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March 5, 2007

Mr. Jerry Wickham Alameda County Department of Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577 Project: 2841

Subject: Fuel Leak Case No. RO0002585, Wente Winery

Site Located at 5565 Tesla Road, Livermore, California

Dear Mr. Wickham:

SOMA's "First Quarter 2007 Groundwater Monitoring Report" for the subject site has been uploaded to the State's GeoTracker database and Alameda County's FTP site for your review.

Thank you for your time in reviewing our report. Please do not hesitate to call me at (925) 734-6400, if you have any questions or comments.

Sincerely,

Mansour Sepehr, Ph.D., PE Principal Hydrogeologist

cc: Mr. Aris Krimetz w/report enclosure





# First Quarter 2007 Groundwater Monitoring Report

# WENTE WINERY 5565 Tesla Road Livermore, California

March 5, 2007

Project 2841

**Prepared for** 

Mr. Aris Krimetz 5565 Tesla Road Livermore, California

Prepared by

SOMA Environmental Engineering, Inc. 6620 Owens Drive, Suite A Pleasanton, California

#### **CERTIFICATION**

This report has been prepared by SOMA Environmental Engineering, Inc. on behalf of Mr. Aris Krimetz, for Wente Winery, which is located at 5565 Tesla Road, Livermore, California to comply with the requirements of the Alameda County Environmental Health Services and the California Regional Water Quality Control Board for the First Quarter 2007 groundwater monitoring event.

Mansour Sepehr, Ph.D., P.E. Principal Hydrogeologist



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#### 1.0 INTRODUCTION

This monitoring report has been prepared by SOMA Environmental Engineering, Inc. (SOMA) on behalf of Mr. Aris Krimetz, for Wente Winery, which is located at 5565 Tesla Road, Livermore, California. Figure 1 shows the location of the Site.

This report summarizes the results of the First Quarter 2007 groundwater monitoring event conducted at the Site on January 30, 2007. This report also includes the laboratory analytical results on the groundwater samples.

A natural attenuation study was conducted during this monitoring event. The objective of the natural attenuation study was to evaluate whether the petroleum hydrocarbons found in the groundwater were biodegrading.

These activities were performed in accordance with the general guidelines of the California Regional Water Quality Control Board (CRWQCB) and the Alameda County Environmental Health Services (ACEHS). Appendix A details the groundwater monitoring procedures used during this monitoring event.

### 1.1 Site Description

West of the winery buildings is an enclosed maintenance and agricultural storage area with a former underground storage tank (UST) pit that contained one gasoline and one diesel UST. The USTs were replaced with three aboveground storage tanks (ASTs), with a total capacity of 4,000 gallons. An on-site potable water supply well provides backup potable drinking water and processed water for the winery facility. This water supply well is located south of and presumably upgradient from the former UST area.

#### 1.2 Previous Activities and Investigations

In 1987, two fuel USTs were removed from the Site. There is no information regarding the condition of the tank or evidence of leakage. In 1990, the ACEHS issued a notice of violation (NOV) for discharging waste sludge into an open ditch adjacent to a former steam-cleaning bay.

Clayton Environmental Consultants (Clayton) conducted a Phase I Environmental Site Assessment of the maintenance and storage areas. The Phase I study revealed the existence of the former USTs, former waste discharge area, and a number of agricultural storage areas.

In 2003, Clayton performed a subsurface investigation at the Site to implement the recommendations of the Phase I report. As shown in Figure 2, boreholes were advanced near the ASTs and near other RECs. The study indicated that a fuel release in the former UST area impacted the groundwater. In the former steam-cleaning bay, gasoline and motor oil-range petroleum hydrocarbons were detected in the groundwater. Figure 2 illustrates the locations of the soil borings.

Wente then retained SOMA to review Clayton's report. SOMA subsequently submitted a workplan that included a vicinity well survey, a regional hydrogeologic study, and an additional site characterization. The site characterization included sampling and evaluating the water quality of the on-site water supply well, installing monitoring wells, and additional lithologic characterization to better define the shallow/perched water-bearing zone.

On May 5, 2005, SOMA oversaw Woodward Drilling (Woodward) install three monitoring wells, MW-1 through MW-3, as shown in Figure 2. On May 20, 2005, Woodward developed the newly installed wells.

On June 24, 2005, SOMA oversaw Woodward drill two confirmatory boreholes (B-9 and B-10). The purpose of this investigation was to confirm the presence of petroleum hydrocarbons in the soil and groundwater next to the former USTs and to evaluate the current soil and groundwater conditions in close proximity of the former steam cleaning area. The results of this investigation are presented in SOMA's report entitled "Phase I: Soil and Groundwater Investigation, Wente Winery, at 5565 Tesla Road, Livermore, California," dated July 25, 2005.

### 1.3 Regional Hydrogeologic Features

The subject site is located in the Livermore Valley Groundwater Basin (LVGB). The LVGB consists of a structural trough that is an important source of irrigation water for the Livermore Valley. In the western part of the basin up to 40 feet of clay caps these water-bearing sediments. The water-bearing zone is predominantly a permeable unit consisting of sand and gravel in a clayey sand matrix. The potentiometric surface of valley-fill groundwater near the Site is at approximately 20 to 30 feet below ground surface (bgs).

The groundwater flow in the valley-fill and underlying Livermore Formations is to the northwest/north. The nearby water supply wells west of and presumably downgradient from the Site are potentially exposed to the on-site contaminant plume.

There is one on-site well and five wells in the properties immediately west of and presumably downgradient from the Site. North/northeast of and presumably up/cross gradient from the subject site there are seven wells within 2,000 feet of the investigation area. Approximately 1,800 feet south of the Site there is another water supply well. Available records indicate that six of the seven wells located north/northeast of and within 2,000 feet of the Site may be used as drinking water wells.

#### 2.0 Results

The following sections provide the results of the field measurements and laboratory analyses for the January 30, 2007 groundwater monitoring event. Based on the directive of the ACEHS, in a letter dated December 15, 2006, sampling has been revised to include supply wells on a quarterly basis and monitoring wells on a semi-annual basis. This report details the sampling of the supply wells only.

#### 2.1 Field Measurements

Depths to groundwater at the supply wells were not measured due to the inaccessibility of these wells. The existing pumps and caps prevented the measurements of the groundwater elevations in these wells.

The field notes in Appendix B show the detailed measurements of the physical and chemical parameters of the groundwater for each well during this monitoring event. The more positive the redox potential of an electron acceptor, the more energetically favorable is the reaction utilizing that electron acceptor. The most energetically preferred electron acceptor for redox reactions is dissolved oxygen (DO). Evaluating the distribution of electron acceptors can provide evidence of where and to what extent hydrocarbon biodegradation is occurring.

Upon equalization of the surrounding aquifer at the well locations and termination of the purge cycle, DO concentrations at the on and off-site supply wells were 6.20 mg/L and 6.40 mg/L, respectively. Oxygen reduction potential (ORP) showed positive redox potentials in both supply wells. Positive redox potentials are more energetically favorable in utilizing electron acceptors during chemical reactions. This promotes the removal of organic mass from the contaminated groundwater by indigenous bacteria in the subsurface during the release of the transfer of electrons.

