DCP)	ND	0.23	$\mu\text{g}/\text{m}^3$
cis-1,3-Dichloropropene	ND	0.14	$\mu\text{g}/\text{m}^3$
trans-1,3-Dichloropropene	ND	0.14	$\mu\text{g}/\text{m}^3$
Toluene	ND	3.8	$\mu\text{g}/\text{m}^3$
1,1,2-Trichloroethane	ND	0.11	$\mu\text{g}/\text{m}^3$
Tetrachloroethene (PCE)	ND	0.41	$\mu\text{g}/\text{m}^3$
Chlorobenzene	ND	4.6	$\mu\text{g}/\text{m}^3$
Ethylbenzene	ND	0.87	$\mu\text{g}/\text{m}^3$
m,p-Xylene	ND	4.3	$\mu\text{g}/\text{m}^3$
o-Xylene	ND	4.3	$\mu\text{g}/\text{m}^3$
1,1,2,2-Tetrachloroethane	ND	0.04	$\mu\text{g}/\text{m}^3$
1,3,5-Trimethylbenzene	ND	4.9	$\mu\text{g}/\text{m}^3$
1,2,4-Trimethylbenzene	ND	4.9	$\mu\text{g}/\text{m}^3$
1,3-Dichlorobenzene	ND	6.0	$\mu\text{g}/\text{m}^3$
1,2,4-Trichlorobenzene	ND	0.74	$\mu\text{g}/\text{m}^3$
Benzyl chloride	ND	5.2	$\mu\text{g}/\text{m}^3$
1,4-Dichlorobenzene	ND	0.18	$\mu\text{g}/\text{m}^3$
1,2-Dichlorobenzene	ND	6.0	$\mu\text{g}/\text{m}^3$
Hexachloro-1,3-butadiene	ND	11	$\mu\text{g}/\text{m}^3$
Naphthalene	ND	0.05	$\mu\text{g}/\text{m}^3$
Methyl tert-Butyl Ether (MTBE)	ND	3.6	$\mu\text{g}/\text{m}^3$
Tertiary Butyl Alcohol (TBA)	ND	6.1	$\mu\text{g}/\text{m}^3$



Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B011798 - Air prep GC/MS										
Blank (B011798-BLK1)										
Prepared & Analyzed: 03/05/13										
Di-isopropyl Ether (DIPE)	ND	4.2	$\mu\text{g}/\text{m}^3$							
Ethyl tert-Butyl Ether (ETBE)	ND	4.2	$\mu\text{g}/\text{m}^3$							
Tert-Amyl Methyl Ether (TAME)	ND	4.2	$\mu\text{g}/\text{m}^3$							
<i>Surrogate: Dibromofluoromethane</i>	4.41		$\mu\text{g}/\text{m}^3$	4.87		91	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	4.72		$\mu\text{g}/\text{m}^3$	4.85		97	70-130			



Notes and Definitions

RDL	Reporting Detection Limit
ND	Analyte NOT DETECTED at or above the reporting detection limit (RDL)
RPD	Relative Percent Difference
NR	Not Reported



Analytical Sciences
 P.O. Box 750336, Petaluma, CA 94975-0336
 110 Liberty Street, Petaluma, CA 94952
 (707) 769-3128

CHAIN OF CUSTODY

LAB PROJECT NUMBER: 3030106
 CLIENT'S PROJECT NAME: Bentley Mall
 CLIENT'S PROJECT NUMBER: East Satek Ultra

BILLING INFORMATION

CONTACT: ERG
 COMPANY NAME:
 ADDRESS:
 PHONE#:
 FAX #:

CLIENT INFORMATION

COMPANY NAME: ERG
 ADDRESS: 1038 Redwood Hwy
 CONTACT: Suite I M.V., CA
 PHONE#: Ben Wells 949
 FAX #: 415-381-6574

GEOTRACKER EDF: Y N
 GLOBAL ID:
 COOLER TEMPERATURE _____ °C
 COC _____

TURNAROUND TIME (check one)
 MOBILE LAB _____
 SAME DAY _____ 24 HOURS _____
 48 HOURS _____ 72 HOURS _____
 5 DAYS _____ NORMAL

