

**RECEIVED**

By lopprojectop at 9:01 am, Feb 03, 2006

February 1, 2006

Mr. Jerry Wickham  
Alameda County Health Care Services Agency  
Environmental Health Services, Environmental Protection  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577



**ENVIRONMENTAL ENGINEERING, INC**  
6620 Owens Drive, Suite A • Pleasanton, CA 94588-3334  
TEL (925) 734-6400 • FAX (925) 734-6401

Re: Fuel Leak Case No. RO0002585: Re-sample of Off-Site Supply Well  
Site Location: Wente Vineyards, 5565 Tesla Road, Livermore, CA

Dear Mr. Wickham:

Based on the directive of the ACHCSA, the off-site well at the above referenced site was re-sampled on January 16, 2006. The off-site well is located at 5443 Tesla Road, Livermore, California. The well was re-sampled due to the detection of tetrahydrofuran and chloroethane during the Fourth Quarter 2005 groundwater monitoring event. Figure 1 shows the site vicinity map. Figure 2 shows the location of the monitoring wells.

On January 16, 2006, SOMA contacted Wente Vineyards (Wente) to inform them that the off-site well needed to be re-sampled. The field personnel at Wente began extracting groundwater from the well using an on-site pump. Water passed through a flow cell during purging; within the flow cell, measurements for dissolved oxygen, pH, temperature, electrical conductivity, turbidity, and oxygen reduction potential were recorded using a U-22 meter. This method reduced the intrusion of oxygen from ambient air into the groundwater samples. The field measurements and piping diagram of the pump are shown in Appendix A.

A groundwater sample was collected when all of the field parameters stabilized. Table 1 thru Table 4 summarizes the groundwater analytical results. Neither chloroethane nor tetrahydrofuran were detected in the groundwater during the re-sampling event. The laboratory report generated by Curtis & Tompkins, Ltd, a state-certified laboratory in Berkeley, California, is included in Appendix B.

The water from this well was used for irrigation of the vineyards. However, the well has not been used for approximately one year. At the present time there are no plans to use this well in the near future.

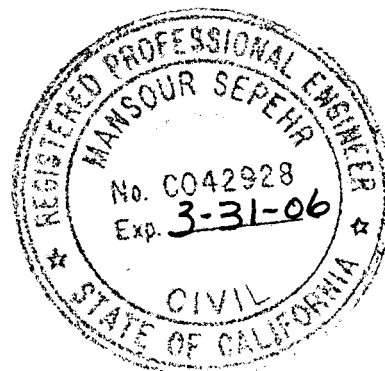
If you have any questions or comments, please do not hesitate to call me at (925) 734-6400.