### 2.2 Sampling of the Supply Wells

SOMA's field personnel began extracting groundwater from the off-site supply well, which is located at 5443 Tesla Road, using the downhole pump within the well. During the purging activities, the groundwater was measured for parameters such as DO, pH, temperature, EC, and ORP using a Hanna HI-9828 multi-parameter instrument. Turbidity was measured using a Hanna HI-98703 portable turbidimeter. The equipment was calibrated at the Site using standard solutions and procedures provided by the manufacturer.

Approximately 24 gallons of groundwater were purged from the off-site well before the field parameters stabilized. Upon stabilization, a groundwater sample was collected. The field measurements taken from the supply well during the purging activities are shown in Appendix B.

Based on the information supplied by Wente, the total depth of this off-site well is 125 feet below ground surface (bgs). In 1972 the pump was installed at 100 feet bgs. The water from this well is used solely for irrigation of the vineyards. The letter referencing the off-site supply well and piping diagram of the pump are included in Appendix C.

The on-site water supply well was also purged before sampling. At total of 20 gallons of groundwater were pumped before the field parameters stabilized. Appendix B shows the field measurements taken during the purging activities.

### 2.3 Laboratory Analysis

The historical total petroleum hydrocarbons as gasoline (TPH-g), total petroleum hydrocarbons as diesel (TPH-d), total petroleum hydrocarbons as motor oil (TPH-mo), benzene, toluene, ethylbenzene, and total xylenes (BTEX), and Methyl tertiary Butyl Ether (MtBE) groundwater analytical results are shown in Table 1.

During this monitoring event, all TPH-g, TPH-d, TPH-mo, BTEX, and MtBE constituents were below the laboratory reporting limit in the groundwater samples collected from the supply wells.

Table 2 shows the analytical results for gasoline oxygenates and lead scavengers. During this monitoring event, all gasoline oxygenates and lead scavengers were below the laboratory reporting limit in the groundwater samples collected from the supply wells.

Table 3 shows the historical concentrations of volatile organic compounds (VOCs) in the groundwater. Tetrachloroethene, 1,1,1-Trichloroethane, Cis-1,2-dichloroethene, Trans-1,2-dichloroethene, vinyl chloride, 1,2-Dichloropropane, and 1,1-Dichloroethene were all below the laboratory reporting limit in the groundwater samples collected from the supply wells during this monitoring event. All other VOCs were also below the laboratory reporting limit in the supply wells.

Table 4 shows the historical concentrations of metals in the groundwater. As shown in Table 4, for the supply wells:

- 1. Both cadmium and lead were below the laboratory reporting limit.
- 2. Chromium was detected at 2.3 ug/L in the on-site supply well and was non-detectable in the off-site supply well.
- 3. Nickel was detected in the on and off-site supply wells at 1.9 ug/L and ug/L, respectively.
- 4. Zinc was detected in the on and off-site supply wells at 31 ug/L and 7,200 ug/L, respectively.

Appendix D includes the laboratory report and chain-of-custody (COC) form for this monitoring event.

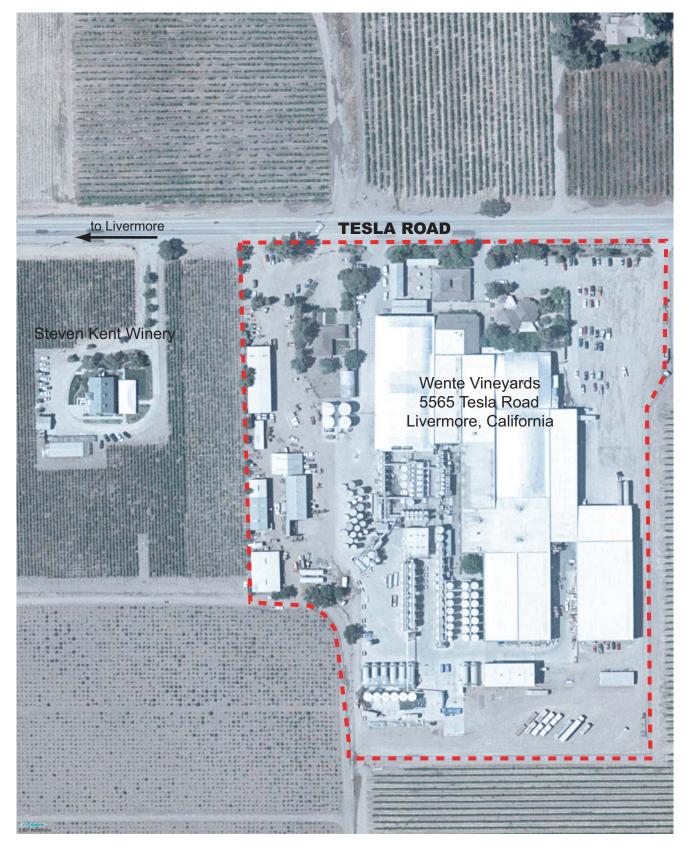
#### 3.0 Conclusions and Recommendations

During this monitoring event, only the supply wells were sampled. The results of the First Quarter 2007 groundwater monitoring event can be summarized as follows:

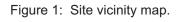
- Based on the results of the bio-attenuation study, indigenous bacteria have effectively removed organic mass from the impacted groundwater in the subsurface. This is evidenced by the high DO levels and positive redox potentials observed in the supply wells.
- All tested analytes were below the laboratory reporting limit in the supply wells, with the exception of metals. The most dominant metal detected in the groundwater was zinc.
- Based on the Cal DHS secondary MCL level for drinking water screening levels for human toxicity, zinc has a rating of 5,000 ug/L. Based on this criteria, the zinc level detected in the off-site well appears to be above this standard. Zinc appears to have significantly spiked in the off-site supply well during this monitoring event.
- During previous monitoring events, chlorinated solvents, which included chloromethane and chloroethane, were detected in the groundwater. However, during this monitoring event, no chlorinated solvents were detected.
- Based on the previous detection of tetrahydrofuran in the off-site supply well, on August 23, 2006, the ACEHS requested analysis of this compound. However, tetrahydrofuran was not detected in either of the supply wells during this monitoring event.

Based on the request of the ACEHS, monitoring events have been revised to include quarterly groundwater sampling of the supply wells and semi-annual sampling for monitoring wells. However, since the concentration of petroleum hydrocarbons and volatile organic chemicals are below the detection limit, SOMA recommends a no further action status be adopted by the ACEHS.