PAGE 1 OF 1

ANALYSIS

ITEM	CLIENT SAMPLE I.D.	Summa Canister Serial #	Regulator Serial #	Sample Start Time	Sample End Time	Date Sampled	Matrix	EPA TO-15	COMMENTS	LAB SAMPLE #
1	ES-Test-1-1	7003	932	12:00pm	8pm	4/27/13 Air		X	3030106	-01
2	ES-Test-1-2	7006	931	12pm	8pm					-02
3	ES-Test-1-3	6994	3388	12pm	8pm					-03
4	outside-Test-1	7002	1078	4pm	5pm					1hr. Test 04
5										
6										
7										
8										
9										
10										

SIGNATURES

RELINQUISHED BY: Ben Wells DATE: 3/4/13 TIME: 11:30
 RECEIVED BY LABORATORY: [Signature] DATE: 3-4-13 TIME: 11:30



March 08, 2013

Ben Wells
Environmental Resource Group
1038 Old Redwood Highway, Suite 1
Mill Valley, CA 94941

Dear Ben,

Enclosed you will find Analytical Sciences' final report 3030407 for your Bentley Mall project. An invoice for this work is enclosed.

Should you or your client have any questions regarding this report please contact me at your convenience. We appreciate you selecting Analytical Sciences for this work and look forward to serving your analytical chemistry needs on projects in the future.

Sincerely,

Analytical Sciences

Mark A. Valentini, Ph.D.

Laboratory Director



Report Date: March 08, 2013

Laboratory Report

Ben Wells
Environmental Resource Group
1038 Old Redwood Highway, Suite 1
Mill Valley, CA 94941

Project Name: **Bentley Mall** **East Satellite**
Lab Project: **3030407**

This 12 page report of analytical data has been reviewed and approved for release.

Mark A. Valentini, Ph.D.

Laboratory Director



Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Lab#	Sample ID	Compound Name	Result ($\mu\text{g}/\text{m}^3$)	RDL ($\mu\text{g}/\text{m}^3$)
3030407-01	ES-Test-2-1	Dichlorodifluoromethane (F-12)	ND	4.9
		Chlorodifluoromethane (F-22)	ND	3.5
		Dichlorotetrafluoroethane (F-114)	ND	7.0
		Chloromethane	ND	2.1
		Vinyl chloride	ND	0.03
		Chloroethane (CE)	ND	2.6
		Trichlorofluoromethane (F-11)	ND	5.6
		1,1-Dichloroethene (1,1-DCE)	ND	4.0
		Trichlorotrifluoroethane (F-113)	ND	7.7
		Methylene chloride	ND	3.5
		trans-1,2-Dichloroethene	ND	4.0
		1,1-Dichloroethane (1,1-DCA)	ND	1.2
		cis-1,2-Dichloroethene (c1,2-DCE)	ND	4.0
		Chloroform (THM1)	ND	0.39
		1,1,1-Trichloroethane (TCA)	ND	5.5
		1,2-Dichloroethane (EDC)	ND	0.08
		Carbon tetrachloride	0.42	0.02
		Benzene	3.6	0.06
		Trichloroethene (TCE)	ND	0.21
		1,2-Dichloropropane (DCP)	ND	0.23
		cis-1,3-Dichloropropene	ND	0.14
		trans-1,3-Dichloropropene	ND	0.14
		Toluene	17	3.8
		1,1,2-Trichloroethane	ND	0.11
		Tetrachloroethene (PCE)	8.3	0.41
		Chlorobenzene	ND	4.6
		Ethylbenzene	3.5	0.87
		m,p-Xylene	11	4.3



Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Lab#	Sample ID	Compound Name	Result ($\mu\text{g}/\text{m}^3$)	RDL ($\mu\text{g}/\text{m}^3$)
3030407-01	ES-Test-2-1	o-Xylene	ND	4.3
		1,1,2,2-Tetrachloroethane	ND	0.04
		1,3,5-Trimethylbenzene	ND	4.9
		1,2,4-Trimethylbenzene	ND	4.9
		1,2,4-Trichlorobenzene	ND	0.74
		1,3-Dichlorobenzene	ND	6.0
		Benzyl chloride	ND	5.2
		1,4-Dichlorobenzene	ND	0.18
		1,2-Dichlorobenzene	ND	6.0
		Hexachloro-1,3-butadiene	ND	11
		Naphthalene	ND	0.05
		Methyl tert-Butyl Ether (MTBE)	ND	3.6
		Tertiary Butyl Alcohol (TBA)	ND	6.1
		Di-isopropyl Ether (DIPE)	ND	4.2
		Ethyl tert-Butyl Ether (ETBE)	ND	4.2
		Tert-Amyl Methyl Ether (TAME)	ND	4.2
Surrogates	Result ($\mu\text{g}/\text{m}^3$)	% Recovery	Acceptance Range (%)	
Dibromofluoromethane	4.20	86	70-130	
4-Bromofluorobenzene	5.24	108	70-130	