Sincerely,

Mansour Sepehr, Ph.D., PE  
Principal Hydrogeologist

Enclosures

cc: Mr. Aris Krimetz



## Certification Statement

**Claimant**

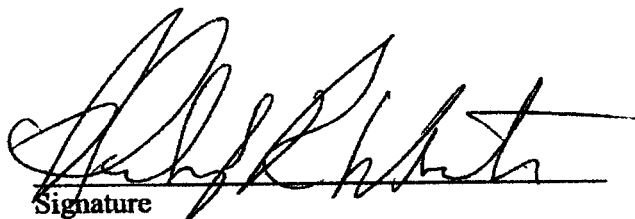
Philip R. Wentz  
Name

Vice Chairman  
Title

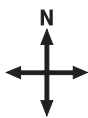
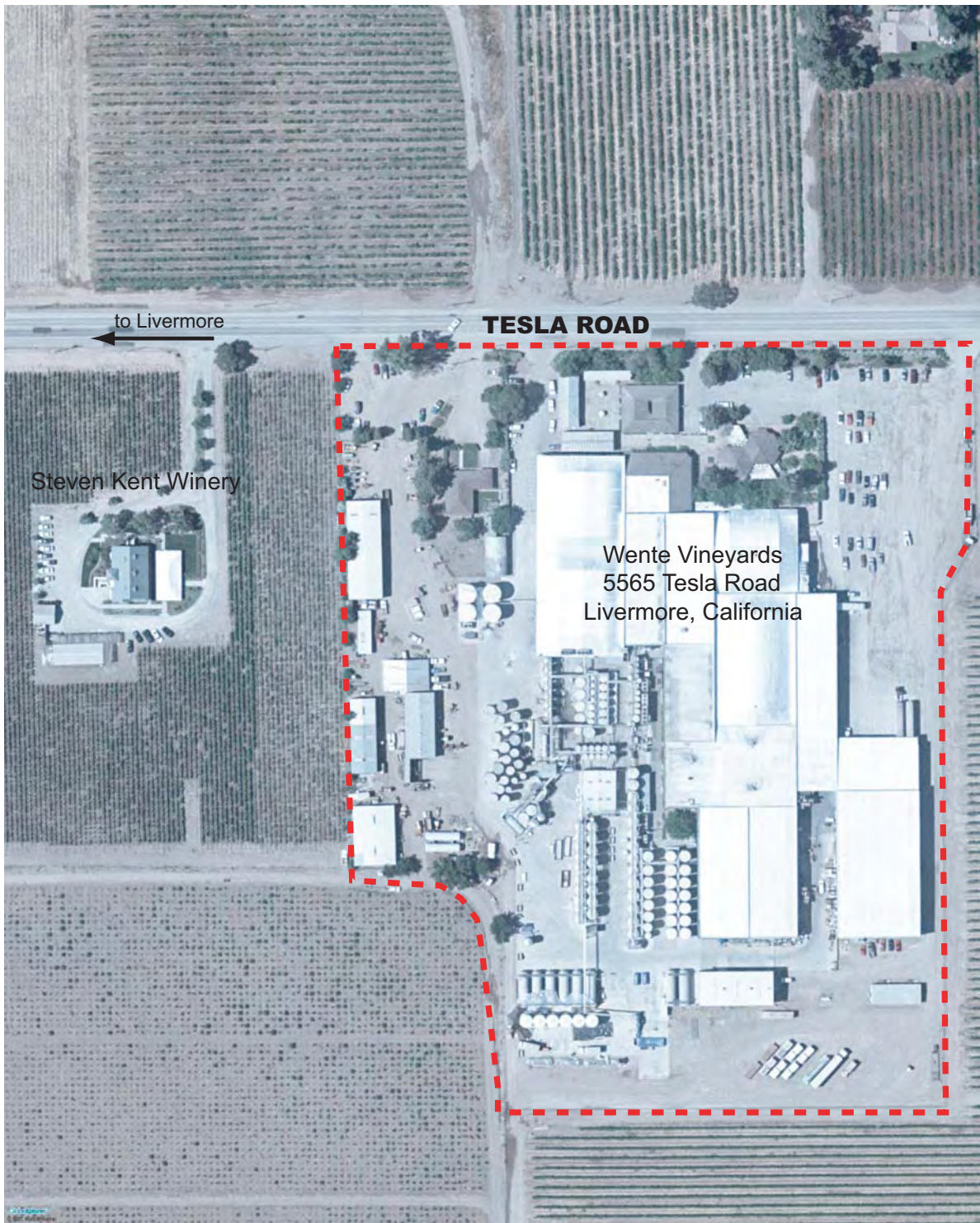
5565 Tesla Rd Livermore  
Street Address City

94550  
Zip

I declare under penalty of perjury that the information and/or recommendations contained in the attached document or report were prepared under my direction and to the best of my knowledge true and correct.

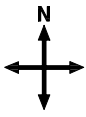
  
Signature

2-1-06  
Date



approximate scale in feet  
0 50 100

Figure 1: Site vicinity map.



▲ Off-Site Supply Well (Steven Kent Winery)

ACTIVE VINEYARDS

↑ TO TESLA RD

RESIDENCE

MW-1

● B-7

PROCESS PAD

GARAGE

BUILDING A

● B-8

AGRICULTURAL STORAGE

○ CPT-2

● B-9

○ CPT-4

MW-2

○ CPT-1

○ B-1 @ 20'

Former FUEL TANKS

○ B-2 @ 10'

○ CPT-6

MW-3

PROCESS HARDWARE

ACTIVE VINEYARDS

TRACTOR SHED

FARM SHOP OFFICE

PROCESS PAD

PROCESS HARDWARE

○ CPT-3

● B-3

● B-5

PROCESS HARDWARE

WELDING SHOP

EQUIPMENT MAINTENANCE

▲ MONITORING WELL (May 2005)

▲ PRIVATE WATER WELL

● TEMPORARY WELL BOREHOLE (June 24, 2005)

○ CPT BOREHOLE (October 2005)

● HSA CALIBRATION BOREHOLE

● SOIL BORING (April 2003 By Clayton)

● ANGLD SOIL BORING (April 2003 By Clayton)

● B-10

HSA

○ CPT-5

● B-4

BUILDING S

● B-6

WATER STORAGE

PROCESS PAD

PROCESS HARDWARE

PROCESS PAD

VINEYARD ACCESS

▲ On-Site Supply Well

VINEYARD ACCESS

ACTIVE VINEYARDS

approximate scale in feet

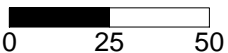


Figure 2: Map showing locations of newly installed wells, temporary well boreholes, and previous soil borings installed by Clayton group.