# **FIGURES**







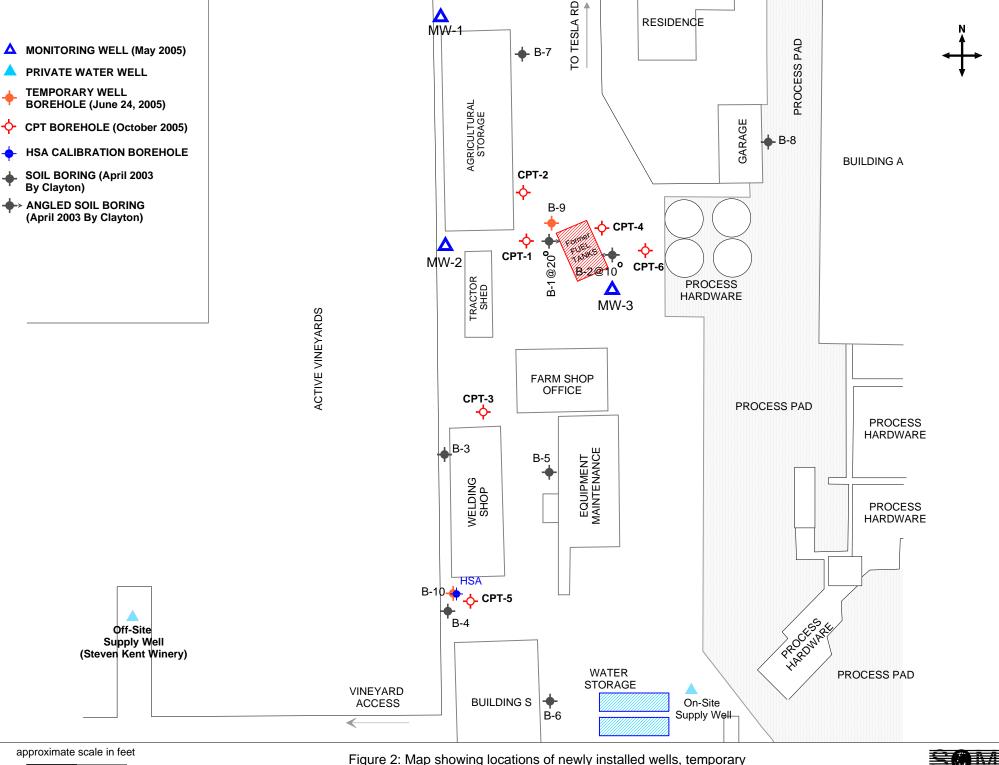


Figure 2: Map showing locations of newly installed wells, temporary well boreholes, and previous soil borings installed by Clayton group.

ENVIRONMENTAL ENGINEERING, INC. SAN RAMON CA (925) 244 6600

# **TABLES**

# 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)
MW-1	5/20/2005	615.16	6.10	609.06	<200	<50	320 YZ	<0.5	<0.5	<0.5	<1.0	<0.5
	9/13/2005	615.16	9.19	605.97	<50	<50	<300	< 0.5	<2.0	<0.5	<1.0	<0.5
	11/28/2005	615.16	8.90	606.26	<50	150 YZ	<300	< 0.5	<2.0	<0.5	<1.0	<0.5
	2/13/2006	615.16	6.29	608.87	<50	<50	<250	<0.5	<2.0	<0.5	<1.0	<0.5
	5/5/2006	615.16	5.23	609.93	<50	70 HY	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	8/15/2006	615.16	7.54	607.62	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	11/2/2006	615.16	8.97	606.19	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	1/30/2007	615.16	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA
MW-2	5/20/2005	616.03	6.69	609.34	<200	<50	<300	<0.5	<0.5	<0.5	<1.0	<0.5
	9/13/2005	616.03	9.30	606.73	<50	<50	<300	<0.5	<2.0	<0.5	<1.0	<0.5
	11/28/2005	616.03	9.20	606.83	<50	<50	<300	<0.5	<2.0	<0.5	<1.0	<0.5
	2/13/2006	616.03	6.52	609.51	<50	76.5 D35	657 <sup>D06</sup>	< 0.5	<2.0	<0.5	<1.0	< 0.5
	5/5/2006	616.03	5.58	610.45	<50	50 HY	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	8/15/2006	616.03	8.09	607.94	<50	<50	<300	< 0.5	< 0.5	<0.5	<0.5	< 0.5
	11/2/2006	616.03	9.00	607.03	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	< 0.5
	1/30/2007	616.03	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA
MW-3	5/20/2005	617.32	7.04	610.28	<200	680	<300	<0.5	1.58	<0.5	<1.0	<0.5
	9/13/2005	617.32	9.61	607.71	<50	300 Y	<300	<0.5	<2.0	<0.5	<1.0	<0.5
	11/28/2005	617.32	9.60	607.72	<50	150 YZ	<300	<0.5	<2.0	<0.5	<1.0	<0.5
	2/13/2006	617.32	7.06	610.26	<50	<50	322 <sup>D06</sup>	<0.5	<2.0	<0.5	<1.0	<0.5
	5/5/2006	617.32	5.94	611.38	<50	61 HY	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	8/15/2006	617.32	8.53	608.79	<50	76 HY	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	11/2/2006	617.32	9.39	607.93	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	1/30/2007	617.32	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA

# 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)
B-9	6/24/2005	NA	NA	NA	1,850,000	540,000 LY	<24,000	3,820	114,000	40,400	177,700	<462
B-10	6/24/2005	NA	NA	NA	<200	<50	<300	<0.5	4.23	1.10	4.03	<0.5
Onsite Supply Well	5/20/2005	NS	NM	NC	<200	<50	<300	<0.5	0.85	<0.5	<1.0	<0.5
	11/28/2005	NS	NM	NC	<50	100 YZ	<300	<0.5	<2.0	<0.5	<1.0	<0.5
	2/13/2006	NS	NM	NC	<50	91.8	<250	<0.5	<2.0	<0.5	<1.0	<0.5
	5/5/2006	NS	NM	NC	<50	52 Y	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	8/15/2006	NS	NM	NC	<50	95 YZ	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	11/2/2006	NS	NM	NC	<50	<50	<300	<0.5	< 0.5	<0.5	<0.5	<0.5
	1/30/2007	NS	NM	NC	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
Offsite Supply Well	5/20/2005	NS	NM	NC	<200	<50	<300	0.77	1.08	<0.5	<1.0	<0.5
	11/28/2005	NS	NM	NC	<5,380	120 YZ	<300	<53.8	<215	<53.8	<108	<53.8
	1/16/2006	NS	9.65	NC	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	2/13/2006	NS	NM	NC	<50	<50	<250	<0.5	<2.0	<0.5	<1.0	<0.5
	5/5/2006	NS	NM	NC	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	8/15/2006	NS	NM	NC	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	11/2/2006	NS	NM	NC	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	1/30/2007	NS	NM	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 stoarge 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.
- 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

H: Heavier hydrocarbons contributed to the quanitation

L: Lighter weight hydrocarbons contributed to the quanitation

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.

D35: Sample does not display fuel pattern. Sample contains several discrete peaks. (1Q06 diesel)

D06: Sample chromatographic pattern does not resemble fuel standard used for quantitation. (1Q06, motor oil)

As of the First Quarter 2007, supply wells are to be analyzed on a quarterly basis and monitoring wells are analyzed semi-annually.