Date Sampled:	02/28/13	Date Analyzed:	03/05/13	QC Batch:	B011798
Date Received:	03/04/13	Method:	EPA TO-15		



Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Lab#	Sample ID	Compound Name	Result ($\mu\text{g}/\text{m}^3$)	RDL ($\mu\text{g}/\text{m}^3$)
3030407-02	ES-Test-2-2	Dichlorodifluoromethane (F-12)	ND	4.9
		Chlorodifluoromethane (F-22)	ND	3.5
		Dichlorotetrafluoroethane (F-114)	ND	7.0
		Chloromethane	ND	2.1
		Vinyl chloride	ND	0.03
		Chloroethane (CE)	ND	2.6
		Trichlorofluoromethane (F-11)	ND	5.6
		1,1-Dichloroethene (1,1-DCE)	ND	4.0
		Trichlorotrifluoroethane (F-113)	ND	7.7
		Methylene chloride	ND	3.5
		trans-1,2-Dichloroethene	ND	4.0
		1,1-Dichloroethane (1,1-DCA)	ND	1.2
		cis-1,2-Dichloroethene (c1,2-DCE)	ND	4.0
		Chloroform (THM1)	ND	0.39
		1,1,1-Trichloroethane (TCA)	ND	5.5
		1,2-Dichloroethane (EDC)	ND	0.08
		Carbon tetrachloride	0.41	0.02
		Benzene	3.6	0.06
		Trichloroethene (TCE)	ND	0.21
		1,2-Dichloropropane (DCP)	ND	0.23
		cis-1,3-Dichloropropene	ND	0.14
		trans-1,3-Dichloropropene	ND	0.14
		Toluene	17	3.8
		1,1,2-Trichloroethane	ND	0.11
		Tetrachloroethene (PCE)	8.5	0.41
		Chlorobenzene	ND	4.6
		Ethylbenzene	3.4	0.87
		m,p-Xylene	11	4.3



Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Lab#	Sample ID	Compound Name	Result ($\mu\text{g}/\text{m}^3$)	RDL ($\mu\text{g}/\text{m}^3$)	
3030407-02	ES-Test-2-2	o-Xylene	ND	4.3	
		1,1,2,2-Tetrachloroethane	ND	0.04	
		1,3,5-Trimethylbenzene	ND	4.9	
		1,2,4-Trimethylbenzene	ND	4.9	
		1,2,4-Trichlorobenzene	ND	0.74	
		1,3-Dichlorobenzene	ND	6.0	
		Benzyl chloride	ND	5.2	
		1,4-Dichlorobenzene	ND	0.18	
		1,2-Dichlorobenzene	ND	6.0	
		Hexachloro-1,3-butadiene	ND	11	
		Naphthalene	ND	0.05	
		Methyl tert-Butyl Ether (MTBE)	ND	3.6	
		Tertiary Butyl Alcohol (TBA)	ND	6.1	
		Di-isopropyl Ether (DIPE)	ND	4.2	
		Ethyl tert-Butyl Ether (ETBE)	ND	4.2	
		Tert-Amyl Methyl Ether (TAME)	ND	4.2	
	Surrogates	Result ($\mu\text{g}/\text{m}^3$)	% Recovery	Acceptance Range (%)	
		Dibromofluoromethane	4.06	83	70-130
		4-Bromofluorobenzene	4.90	101	70-130
Date Sampled: 02/28/13		Date Analyzed: 03/05/13		QC Batch: B011798	
Date Received: 03/04/13		Method: EPA TO-15			



Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Lab#	Sample ID	Compound Name	Result ($\mu\text{g}/\text{m}^3$)	RDL ($\mu\text{g}/\text{m}^3$)
3030407-03	ES-Test-2-3	Dichlorodifluoromethane (F-12)	ND	4.9
		Chlorodifluoromethane (F-22)	ND	3.5
		Dichlorotetrafluoroethane (F-114)	ND	7.0
		Chloromethane	ND	2.1
		Vinyl chloride	ND	0.03
		Chloroethane (CE)	ND	2.6
		Trichlorofluoromethane (F-11)	ND	5.6
		1,1-Dichloroethene (1,1-DCE)	ND	4.0
		Trichlorotrifluoroethane (F-113)	ND	7.7
		Methylene chloride	ND	3.5
		trans-1,2-Dichloroethene	ND	4.0
		1,1-Dichloroethane (1,1-DCA)	ND	1.2
		cis-1,2-Dichloroethene (c1,2-DCE)	ND	4.0
		Chloroform (THM1)	ND	0.39
		1,1,1-Trichloroethane (TCA)	ND	5.5
		1,2-Dichloroethane (EDC)	ND	0.08
		Carbon tetrachloride	0.39	0.02
		Benzene	3.6	0.06
		Trichloroethene (TCE)	ND	0.21
		1,2-Dichloropropane (DCP)	ND	0.23
		cis-1,3-Dichloropropene	ND	0.14
		trans-1,3-Dichloropropene	ND	0.14
		Toluene	17	3.8
		1,1,2-Trichloroethane	ND	0.11
		Tetrachloroethene (PCE)	9.3	0.41
		Chlorobenzene	ND	4.6
		Ethylbenzene	ND	0.87
		m,p-Xylene	ND	4.3



Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Lab#	Sample ID	Compound Name	Result ($\mu\text{g}/\text{m}^3$)	RDL ($\mu\text{g}/\text{m}^3$)
3030407-03	ES-Test-2-3	o-Xylene	ND	4.3
		1,1,2,2-Tetrachloroethane	ND	0.04
		1,3,5-Trimethylbenzene	ND	4.9
		1,2,4-Trimethylbenzene	ND	4.9
		1,2,4-Trichlorobenzene	ND	0.74
		1,3-Dichlorobenzene	ND	6.0
		Benzyl chloride	ND	5.2
		1,4-Dichlorobenzene	ND	0.18
		1,2-Dichlorobenzene	ND	6.0
		Hexachloro-1,3-butadiene	ND	11
		Naphthalene	ND	0.05
		Methyl tert-Butyl Ether (MTBE)	ND	3.6
		Tertiary Butyl Alcohol (TBA)	ND	6.1
		Di-isopropyl Ether (DIPE)	ND	4.2
		Ethyl tert-Butyl Ether (ETBE)	ND	4.2
		Tert-Amyl Methyl Ether (TAME)	ND	4.2
Surrogates	Result ($\mu\text{g}/\text{m}^3$)	% Recovery	Acceptance Range (%)	
Dibromofluoromethane	3.90	80	70-130	
4-Bromofluorobenzene	5.65	116	70-130	

Date Sampled:	02/28/13	Date Analyzed:	03/05/13	QC Batch:	B011798
Date Received:	03/04/13	Method:	EPA TO-15		



Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Lab#	Sample ID	Compound Name	Result ($\mu\text{g}/\text{m}^3$)	RDL ($\mu\text{g}/\text{m}^3$)
3030407-04	Trip Blank	Dichlorodifluoromethane (F-12)	ND	4.9
		Chlorodifluoromethane (F-22)	ND	3.5
		Dichlorotetrafluoroethane (F-114)	ND	7.0
		Chloromethane	ND	2.1
		Vinyl chloride	ND	0.03
		Chloroethane (CE)	ND	2.6
		Trichlorofluoromethane (F-11)	ND	5.6
		1,1-Dichloroethene (1,1-DCE)	ND	4.0
		Trichlorotrifluoroethane (F-113)	ND	7.7
		Methylene chloride	ND	3.5
		trans-1,2-Dichloroethene	ND	4.0
		1,1-Dichloroethane (1,1-DCA)	ND	1.2
		cis-1,2-Dichloroethene (c1,2-DCE)	ND	4.0
		Chloroform (THM1)	ND	0.39
		1,1,1-Trichloroethane (TCA)	ND	5.5
		1,2-Dichloroethane (EDC)	ND	0.08
		Carbon tetrachloride	ND	0.02
		Benzene	ND	0.06
		Trichloroethene (TCE)	ND	0.21
		1,2-Dichloropropane (DCP)	ND	0.23
		cis-1,3-Dichloropropene	ND	0.14
		trans-1,3-Dichloropropene	ND	0.14
		Toluene	ND	3.8
		1,1,2-Trichloroethane	ND	0.11
		Tetrachloroethene (PCE)	ND	0.41
		Chlorobenzene	ND	4.6
		Ethylbenzene	ND	0.87
		m,p-Xylene	ND	4.3



Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Lab#	Sample ID	Compound Name	Result ($\mu\text{g}/\text{m}^3$)	RDL ($\mu\text{g}/\text{m}^3$)
3030407-04	Trip Blank	o-Xylene	ND	4.3
		1,1,2,2-Tetrachloroethane	ND	0.04
		1,3,5-Trimethylbenzene	ND	4.9
		1,2,4-Trimethylbenzene	ND	4.9
		1,2,4-Trichlorobenzene	ND	0.74
		1,3-Dichlorobenzene	ND	6.0
		Benzyl chloride	ND	5.2
		1,4-Dichlorobenzene	ND	0.18
		1,2-Dichlorobenzene	ND	6.0
		Hexachloro-1,3-butadiene	ND	11
		Naphthalene	ND	0.05
		Methyl tert-Butyl Ether (MTBE)	ND	3.6
		Tertiary Butyl Alcohol (TBA)	ND	6.1
		Di-isopropyl Ether (DIPE)	ND	4.2
		Ethyl tert-Butyl Ether (ETBE)	ND	4.2
		Tert-Amyl Methyl Ether (TAME)	ND	4.2
	Surrogates	Result ($\mu\text{g}/\text{m}^3$)	% Recovery	Acceptance Range (%)
		4.02	83	70-130
		4.56	94	70-130
Date Sampled: 02/28/13		Date Analyzed: 03/04/13		QC Batch: B011798
Date Received: 03/04/13		Method: EPA TO-15		



Quality Assurance Report

Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Notes
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Batch B011798 - Air prep GC/MS

Blank (B011798-BLK1)

Prepared & Analyzed: 03/05/13

Dichlorodifluoromethane (F-12)	ND	4.9	$\mu\text{g}/\text{m}^3$
Chlorodifluoromethane (F-22)	ND	3.5	$\mu\text{g}/\text{m}^3$
Dichlorotetrafluoroethane (F-114)	ND	7.0	$\mu\text{g}/\text{m}^3$
Chloromethane	ND	2.1	$\mu\text{g}/\text{m}^3$
Vinyl chloride	ND	0.03	$\mu\text{g}/\text{m}^3$
Chloroethane (CE)	ND	2.6	$\mu\text{g}/\text{m}^3$
Trichlorofluoromethane (F-11)	ND	5.6	$\mu\text{g}/\text{m}^3$
1,1-Dichloroethene (1,1-DCE)	ND	4.0	$\mu\text{g}/\text{m}^3$
Trichlorotrifluoroethane (F-113)	ND	7.7	$\mu\text{g}/\text{m}^3$
Methylene chloride	ND	3.5	$\mu\text{g}/\text{m}^3$
trans-1,2-Dichloroethene	ND	4.0	$\mu\text{g}/\text{m}^3$
1,1-Dichloroethane (1,1-DCA)	ND	1.2	$\mu\text{g}/\text{m}^3$
cis-1,2-Dichloroethene (c1,2-DCE)	ND	4.0	$\mu\text{g}/\text{m}^3$
Chloroform (THM1)	ND	0.39	$\mu\text{g}/\text{m}^3$
1,1,1-Trichloroethane (TCA)	ND	5.5	$\mu\text{g}/\text{m}^3$
1,2-Dichloroethane (EDC)	ND	0.08	$\mu\text{g}/\text{m}^3$
Carbon tetrachloride	ND	0.02	$\mu\text{g}/\text{m}^3$
Benzene	ND	0.06	$\mu\text{g}/\text{m}^3$
Trichloroethene (TCE)	ND	0.21	$\mu\text{g}/\text{m}^3$
1,2-Dichloropropane (DCP)	ND	0.23	$\mu\text{g}/\text{m}^3$
cis-1,3-Dichloropropene	ND	0.14	$\mu\text{g}/\text{m}^3$
trans-1,3-Dichloropropene	ND	0.14	$\mu\text{g}/\text{m}^3$
Toluene	ND	3.8	$\mu\text{g}/\text{m}^3$
1,1,2-Trichloroethane	ND	0.11	$\mu\text{g}/\text{m}^3$
Tetrachloroethene (PCE)	ND	0.41	$\mu\text{g}/\text{m}^3$
Chlorobenzene	ND	4.6	$\mu\text{g}/\text{m}^3$
Ethylbenzene	ND	0.87	$\mu\text{g}/\text{m}^3$
m,p-Xylene	ND	4.3	$\mu\text{g}/\text{m}^3$
o-Xylene	ND	4.3	$\mu\text{g}/\text{m}^3$
1,1,2,2-Tetrachloroethane	ND	0.04	$\mu\text{g}/\text{m}^3$
1,3,5-Trimethylbenzene	ND	4.9	$\mu\text{g}/\text{m}^3$
1,2,4-Trimethylbenzene	ND	4.9	$\mu\text{g}/\text{m}^3$
1,3-Dichlorobenzene	ND	6.0	$\mu\text{g}/\text{m}^3$
1,2,4-Trichlorobenzene	ND	0.74	$\mu\text{g}/\text{m}^3$
Benzyl chloride	ND	5.2	$\mu\text{g}/\text{m}^3$
1,4-Dichlorobenzene	ND	0.18	$\mu\text{g}/\text{m}^3$
1,2-Dichlorobenzene	ND	6.0	$\mu\text{g}/\text{m}^3$
Hexachloro-1,3-butadiene	ND	11	$\mu\text{g}/\text{m}^3$
Naphthalene	ND	0.05	$\mu\text{g}/\text{m}^3$
Methyl tert-Butyl Ether (MTBE)	ND	3.6	$\mu\text{g}/\text{m}^3$
Tertiary Butyl Alcohol (TBA)	ND	6.1	$\mu\text{g}/\text{m}^3$