**Table 1**  
**Historical Groundwater Elevation Data & Analytical Results**  
**Hydrocarbons, BTEX, & MtBE**  
**Wente Vineyards**  
**5565 Tesla Road, Livermore, California**

Monitoring Well	Date	Top of Casing (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L)
MW-1	May-05	615.16	6.10	609.06	<200	<50	320 YZ	<0.5	<0.5	<0.5	<1.0	<0.5
	Sep-05	615.16	9.19	605.97	<50	<50	<300	<0.5	<2.0	<0.5	<1.0	<0.5
	Nov-05	<b>615.16</b>	<b>8.90</b>	<b>606.26</b>	<50	<b>150 YZ</b>	<b>&lt;300</b>	<b>&lt;0.5</b>	<b>&lt;2.0</b>	<b>&lt;0.5</b>	<b>&lt;1.0</b>	<b>&lt;0.5</b>
MW-2	May-05	616.03	6.69	609.34	<200	<50	<300	<0.5	<0.5	<0.5	<1.0	<0.5
	Sep-05	616.03	9.30	606.73	<50	<50	<300	<0.5	<2.0	<0.5	<1.0	<0.5
	Nov-05	<b>616.03</b>	<b>9.20</b>	<b>606.83</b>	<50	<50	<b>&lt;300</b>	<b>&lt;0.5</b>	<b>&lt;2.0</b>	<b>&lt;0.5</b>	<b>&lt;1.0</b>	<b>&lt;0.5</b>
MW-3	May-05	617.32	7.04	610.28	<200	680	<300	<0.5	1.58	<0.5	<1.0	<0.5
	Sep-05	617.32	9.61	607.71	<50	300 Y	<300	<0.5	<2.0	<0.5	<1.0	<0.5
	Nov-05	<b>617.32</b>	<b>9.60</b>	<b>607.72</b>	<50	<b>150 YZ</b>	<b>&lt;300</b>	<b>&lt;0.5</b>	<b>&lt;2.0</b>	<b>&lt;0.5</b>	<b>&lt;1.0</b>	<b>&lt;0.5</b>
B-9	Jun-05	NA	NA	NA	1,850,000	540,000 LY	<24,000	3,820	114,000	40,400	177,700	<462
B-10	Jun-05	NA	NA	NA	<200	<50	<300	<0.5	4.23	1.10	4.03	<0.5
Onsite Supply Well	May-05	NS	NM	NC	<200	<50	<300	<0.5	0.85	<0.5	<1.0	<0.5
	Nov-05	NS	NM	NC	<50	<b>100 YZ</b>	<b>&lt;300</b>	<b>&lt;0.5</b>	<b>&lt;2.0</b>	<b>&lt;0.5</b>	<b>&lt;1.0</b>	<b>&lt;0.5</b>
Offsite Supply Well	Nov-05	NS	NM	NC	<5,380	120 YZ	<300	<53.8	<215	<53.8	<108	<53.8
	Jan-06	NS	9.65	NC	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5

**Table 1**  
**Historical Groundwater Elevation Data & Analytical Results**  
**Hydrocarbons, BTEX, & MtBE**  
**Wente Vineyards**  
**5565 Tesla Road, Livermore, California**

Monitoring Well	Date	Top of Casing (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L)
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Notes:

- 1) The wells were installed on May 5, 2005 and developed by Woodward Drilling on May 20, 2005.
- 2) A grab sample was collected after the well development on May 20, 2005.
- 3) A grab sample was also collected from the water well, southeast of the water storage units on May 20, 2005.
- 4) The wells were surveyed by Harrington Surveys of Walnut Creek, CA on June 5, 2005.
- 5) A grab sample was collected from the borings on June 24, 2005.
- 6) The groundwater elevation for the May 2005 sampling was based on the survey data of Harrington Surveys.
- 7) The supply wells were first added to the quarterly events in the Fourth Quarter 2005.  
 The off-site water supply well was re-sampled on January 16, 2006, based on the directive of Alameda County Environmental Health Dpt. Tetrahydrofuran was detected at 19,700 ug/L and chloroethane was detected at 380 ug/L during the 4Q05 Monitoring Event.