# 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	9/13/2005	<2.5	<0.5	<0.5	<2.0	<0.5	<2.0
	2/13/2006	<2.5	<0.5	<0.5	<2.0	<0.5	<2.0
	5/5/2006	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	8/15/2006	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	11/2/2006	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	1/30/2007	NA	NA	NA	NA	NA	NA
MW-2	9/13/2005	<2.5	<0.5	<0.5	<2.0	<0.5	<2.0
	2/13/2006	<2.5	<0.5	<0.5	<2.0	<0.5	<2.0
	5/5/2006	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	8/15/2006	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	11/2/2006	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	1/30/2007	NA	NA	NA	NA	NA	NA

# 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-3	9/13/2005	<2.5	<0.5	<0.5	<2.0	<0.5	<2.0
	2/13/2006	<2.5	<0.5	<0.5	<2.0	<0.5	<2.0
	5/5/2006	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	8/15/2006	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	11/2/2006	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	1/30/2007	NA	NA	NA	NA	NA	NA
Onsite Supply Well	11/28/2005	<2.5	<0.5	<0.5	<2.0	<0.5	<2.0
	2/13/2006	<2.5	<0.5	<0.5	<2.0	<0.5	<2.0
	5/5/2006	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	8/15/2006	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	11/2/2006	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	1/30/2007	<10	<0.5	<0.5	<0.5	<0.5	<0.5
Offsite Supply Well	11/28/2005	<269	<53.8	<53.8	<215	<53.8	<215
	1/16/2006	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	2/13/2006	<2.5	<0.5	< 0.5	<2.0	<0.5	<2.0
	5/5/2006	<10	<0.5	< 0.5	<0.5	<0.5	<0.5
	8/15/2006	<10	<0.5	< 0.5	<0.5	<0.5	<0.5
	11/2/2006	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	1/30/2007	<10	<0.5	<0.5	<0.5	<0.5	<0.5

### Table 2

# **Historical Groundwater Analytical Results Gasoline Oxygenates & Lead Scavengers**

### **Wente Vineyards**

5565 Tesla Road, Livermore, California

Monitoring	Date	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB
Well		(μ <b>g/L</b> )					

#### Notes:

- 1) A grab sample was collected after well development on May 20, 2005.
- 2) 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.</p>
  As of the First Quarter 2007, supply wells are to be analyzed on a quarterly basis and monitoring wells are analyzed semi-annually.

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)
MW-1	9/13/2005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	2/13/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	5/5/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	8/15/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	11/2/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	1/30/2007	NA	NA	NA	NA	NA	NA	NA
MW-2	9/13/2005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	2/13/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	5/5/2006	< 0.5	<0.5	<0.5	<0.5	<0.5	< 0.5	<0.5
	8/15/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	11/2/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	1/30/2007	NA	NA	NA	NA	NA	NA	NA
MW-3	9/13/2005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	2/13/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	5/5/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	8/15/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	11/2/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	1/30/2007	NA	NA	NA	NA	NA	NA	NA

# 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)
Onsite								
Supply Well	11/28/2005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	2/13/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	5/5/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	8/15/2006	< 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	11/2/2006	< 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	1/30/2007	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Offsite								
Supply Well	11/28/2005	<53.8	<53.8	<53.8	<53.8	<53.8	<53.8	<53.8
	1/16/2006	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	2/13/2006	< 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	5/5/2006	< 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	8/15/2006	< 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	11/2/2006	< 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	1/30/2007	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

#### Table 3

## Historical Analytical Results For Volatile Organic Compound

## Analyses in Groundwater Samples Wente Vineyards

5565 Tesla Road, Livermore, California

Monitoring	Doto	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride	1,2-DCP	1,1-DCE
Well	Date	(μ <b>g/L</b> )	(μ <b>g/L</b> )	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)

#### 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) 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.

As of the First Quarter 2007, supply wells are to be analyzed on a quarterly basis and monitoring wells are analyzed semi-annually.

Volatile organic compounds (VOCs)

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	9/13/2005	<5.0	<10	<3.0	<20	27
MW-2	9/13/2005	<5.0	<10	<3.0	<20	23
MW-3	9/13/2005	<5.0	<10	<3.0	<20	<20
B-10	6/24/2005	12	930	82	3,600	800
-						1
Onsite Supply Well	11/28/2005	<5.0	<10	<3.0	<20	62
	2/13/2006	<5.0	<10	<3.0	<20	<20
	5/5/2006	<5.0	<10	26	<20	<20
	8/15/2006	<5.0	<10	<3.0	34	60
	11/2/2006	<5.0	<10	<3.0	<20	<20
	1/30/2007	<1.0	2.30	<1.0	1.9	31
Offsite Supply Well	11/28/2005	<5.0	<10	<3.0	<20	830
	1/16/2006	<5.0	<10	8.30	<20	650
	2/13/2006	<5.0	15	<3.0	<20	1700
	5/5/2006	<5.0	<10	26	<20	750
	8/15/2006	<5.0	<10	<3.0	<20	1,200
	11/2/2006	<5.0	<10	<3.0	<20	1,300
	1/30/2007	<1.0	<1.0	<1.0	4.0	7,200

# Table 4 Historical Groundwater Analytical Results Metals

## Wente Vineyards 5565 Tesla Road, Livermore, California

Monitoring	Dete	Cadmium	Chromium	Lead	Nickel	Zinc
Well	Date	(μ <b>g/L</b> )				

#### 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**

SOMA's Groundwater Monitoring Procedures

### Field Activities

On January 30, 2007, SOMA's field crew conducted a groundwater monitoring event in accordance with the procedures and guidelines of the Alameda County Environmental Health Services and the California Regional Water Quality Control Board. Figure 2 shows the locations of the wells.

#### **Water Level Measurements**

On January 30, 2007, field measurements and grab groundwater samples were collected from an onsite supply well and off-site supply well.

Prior to collecting samples, each supply well was purged using an active downhole pump within each well. During the purging activities, the groundwater was measured for parameters such as DO, pH, temperature, EC, and the ORP using a Hanna HI-9828 multi-parameter instrument. Turbidity was measured using a Hanna HI-98703 portable turbidimeter. The equipment was calibrated at the Site using standard solutions and procedures provided by the manufacturer. At the supply wells, groundwater was extracted using an active pump within the well.

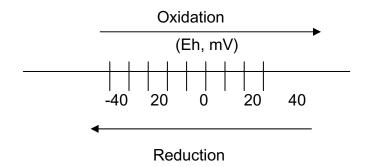
The pH of groundwater has an effect on the activity of microbial populations in the groundwater. The groundwater temperature affects the metabolic activity of bacteria. The groundwater conductivity (EC) is directly related to the concentration of ions in solution.

There is a strong correlation between the turbidity level and the biological oxygen demand of natural water bodies. The main purpose for checking the turbidity level is to provide a general overview of the extent of the suspended solids in the groundwater.