Volatile Hydrocarbons by GC/MS in Air ($\mu\text{g}/\text{m}^3$)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B011798 - Air prep GC/MS										
Blank (B011798-BLK1)										
Prepared & Analyzed: 03/05/13										
Di-isopropyl Ether (DIPE)	ND	4.2	$\mu\text{g}/\text{m}^3$							
Ethyl tert-Butyl Ether (ETBE)	ND	4.2	$\mu\text{g}/\text{m}^3$							
Tert-Amyl Methyl Ether (TAME)	ND	4.2	$\mu\text{g}/\text{m}^3$							
<i>Surrogate: Dibromofluoromethane</i>	4.41		$\mu\text{g}/\text{m}^3$	4.87		91	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	4.72		$\mu\text{g}/\text{m}^3$	4.85		97	70-130			



Notes and Definitions

RDL	Reporting Detection Limit
ND	Analyte NOT DETECTED at or above the reporting detection limit (RDL)
RPD	Relative Percent Difference
NR	Not Reported



Analytical Sciences
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 (707) 769-3128

CHAIN OF CUSTODY

LAB PROJECT NUMBER: 3030407
 CLIENT'S PROJECT NAME: Bentley Mill
 CLIENT'S PROJECT NUMBER: East Settlement

BILLING INFORMATION

CONTACT: ERG
 COMPANY NAME:
 ADDRESS:
 PHONE#:
 FAX #:

CLIENT INFORMATION

COMPANY NAME: ERG
 ADDRESS: 1038 Redwood Hwy
 CONTACT: M.V. CA 94940
 PHONE#: Benwick
 FAX #: 415-381-6574

TURNAROUND TIME (check one)
 MOBILE LAB _____
 SAME DAY _____ 24 HOURS _____
 48 HOURS _____ 72 HOURS _____
 5 DAYS _____ NORMAL
 COOLER TEMPERATURE _____ °C
 COC _____
 PAGE 1 OF 1

GEOTRACKER EDF: Y N
 GLOBAL ID: _____

ANALYSIS

ITEM	CLIENT SAMPLE I.D.	Summa Canister Serial #	Regulator Serial #	Sample Start Time	Sample End Time	Date Sampled	Matrix	EPA TO-15	COMMENTS	LAB SAMPLE #
1	ES-Test-2-1	6973	932	7AM	3PM	7/28/13	air	X		3030407-01
2	ES-Test-2-2	7008	931	7AM	3PM					102
3	ES-Test-2-3	7007	3388	7AM	3PM					05
4	Trip Blank	1175								04
5										
6										
7										
8										
9										
10										

SIGNATURES

RELINQUISHED BY: Benwick SIGNATURE
 SAMPLED BY: Benwick SIGNATURE
 DATE: 3/4/13 DATE
 TIME: 11:30 TIME
 RECEIVED BY LABORATORY: Plarney SIGNATURE
 DATE: 3-4-13 DATE
 TIME: 1130 TIME