NA: Not Applicable. B-9 and B-10 are boring locations and are not surveyed.  
 NC: Not calculated.  
 NM: Not Measured  
 NS: Not surveyed. The onsite well is a private well.

TPH-d: Total hydrocarbons as diesel  
 TPH-g: Total hydrocarbons as gasoline  
 TPH-mo: Total hydrocarbons as motor oil  
 L: Lighter weight hydrocarbons contributed to the quantitation  
 Y: Sample exhibits chromatographic pattern which does not resemble standard  
 Z: Sample exhibits unknown single peaks or peaks.  
 <: Not Detected above the laboratory reporting limit.



**Table 2**  
**Historical Groundwater Analytical Results**  
**Gasoline Oxygenates & Lead Scavengers**  
Wente Vineyards  
5565 Tesla Road, Livermore, California

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-1	Sep-05	<2.5	<0.5	<0.5	<2.0	<0.5	<2.0
MW-2	Sep-05	<2.5	<0.5	<0.5	<2.0	<0.5	<2.0
MW-3	Sep-05	<2.5	<0.5	<0.5	<2.0	<0.5	<2.0
Onsite Supply Well	Nov-05	<2.5	<0.5	<0.5	<2.0	<0.5	<2.0
Offsite Supply Well	Nov-05	<269	<53.8	<53.8	<215	<53.8	<215
	Jan-06	<10	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

- 1) A grab sample was collected after well development on May 20, 2005.
- 2) Based on the approval of the Alameda County Environmental Health Services since gasoline oxygenates were not detected, further analysis was not required for wells MW-1 to MW-3. The only time gasoline oxygenates were tested for wells MW-1 to MW-3 was in the Third Quarter 2005.
- 3) The supply wells were first added to the quarterly events in the Fourth Quarter 2005. The off-site water supply well was re-sampled on January 16, 2006, based on the directive of Alameda County Environmental Health Dpt. Tetrahydrofuran was detected at 19,700 ug/L and chloroethane was detected at 380 ug/L during the 4Q05 Monitoring Event.

<: Not Detected above the laboratory reporting limit.

Gasoline Oxygenates:

TBA: tertiary Butyl Alcohol  
DIPE: Di-Isopropyl Ether  
ETBE: Ethyl tertiary Butyl Ether  
TAME: Methyl tertiary Amyl Ether

Lead Scavengers:

EDB: 1,2-Dibromoethane  
1,2-DCA: 1,2-Dichloroethane





**Table 3**  
**Historical Analytical Results For Volatile Organic Compound**  
**Analyses in Groundwater Samples**  
**Wente Vineyards**  
**5565 Tesla Road, Livermore, California**

Monitoring Well	Date	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Vinyl Chloride (µg/L)	1,2-DCP (µg/L)	1,1-DCE (µg/L)
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Notes:

- 1) A grab sample was collected after well development on May 20, 2005. However, the first time volatile organic compounds (VOCs) were analyzed was during the Third Quarter 2005 monitoring event.
  - 2) Based on the approval of the Alameda County Environmental Health Services since VOCs were not detected, further analysis was not required for wells MW-1 to MW-3. The only time VOCs were tested in wells MW-1 to MW-3 was in the Third Quarter 2005.
  - 3) The supply wells were first added to the quarterly events in the Fourth Quarter 2005. The off-site water supply well was re-sampled on January 16, 2006, based on the directive of Alameda County Environmental Health Dpt. Tetrahydrofuran was detected at 19,700 ug/L and chloroethane was detected at 380 ug/L during the 4Q05 Monitoring Event.
- <: Not detected above the laboratory reporting limit.