ORP (oxidation reduction potential) is the measure of the potential for an oxidation or reduction process to occur. In the oxidation process a molecule or ion loses one or several electrons. In the reduction process a molecule or ion gains one or several electrons. The unit of the redox potential is the Volt or m-Volt. The most important redox reaction in petroleum contaminated groundwater is the oxidation of petroleum hydrocarbons in the presence of bacteria and free molecular oxygen. Because the solubility of O<sub>2</sub> in water is low (9 mg/L at 25 °C and 11 mg/L at 5 °C), and because the rate of O<sub>2</sub> replenishment in subsurface environments is limited, DO can be entirely consumed, when the oxidation of only a small amount of petroleum hydrocarbons occurs.

Oxidation of petroleum hydrocarbons can still occur, when all the dissolved  $O_2$  in the groundwater is consumed, however, the oxidizing agents (i.e., the constituents that undergo reduction) now become  $NO_3$ ,  $MnO_2$ , Fe  $(OH)_3$ ,  $SO_4^{2-}$  and others (Freeze and Cherry, 1979). As these oxidizing agents are consumed, the groundwater environment becomes more and more reduced. If the process proceeds far enough, the environment may become so strongly reduced that the

petroleum hydrocarbons may undergo anaerobic degradation, resulting in the production of methane and carbon dioxide. The concept of oxidation and reduction in terms of changes in oxidation states is illustrated below.



The purging of the wells continued until the parameters for DO, pH, temperature, EC, turbidity, and redox stabilized or three casing volumes were purged.

### Sampling

On January 30, 2007, for sampling purposes, after purging, groundwater samples from the supply wells were collected using the active downhole pumps.

The groundwater sample was transferred to three 40-mL VOA vials and preserved with hydrochloric acid. The vials were then sealed to prevent the development of air bubbles within the headspace. The groundwater sample was also transferred into a one-liter non-preserved amber glass container. The groundwater sample from the onsite supply well was transferred into two one-liter non-preserved amber glass containers. The groundwater samples from each supply well were further transferred into a 250-milliliter poly container. All groundwater samples were placed in an ice chest along with a chain of custody (COC) form. On January 30, 2007, upon completion of the monitoring event, SOMA's field crew delivered the groundwater samples to Curtis and Tompkins in Berkeley, California.

### **Laboratory Analysis**

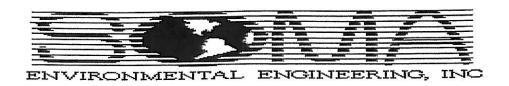
Curtis and Tompkins, a state certified laboratory, analyzed the groundwater samples collected from the supply wells for TPH-g, TPH-d, TPH-mo, BTEX, MtBE, gasoline oxygenates, lead scavengers, volatile organic compounds (VOCs), and metals.

EPA Method 5030B was used to prepare the samples for TPH-g, BTEX, MtBE, gasoline oxygenates, lead scavengers, and VOCs; and analyzed using EPA Method 8260B. EPA Method 3520C was used to prepare the samples for TPH-d and TPH-mo; and analyzed using Method 8015B. To reduce matrix interference, during TPH-d and TPH-mo testing, the sample extract has undergone silica gel clean-up method 3630C. At the request of the ACEHS, for the onsite supply well, TPH-d was further tested not using silica gel clean-up method 3630C.

Metals, which included cadmium, chromium, lead, nickel, and zinc were prepared using EPA Method 200.8 and analyzed using EPA Method 6020. The metals were also filtered at the laboratory to verify a more accurate reading.

# **Appendix B**

Field Measurements of Physical, Chemical, & Biodegradation Parameters of the Groundwater Samples at Time of Sampling



Well No.:	ets ite supply	well		P	roject No.: 2841
Casing Diameter:		_inch			Address: Wente Vineyards
Depth of Well:	nn	_ft			5565 Tesla Rd, Livermore
Top of Casing Elevation:	NS	_ft			Date: 1/30/07
Depth to Groundwater:	NM	_ft			Sampler: Tony Perini
Groundwater Elevation:	NC	_ft			
Water Column Height:	NM	_ft			
Purged Volume:	24	_gallons			
					1 1 11 1 2 1 1 1
Purging Method:	Bailer □				Pump I telle pump
Sampling Method:	Bailer □				Pump of Active pump
Jampinia Motilogi	, <b>20.1.0.1</b>				
Color:	No 🗹		Yes		Describe
Color;	NO 🗈		162	ш	Describe
Sheen:	No 🗹		Yes		Describe
Odor:	No 🗹		Yes	П	Describe
04011			100	_	

## Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pН	Temp °C	E.C. (μS/cm)	Turb. NTU	ORP
1035 AM	startes	purgin	19 well				
1041 Am	8	6.04	1776	17.26	1593	51.6	-74
			8.04				
1051 AM	16	5.82	8.05	15.77	1614	76.7	-7.3
1102 Am	24	6.40	8.06	15.80	1604	103	9.2
1110 Am	ramy	les					

Notes:	1 16
nc-not	calculates
nm-not	MEASUNED

NS-Not surveyes



Well No.:	wife su	PPly well		Р	roject No.: 2841
Casing Diameter:		inch			Address: Wente Vineyards
Depth of Well:	N	n_ft			5565 Tesla Rd, Livermore
Top of Casing Elevation:	NS	ft			Date: 1/30/07
Depth to Groundwater:	NA	7ft			Sampler: Tony Perini
Groundwater Elevation:	NC	ft			
Water Column Height:	NV	ηft			
Purged Volume:	20	2galloi	ns		
Purging Method:	Bailer				Pump of Active pump
Sampling Method:	Bailer				Pump of Active Jump
Color:	No		Yes		Describe
Sheen:	No	d	Yes		Describe
Odor:	No	d	Yes		Describe

## Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pН	Temp °C	E.C. (μS/cm)	Turb. NTU	ORP
1130 Am	Starte	id pus	ging w	e//			
1130 Am 1138 Am	8	7.63	8.46	15.44	1433	7.54	36
1147 AM	13	5.92	8.27	12.93	1484	3.58	60
1154 AM	20	6.20	8,27	12.92	1500	3.60	68
1158 AM	Jany 18	6					1100
	<b>V</b>						

Notes:	
nc-not	calculates
num- not	Measures

# **Appendix C**



#### Mansour Sepehr

From: Aris Krimetz [aris@wentevineyards.com]

Sent: Thursday, February 16, 2006 5:06 PM

To: Mansour Sepehr (E-mail)

Subject: 5443 Tesla Road

#### Mansour-

According to documents provided by the previous owner, the total depth of the well is 125', and the pump is at 100'. It was installed about 1972 by the previous owner. We only re-piped on the well discharge side and connected it to the irrigation system, removing it from the potable system when we purchased the property in 1995/96. The potable water for the property is supplied from a municipal source.

#### Aris Krimetz

Director of Engineering Wente Vineyards 5565 Tesla Road Livermore, CA 94550 Office: 925 456 2313 Cell: 925 519 9010

arisk@wentevineyards.com www.wentevineyards.com

# **Appendix D**

Chain of Custody Form and Laboratory Report



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

2323 Fifth Street, Berkeley, CA 9471O, Phone (510) 486-0900

## ANALYTICAL REPORT

Prepared for:

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

Date: 15-FEB-07 Lab Job Number: 192361 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.