Volatile organic compounds (VOCs)

PCE:	tetrachloroethene	TCE:	1,1,1-trichloroethane
cis-1,2-DCE:	cis-1,2-dichloroethene	trans-1,2-DCE:	trans-1,2-dichloroethene
vinyl chloride		1,2-DCP:	1,2-dichloropropane
1,1-DCE:	1,1-dichloroethene		

**Table 4**  
**Historical Groundwater Analytical Results**  
**Metals**  
**Wente Vineyards**  
**5565 Tesla Road, Livermore, California**

Monitoring Well	Date	Cadmium (µg/L)	Chromium (µg/L)	Lead (µg/L)	Nickel (µg/L)	Zinc (µg/L)
MW-1	Sep-05	<5.0	<10	<3.0	<20	27
MW-2	Sep-05	<5.0	<10	<3.0	<20	23
MW-3	Sep-05	<5.0	<10	<3.0	<20	<20
B-10	Jun-05	12	930	82	3,600	800
Onsite Supply Well	Nov-05	<5.0	<10	<3.0	<20	62
Offsite Supply Well	Nov-05	<5.0	<10	<3.0	<20	830
	Jan-06	<5.0	<10	8.30	<20	650

Notes:

- 1) Metals were tested at boring B-10 on June 24, 2005.
  - 2) Due to the results from B-10, the Alameda County Environmental Health Services requested that SOMA further analyze the wells for metals in a letter dated Sept. 19, 2005. SOMA collected grab samples from the wells on September 29, 2005.
  - 3) The only time metals were tested in wells MW-1 to MW-3 was in the Third Quarter 2005.
  - 4) The supply wells were first added to the quarterly events in the Fourth Quarter 2005. The off-site water supply well was re-sampled on January 16, 2006, based on the directive of Alameda County Environmental Health Dpt. Tetrahydrofuran was detected at 19,700 ug/L and chloroethane was detected at 380 ug/L during the 4Q05 Monitoring Event.
- <: Not Detected above the laboratory reporting limit.

# **Appendix A**

Field Notes  
&  
Piping Diagram of Well



ENVIRONMENTAL ENGINEERING, INC

Well No.: (off-site well)  
 5443 Telsa Road  
 Casing Diameter: 4 inch  
 Depth of Well: 57.50 ft  
 Top of Casing Elevation: NS ft  
 Depth to Groundwater: 9.65 ft  
 Groundwater Elevation: NC ft  
 Water Column Height: 47.85 ft  
 Purged Volume: 30 gallons