NELAP # 01107CA

Page 1 of /



#### CASE NARRATIVE

Laboratory number:

192361

Client:

SOMA Environmental Engineering Inc.

Project:

2841

Location:

5565 Tesla Rd, Livermore

Request Date:

01/30/07

Samples Received:

01/30/07

This hardcopy data package contains sample and QC results for two water samples, requested for the above referenced project on 01/30/07. The samples were received cold and intact.

#### 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 6020):

Low recovery was observed for lead in the MSD for batch 121710; the parent sample was not a project sample, and the associated RPD was within limits. No other analytical problems were encountered.

# **CHAIN OF CUSTODY**

Page	ĺ	of	

### Curtis & Tompkins, Ltd.

Analytical Laboratory Since 1878 2323 Fifth Street Berkeley, CA 94710 (510)486-0900 Phone (510)486-0532 Fax

C&T LOGIN# 1923@1

Sampler: TONY PERINI

(full 8260B list)

scavengers

lead

∞ಶ

**Analyses** 

Project No: 2841

Tony Perini Report To:

Project Name: 5565 Tesla Rd, Livermore

Company: SOMA Environmental

Turna	round Time: Standard	Tele	ohor		925-734-6400	)							(full 8	2	ates 8					
		Fax:		l m 4 m² v	925-734-6401					==	0B	H-mo	Organics		Oxygenates	≣ only				
Lab No.	Sample ID.	Sampling Date Time	+	Waste Waste	# of Containers	HCL	4	r	ativ	e e e	TPH-9 8260B	TPH-d / TPH-mo	Volatile Org	Metals	Gasoline O	BTEX/MtBE	THE THE PROPERTY OF THE PROPER			
- \	Off-site Supply Well	1/30/07 1110 Am		*	XVOAs/ 1 L Amber/ 250 ml Poly	*			*	*	*	*	*	*	*					
2	On-site Supply Well	1/30/07 1158 AM		*	3-VOAs/2- 1L Ambers/ 250 ml Poly	*			*	*	*	*	*	*	*					
3	TRIPBAN																			
otes	EDF OUTPUT REQUIRE		RE	LINQ	UISHED BY:	<u> </u>	-L	L	IL		RÉ	CEI	VED E	3Y:\	)	I	<u></u>	<u> </u>		
	Metals for supply wells				2/5	1	138	r fc	7			h.	11		5	-14	?	 1/	30/0	7 15

Metals include cadmium, chromium, lead

nickel, and zinc GasOx to include ethanol

onsite netals using 0.45 micro filt-onsite nell - lovesel sample using strict Cold+Intact set, one sample no stited gel

TOMY June 150 PM DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME



Total Extractable Hydrocarbons Lab #: 5565 Tesla Rd, Livermore EPA 3520C Location: Client: SOMA Environmental Engineering Inc. Prep: Analysis: Project#: 2841 Matrix: EPA 8015B 01/30/07 01/30/07 Water Sampled: ug/L 1.000 121766 Units: Received: Diln Fac: 02/01/07 Prepared: Batch#: Analyzed: 02/02/07

Field ID:

OFF-SITE SUPPLY WELL

Lab ID:

192361-001

Type:

SAMPLE

Diesel C10-C24   ND   50   ND   300	Analyte	Result	RL	
1.1800000 (11 + 0.004 = 0.006)		ND	50	
	Motor Oil C24-C36	MD	300	

Surrogate	%REC	Limits	
Hexacosane	104	65-130	

Field ID:

ON-SITE SUPPLY WELL

Lab ID:

192361-002

SAMPLE Type:

Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	50
Diesel C10-C24 (SGCU)	ND	50
Motor Oil C24-C36	ND	300
Motor Oil C24-C36 (SGCU)	ND	300

Surrogate	%REC	Limits	
Hexacosane	97	65-130	
Hexacosane (SGCU)	96	65-130	

Type: Lab ID:

BLANK QC373850 Cleanup Method: EPA 3630C

Analyte	Result	RL	998
Diesel C10-C24	ND	50	20000
Diesel C10-C24 (SGCU)	ND	50	
Motor Oil C24-C36	ИD	300	
Motor Oil C24-C36 (SGCU)	ND	300	

Surrogate	%REC	Limits	
Hexacosane	100	65-130	
Hexacosane (SGCU)	115	65-130	

ND= Not Detected RL= Reporting Limit SGCU= Silica gel cleanup Page 1 of 1



	Total Extracta	ble Hydroca:	bons
Lab #:	192361	Location:	5565 Tesla Rd, Livermore
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	2841	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	121766
Units:	ug/L	Prepared:	02/01/07
Diln Fac:	1.000	Analyzed:	02/02/07

Type:

BS

Cleanup Method: EPA 3630C

Lab ID:

QC373851

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,614	105	61-133
Diesel C10-C24 (SGCU)	2,500	2,444	98	61-133

Hexacosane (SGCU)	102	65-130
Hexacosane	106	65-130
Surrogate	%REC	

Type:

BSD

Lab ID:

QC373852

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits	RPL	Lim
Diesel C10-C24	2,500	2,605	104	61-133	0	31
Diesel C10-C24 (SGCU)	2,500	2,677	107	61-133	9	31

Surrogate	%REC	Limits
Hexacosane	103	65-130
Hexacosane (SGCU)	109	65-130



	Gasol	ine by GC/MS	
Lab #: Client: Project#: Field ID: Lab ID: Matrix: Units: Diln Fac:	OFF-SITE SUPPLY WELL 192361-001 Water	Location: nc. Prep: Analysis: Batch#: Sampled: Received: Analyzed:	5565 Tesla Rd, Livermore EPA 5030B EPA 8260B 121706 01/30/07 01/30/07 01/31/07