Project No.: 2841

Address: Wente Vineyards  
 5565 Tesla Rd, Livermore

Date: 1/16/06

Sampler: Mehran Nowroozi

Purging Method: Bailer

Pump  on-site pump

Sampling Method: Bailer

Pump  on-site pump

Color: No

Yes  Describe Yellowish

Sheen: No

Yes  Describe \_\_\_\_\_

Odor: No

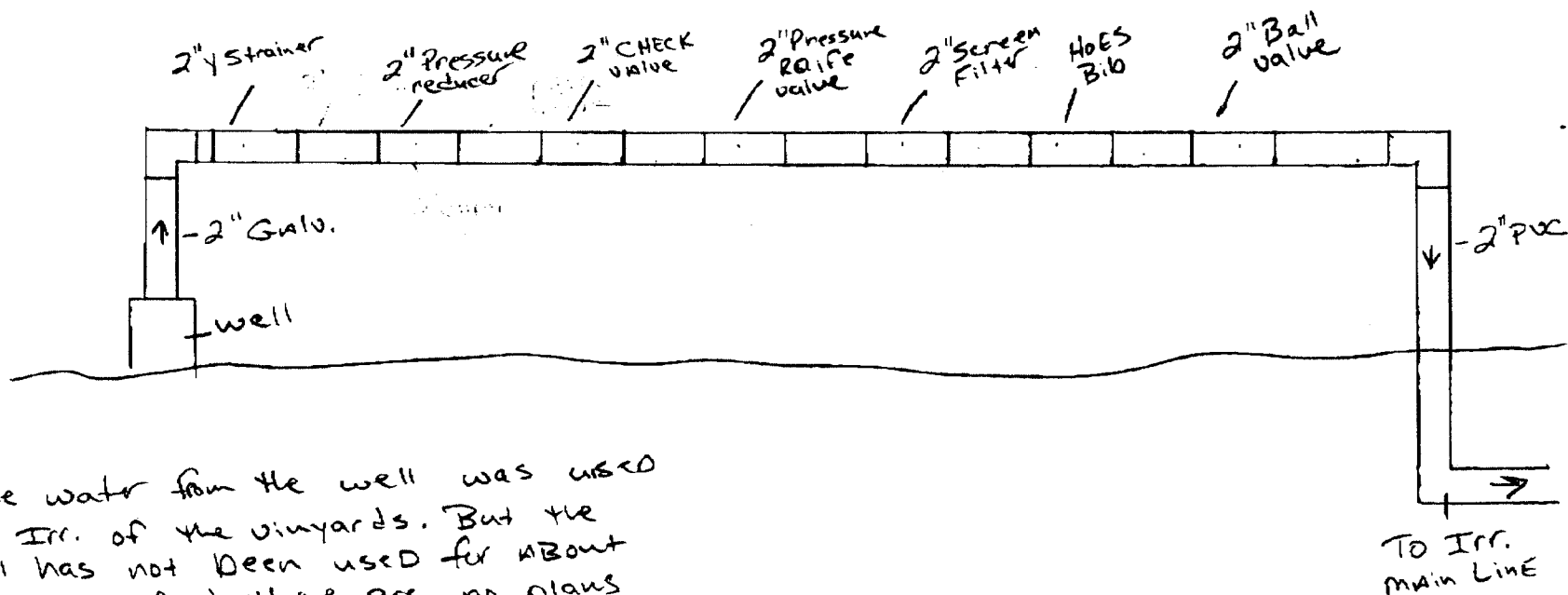
Yes  Describe \_\_\_\_\_

Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
11:10 Am	START	Purging					
11:15 Am	5	6.90	7.85	17.88	157	62.5	150
11:20 Am	10	8.90	7.65	18.33	153	59.9	153
11:24 Am	15	8.70	7.61	18.42	153	85.6	152
11:29 Am	20	8.45	7.48	18.81	152	62.8	150
11:34 Am	25	8.20	7.48	18.96	152	59.2	147
11:39 Am	30	8.15	7.48	18.86	152	57.9	146

Notes: 8 Am Pled 11:45 Am

(NS: not surveyed)  
 (NC: not calculated)



The water from the well was used for Irr. of the vineyards. But the well has not been used for ABOUT one year. And there are no plans to use the well in the near future

# **Appendix B**

Chain of Custody Form and Laboratory Report



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L   R E P O R T

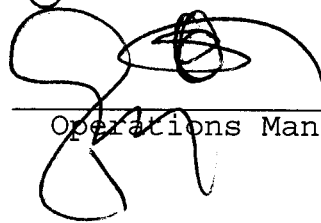
Prepared for:

SOMA Environmental Engineering Inc.  
6620 Owens Dr.  
Suite A  
Pleasanton, CA 94588

Date: 27-JAN-06  
Lab Job Number: 184331  
Project ID: 2841  
Location: 5565 Tesla Rd, Livermore

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by:   
Project Manager

Reviewed by:   
Operations Manager

This package may be reproduced only in its entirety.



**CASE NARRATIVE**

Laboratory number: 184331  
Client: SOMA Environmental Engineering Inc.  
Project: 2841  
Location: 5565 Tesla Rd, Livermore  
Request Date: 01/16/06  
Samples Received: 01/16/06

This hardcopy data package contains sample and QC results for one water sample, requested for the above referenced project on 01/16/06. The sample was received on ice and intact.

**TPH-Purgeables and/or BTXE by GC (EPA 8015B):**

No analytical problems were encountered.

**TPH-Extractables by GC (EPA 8015B):**

No analytical problems were encountered.

**Volatile Organics by GC/MS (EPA 8260B):**

No analytical problems were encountered.

**Metals (EPA 6010B):**

No analytical problems were encountered.



**Lisa Brooker**

---

**From:** "Tony Perini" <tperini@somaenv.com>  
**To:** <Lisa@ctberk.com>  
**Sent:** Tuesday, January 24, 2006 3:52 PM  
**Subject:** Proj 2841-Livermore

Lisa could you run VOCs (full target list + gasoline oxygenates) for this project. The C&T lab ID is 184331.

Ethylene dibromide also needs to be run. It appears that all of the hydrocarbons have been tested, as well as, the full 2 page list of VOCs, and metals. This report needs to go out by February 6, 2006. This includes the final lab report.

Thank you.

**Lisa Brooker**

---

**From:** "Tony Perini" <tperini@somaenv.com>  
**To:** <Lisa@ctberk.com>  
**Sent:** Tuesday, January 24, 2006 4:58 PM  
**Subject:** Livermore-Proj 2841

Lisa could you also run this project for tetrahydrofuran. C&T lab ID is 184331.