Secon 13	Analyte	Re	esult Br.
Lett-Butty1 Alcohol (TBA)	Gasoline C7-C12		
Chloromethane   ND		ND	
Isopropy  Ether (DIPE)	tert-Butyl Alcohol (TBA)	ND	
Vinyl Chloride		ND	
Bromomethane	isopropyl Ether (DIPE)	ND	
Ethyl tert-Butyl Ether (ETBE)	Vinyl Chloride	ND	
Chloroethame	Bromomethane	ND	
Methyl text-Amyl Ether (TAME)   ND	Etnyl tert-Butyl Ether (ETBE)	ND	— · •
Trichlorofluoromethane	Chloroethane	ND	
Retamol Acetone	Metnyl tert-Amyl Ether (TAME)	ND	· · · · · · · · · · · · · · · · · · ·
Acetone	Trichlorofluoromethane	ND	
Free   1.13		ND	
1.1-Dichlororethene		ND	· · · · · · · · · · · · · · · · · · ·
Methylene Chloride		ND	· · · · · · · · · · · · · · · · · · ·
Carbon Disulfide	1,1-Dichioroethene	ND	
MTBE	Carban District	ND	
Trans-1, 2-Dichloroethene		ND	· -
Vinyl Acetate		ND	
1,1-Dichloroethane	Vinyl Acata	ND	
2-Butanone	1 1 -Dighlamanhan	ND	=
Cis-1,2-Dichloroethene	2-Butanone		
2,2-Dichloropropane	Cis-1 2 Dichlomath		=
Chloroform	2 2-Dighloroppen		
Bromochloromethane	Chloroform		· =
1,1,1-Trichloroethane			* · · =
1,1-Dichloropropene	1.1.1-Trichleroothere		
Carbon Tetrachloride	1.1-Dichleropropens		
1,2-Dichloroethane	Carbon Tetrachlorido		0.5
Benzene	1.2-Dichloroethane		0.5
Trichloroethene ND 0.5 1,2-Dichloropropane ND 0.5 Bromodichloromethane ND 0.5 Dibromomethane ND 0.5 Crans-1,3-Dichloropropene ND 0.5 Cretrachloroethane ND 0.5 Cretrachloropropane ND 0.5 Cretrachloroethene ND 0.5 Cretrachloromethane ND 0.5 Cretrachloromethane ND 0.5 Cretrachloromethane ND 0.5 Cretrachloroethane ND 0.5 Cretrachloroet	Benzene		0.5
1,2-Dichloropropane			0.5
Bromodichloromethane	1.2-Dichloropropage		0.5
Dibromomethane	Bromodichloromethane		0.5
4-Methyl-2-Pentanone       ND       0.5         cis-1,3-Dichloropropene       ND       10         Toluene       ND       0.5         trans-1,3-Dichloropropene       ND       0.5         1,1,2-Trichloroethane       ND       0.5         2-Hexanone       ND       0.5         1,3-Dichloropropane       ND       10         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         1,1,1,2-Tetrachloroethane       ND       0.5         m,p-Xylenes       ND       0.5         o-Xylene       ND       0.5         Styrene       ND       0.5         Bromoform       ND       0.5         Isopropylbenzene       ND       0.5         1,1,2,2-Tetrachloroethane       ND       0.5         O-Xylene       ND       0.5         Bromoform       ND       0.5         Isopropylbenzene       ND       0.5         1,1,2,2-Tetrachloroethane       ND       0.5 </td <td>Dibromomethane</td> <td></td> <td>0.5</td>	Dibromomethane		0.5
Cis-1,3-Dichloropropene	4-Methyl-2-Pentanone		· · · =
Tollene trans-1,3-Dichloropropene ND 0.5  1,1,2-Trichloroethane ND 0.5  2-Hexanone ND 0.5  1,3-Dichloropropane ND 10  Tetrachloroethene ND 0.5  Dibromochloromethane ND 0.5  1,2-Dibromoethane ND 0.5  1,2-Dibromoethane ND 0.5  1,1,2-Tetrachloroethane ND 0.5  1,1,1,2-Tetrachloroethane ND 0.5  Ethylbenzene ND 0.5  m,p-Xylenes ND 0.5  m,p-Xylenes ND 0.5  Styrene ND 0.5  Bromoform ND 0.5  Isopropylbenzene ND 0.5	cis-1,3-Dichloropropene		10
trans-1,3-Dichloropropene       ND       0.5         1,1,2-Trichloroethane       ND       0.5         2-Hexanone       ND       0.5         1,3-Dichloropropane       ND       0.5         Tetrachloroethene       ND       0.5         Dibromochloromethane       ND       0.5         1,2-Dibromoethane       ND       0.5         Chlorobenzene       ND       0.5         1,1,2-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       0.5         Isopropylbenzene       ND       0.5         1,1,2,2-Tetrachloroethane       ND       0.5         Isopropylbenzene       ND       0.5         Isopropylbenzene       ND       0.5         1,1,2,2-Tetrachloroethane       ND       0.5	l Toluene		
1,1,2-Trichloroethane	trans-1,3-Dichloropropene		
2-Hexanone	1,1,2-Trichloroethane		
Tetrachloropropane	2-Hexanone		
Tetrachloroethene	1,3-Dichloropropane		
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         0.5           Isopropylbenzene         ND         1.0           1,1,2,2-Tetrachloroethane         ND         0.5	Tetrachloroethene		
1,2-Dibromoethane	Dibromochloromethane		
Chlorobenzene	1,2-Dibromoethane		
Time	Chlorobenzene		_
Ethylbenzene	1,1,1,2-Tetrachloroethane		<b>,</b>
m,p-xylenes	Ethylbenzene		
O-Xylene			
Styrene ND 0.5 Bromoform ND 0.5 Isopropylbenzene ND 1.0 1,1,2,2-Tetrachloroethane ND 0.5			
Isopropylbenzene ND 1.0 1,1,2,2-Tetrachloroethane ND 0.5			
1,1,2,2-Tetrachloroethane			l de la companya de
	1 1 2 2 metal 2	ND	= : <del>-</del>
	<u> 1,1,2,2-letrachloroethane</u>	ND	0.5

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



	Gasoline	by GC/MS	
Project#:		Location: Prep: Analysis:	5565 Tesla Rd, Livermore EPA 5030B EPA 8260B
Field ID: Lab ID: Matrix: Units: Diln Fac:	OFF-SITE SUPPLY WELL 192361-001 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	121706 01/30/07 01/30/07 01/31/07

Analyte	Result	RL
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
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	
1,2-Dibromo-3-Chloropropane	ND	0.5
1,2,4-Trichlorobenzene	ND	2.0
Hexachlorobutadiene	ND	0.5
Naphthalene	ND	0.5
1,2,3-Trichlorobenzene	ND	2.0
Tetrahydrofuran		
Tetrahydrofuran	ND ND	0.5 100

Surrogate	%REC	Limits	
Dibromofluoromethane	102	80-120	
1,2-Dichloroethane-d4	101	80-130	
Toluene-d8	100	80-120	
Bromofluorobenzene	105	80-122	



	by GC/Ms	
Lab #: 192361 Client: SOMA Environmental Engineering Inc. Project#: 2841 Field ID: ON-SITE SUPPLY WELL Lab ID: 192361-002 Matrix: Water Units: ug/L Diln Fac: 1.000	Location: Prep: Analysis: Batch#: Sampled: Received: Analyzed:	5565 Tesla Rd, Livermore EPA 5030B EPA 8260B 121706 01/30/07 01/30/07 01/31/07