## Batch QC Report

## Total Volatile Hydrocarbons

Lab #:	184331	Location:	5565 Tesla Rd, Livermore
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2841	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC324244	Batch#:	109526
Matrix:	Water	Analyzed:	01/17/06
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	1,749	87	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	101	62-141
Bromofluorobenzene (FID)	98	78-134

## Batch QC Report

## Total Volatile Hydrocarbons

Lab #:	184331	Location:	5565 Tesla Rd, Livermore
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2841	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	109526
MSS Lab ID:	184342-001	Sampled:	01/16/06
Matrix:	Water	Received:	01/17/06
Units:	ug/L	Analyzed:	01/17/06
Diln Fac:	1.000		

Type: MS Lab ID: QC324353

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	19.91	2,000	1,650	82	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	108	62-141
Bromofluorobenzene (FID)	96	78-134

Type: MSD Lab ID: QC324354

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,617	80	80-120	2	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	108	62-141
Bromofluorobenzene (FID)	85	78-134







### Volatile Organics

Lab #: 184331	Location: 5565 Tesla Rd, Livermore
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2841	Analysis: EPA 8260B
Field ID: 5443 TESLA ROAD	Batch#: 109571
Lab ID: 184331-001	Sampled: 01/16/06
Matrix: Water	Received: 01/16/06
Units: ug/L	Analyzed: 01/18/06
Diln Fac: 1.000	

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit  
 Page 1 of 2



### Volatile Organics

Lab #: 184331	Location: 5565 Tesla Rd, Livermore
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2841	Analysis: EPA 8260B
Field ID: 5443 TESLA ROAD	Batch#: 109571
Lab ID: 184331-001	Sampled: 01/16/06
Matrix: Water	Received: 01/16/06
Units: ug/L	Analyzed: 01/18/06
Diln Fac: 1.000	

Analyte	Result	RL
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5
Tetrahydrofuran	ND	100

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-121
1,2-Dichloroethane-d4	100	80-125
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-124

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

**Volatile Organics**

Lab #: 184331	Location: 5565 Tesla Rd, Livermore
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2841	Analysis: EPA 8260B
Type: BLANK	Diln Fac: 1.000
Lab ID: QC324433	Batch#: 109571
Matrix: Water	Analyzed: 01/18/06
Units: ug/L	

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit  
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**Batch QC Report**
**Volatile Organics**

Lab #: 184331	Location: 5565 Tesla Rd, Livermore
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2841	Analysis: EPA 8260B
Type: BLANK	Diln Fac: 1.000
Lab ID: QC324433	Batch#: 109571
Matrix: Water	Analyzed: 01/18/06
Units: ug/L	

Analyte	Result	RL
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5
Tetrahydrofuran	ND	100

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-121
1,2-Dichloroethane-d4	98	80-125
Toluene-d8	99	80-120
Bromofluorobenzene	101	80-124

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

**Volatile Organics**

Lab #:	184331	Location:	5565 Tesla Rd, Livermore
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2841	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC324434	Batch#:	109571
Matrix:	Water	Analyzed:	01/18/06
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5

ND= Not Detected  
 RL= Reporting Limit



## Batch QC Report

**Volatile Organics**

Lab #: 184331	Location: 5565 Tesla Rd, Livermore
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2841	Analysis: EPA 8260B
Type: BLANK	Diln Fac: 1.000
Lab ID: QC324434	Batch#: 109571
Matrix: Water	Analyzed: 01/18/06
Units: ug/L	

Analyte	Result	RL
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5
Tetrahydrofuran	ND	100

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-121
1,2-Dichloroethane-d4	99	80-125
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-124

## Batch QC Report

**Volatile Organics**

Lab #:	184331	Location:	5565 Tesla Rd, Livermore
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2841	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC324432	Batch#:	109571
Matrix:	Water	Analyzed:	01/18/06
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	111.6	89	66-138
Isopropyl Ether (DIPE)	25.00	24.80	99	74-121
Ethyl tert-Butyl Ether (ETBE)	25.00	27.35	109	77-123
Methyl tert-Amyl Ether (TAME)	25.00	23.20	93	77-120
1,1-Dichloroethene	25.00	26.18	105	74-124
Benzene	25.00	25.20	101	80-120
Trichloroethene	25.00	26.24	105	79-120
Toluene	25.00	25.62	102	80-120
Chlorobenzene	25.00	25.91	104	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-121
1,2-Dichloroethane-d4	98	80-125
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-124

**Batch QC Report**
**Volatile Organics**

Lab #: 184331	Location: 5565 Tesla Rd, Livermore
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2841	Analysis: EPA 8260B
Field ID: ZZZZZZZZZZ	Batch#: 109571
MSS Lab ID: 184364-001	Sampled: 01/16/06
Matrix: Water	Received: 01/17/06
Units: ug/L	Analyzed: 01/18/06
Diln Fac: 1.000	

Type: MS Lab ID: QC324435

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<2.480	125.0	116.0	93	70-145
Isopropyl Ether (DIPE)	<0.02706	25.00	24.30	97	78-125
Ethyl tert-Butyl Ether (ETBE)	<0.2000	25.00	27.31	109	78-124
Methyl tert-Amyl Ether (TAME)	<0.05372	25.00	23.01	92	78-120
1,1-Dichloroethene	<0.1655	25.00	24.85	99	69-130
Benzene	<0.06135	25.00	25.03	100	78-120
Trichloroethene	<0.1670	25.00	25.90	104	71-122
Toluene	<0.09165	25.00	25.44	102	78-120
Chlorobenzene	<0.1570	25.00	25.70	103	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-121
1,2-Dichloroethane-d4	100	80-125
Toluene-d8	100	80-120
Bromofluorobenzene	98	80-124

Type: MSD Lab ID: QC324436

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	131.3	105	70-145	12	22
Isopropyl Ether (DIPE)	25.00	24.77	99	78-125	2	20
Ethyl tert-Butyl Ether (ETBE)	25.00	27.51	110	78-124	1	20
Methyl tert-Amyl Ether (TAME)	25.00	23.33	93	78-120	1	20
1,1-Dichloroethene	25.00	25.42	102	69-130	2	20
Benzene	25.00	25.84	103	78-120	3	20
Trichloroethene	25.00	26.82	107	71-122	4	20
Toluene	25.00	26.20	105	78-120	3	20
Chlorobenzene	25.00	26.59	106	80-120	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-121
1,2-Dichloroethane-d4	99	80-125
Toluene-d8	100	80-120
Bromofluorobenzene	100	80-124

RPD= Relative Percent Difference



## Batch QC Report

**Metals Analytical Report**

Lab #:	184331	Location:	5565 Tesla Rd, Livermore
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3010A
Project#:	2841	Analysis:	EPA 6010B
Matrix:	Water	Batch#:	109534
Units:	ug/L	Prepared:	01/17/06
Diln Fac:	1.000	Analyzed:	01/17/06

Type: BS Lab ID: QC324281

Analyte	Spiked	Result	%REC	Limits
Cadmium	50.00	52.88	106	80-120
Chromium	200.0	197.8	99	80-120
Lead	100.0	100.1	100	76-124
Nickel	500.0	502.8	101	80-120
Zinc	500.0	522.2	104	80-120

Type: BSD Lab ID: QC324282

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Cadmium	50.00	53.91	108	80-120	2	20
Chromium	200.0	202.2	101	80-120	2	20
Lead	100.0	102.5	103	76-124	2	20
Nickel	500.0	513.2	103	80-120	2	20
Zinc	500.0	537.2	107	80-120	3	20

## Batch QC Report

**Metals Analytical Report**

Lab #:	184331	Location:	5565 Tesla Rd, Livermore
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3010A
Project#:	2841	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZZ	Batch#:	109534
MSS Lab ID:	184324-001	Sampled:	01/14/06
Matrix:	Water	Received:	01/15/06
Units:	ug/L	Prepared:	01/17/06
Diln Fac:	1.000	Analyzed:	01/17/06

Type: MS Lab ID: QC324283

Analyte	MSS Result	Spiked	Result	%REC	Limits
Cadmium	<0.5500	50.00	52.84	106	80-120
Chromium	3.219	200.0	203.1	100	80-120
Lead	0.6262	100.0	101.0	100	61-135
Nickel	4.248	500.0	507.2	101	77-120
Zinc	137.8	500.0	668.5	106	75-124

Type: MSD Lab ID: QC324284

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Cadmium	50.00	52.34	105	80-120	1	20
Chromium	200.0	201.4	99	80-120	1	20
Lead	100.0	98.45	98	61-135	3	23
Nickel	500.0	502.9	100	77-120	1	20
Zinc	500.0	657.5	104	75-124	2	20

RPD= Relative Percent Difference