Analyte		
Gasoline C7-C12	ND	sult RL
Freon 12		50
tert-Butyl Alcohol (TBA)	ND	1.0
Cnioromethane	ND	10
Isopropyl Ether (DIPE)	ND	1,0
Vinyl Chloride	ND	0.5
Bromomethane	ND	0.5
Ethyl tert-Butyl Ether (FTDE)	ND	1.0
Chloroethane	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	1.0
Trichlorofluoromethane	ND	0.5
Ethanol	ND	1.0
Acetone	ND	1,000
Freon 113	ND	10
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	0.5
Carbon Disulfide	ND	10
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	0.5
1,1-Dichloroethane	ND	10
2-Butanone	ND	
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	
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	
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	0.5
Cig-1 3 Dightamone	ND	0.5
cis-1,3-Dichloropropene	ND	10
trangul a piable	ND	0.5
trans-1,3-Dichloropropene 1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	0.5
1 3-Dichloroprop-	ND	0.5
1,3-Dichloropropane Tetrachloroethene	ND	··· -
Dibromochloment	ND	0.5
Dibromochloromethane 1,2-Dibromoethane	ND	0.5
Chloroponane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene m. n-Yylonea	ND	0.5
m,p-Xylenes o-Xylene	ND	0.5
	ND	0.5
Styrene	ND	0.5
Bromoform	ND	0.5
Toomwon-11-		
Isopropylbenzene	ND	1.0
Isopropylbenzene 1,1,2,2-Tetrachloroethane		1.0 0.5 0.5

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



		e by GC/MS	
Client: So Project#: 28		Location: Prep: Analysis:	5565 Tesla Rd, Livermore EPA 5030B
Field ID: Lab ID: Matrix: Units: Diln Fac:	ON-SITE SUPPLY WELL 192361-002 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	EPA 8260B 121706 01/30/07 01/30/07 01/31/07

Analyte	Result	
1,2,3-Trichloropropane	ND	RL.
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5 0.5
1,3,5-Trimethylbenzene	ND	* * * * * * * * * * * * * * * * * * * *
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 0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	· -
1,4-Dichlorobenzene	ND	0.5 0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	
1,2-Dibromo-3-Chloropropane	ND	0.5 2.0
11,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	· -
Naphthalene	ND	0.5
1,2,3-Trichlorobenzene	ND	2.0
Tetrahydrofuran	ND	0.5 100
		100

Surrogate	*REC	Limits	***************************************
Dibromofluoromethane	102	80-120	
1,2-Dichloroethane-d4	102	80-130	
Toluene-d8	99	80-120	
Bromofluorobenzene	104	80-122	



		Gasoline	by GC/MS	
Lab #: Client: Project#: Field ID: Lab ID: Matrix: Units: Diln Fac:	TRIP BLANK 192361-003 Water	Engineering Inc.	Location: Prep: Analysis: Batch#: Sampled: Received: Analyzed:	5565 Tesla Rd, Livermore EPA 5030B EPA 8260B 121706 01/30/07 01/30/07 01/31/07

Analyte	Resu	g 22
Gasoline C7-C12	ND Resu	CH
Freon 12	ND	50
tert-Butyl Alcohol (TRA)		1.0
Chloromethane	ND	10
Isopropyl Ether (DIPE)	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	0.5
Ethyl tert-Butan met - /	ND	1.0
Ethyl tert-Butyl Ether (ETBE) Chloroethane	ND	0.5
Mother	ND	
Methyl tert-Amyl Ether (TAME)	ND	1.0
111CHIOTOIluoromethane	ND	0.5
Ethanol	ND	1.0
Acetone	ND	1,000
Freon 113		10
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	0.5
Carbon Disulfide	ND	10
MTBE	ND	0.5
	ND	
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	0.5
l,1-Dichloroethane	ND	10
2-Butanone		0.5
cis-1,2-Dichloroethene	ND	10
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1 1 Trightomethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	
Carbon Tetrachloride	ND	0.5
,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Prichloroethene	ND	0.5
,2-Dichloropropage		0.5
romodichloromethane	ИD	0.5
ibromomethane	ND	0.5
-Methyl-2-Pentanone	ND	0.5
ig-1 3-Dighton-	ND	10
is-1,3-Dichloropropene	ND	
oluene	ND	0.5
rans-1,3-Dichloropropene	ND	0.5
, 1, 2-Trichloroethane	ND	0.5
-Hexanone	ND	0.5
,3-Dichloropropane		1.0
Etrachloroethene	ND	0.5
bromochloromethane	ND	0.5
2-Dibromoethane	ND	0.5
llorobenzene	ND	0.5
1 1 2 Total all 1	ND	
1,1,2-Tetrachloroethane	ND	0.5
hylbenzene	ND	0.5
p-Xylenes	ND	0.5
Xylene	ND	0.5
yrene		0.5
omoform	ND	0.5
opropylbenzene	ND	1.0
1,2,2-Tetrachloroethane	ND	0.5
<u></u>	ND	0.5

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



		Gasoline	by GC/Ms	
Project#:	192361 SOMA Environmental 2841	Engineering Inc.	Location: Prep: Analysis:	5565 Tesla Rd, Livermore EPA 5030B EPA 8260B
Field ID: Lab ID: Matrix: Units: Diln Fac:	TRIP BLANK 192361-003 Water ug/L 1.000		Batch#: Sampled: Received: Analyzed:	121706 01/30/07 01/30/07 01/31/07

Analyte	Result	RI
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
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	500000000000000000000000000000000000000
Dibromofluoromethane	99	80-120	
1,2-Dichloroethane-d4	99	80-130	
Toluene-d8	101	80-120	
Bromofluorobenzene	104	80-122	



-		Gasoline	by GC/MS	
Lab #: Client: Project#: Type: Lab ID: Matrix: Units:	192361 SOMA Environmental 2841 BLANK QC373646 Water ug/L	Engineering Inc.	Location: Prep: Analysis: Diln Fac: Batch#: Analyzed:	5565 Tesla Rd, Livermore EPA 5030B EPA 8260B 1.000 121706 01/31/07

Analyte Gasoline C7-C12	Result	DT
Freen 12	ND	RL .
Freon 12	ND	50
tert-Butyl Alcohol (TBA)	ND	1.0
Unioromethane	ND	10
Isopropyl Ether (DTPE)		1.0
Vinyi Chloride	ND	0.5
Bromomethane	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	1.0
Chloroethane (ETBE)	ND	0.5
citiologinane	ND	
Methyl tert-Amyl Ether (TAME)	ND	1.0
LICILOTOI LUOTOMET hans	ND	0.5
sthanol	ND	1.0
Acetone		1,000
Freon 113	ND	10
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	0.5
'arbon Diamic's	ND	
Carbon Disulfide	ND	10
TBE	ND	0.5
rans-1,2-Dichloroethene	ND	0.5
'lnyl Acetate		0.5
,1-Dichloroethane	ND	10
-Butanone	ND	0.5
18-1 2-Diahlamana	ND	
is-1,2-Dichloroethene	ND	10
,2-Dichloropropane	ND	0.5
nioroform		0.5
romochloromethane	ND	0.5
,1,1-Trichloroethane	ND	0.5
,1-Dichloropropene	ND	0.5
arbon Tetwachia	ND	
arbon Tetrachloride	ND	0.5
,2-Dichloroethane	ND	0.5
enzene	ND	0.5
richloroethene		0.5
,2-Dichloropropane	ND	0.5
romodichloromethane	ND	0.5
ibromomethane	ND	0.5
-~	ND	
-Methyl-2-Pentanone	ND	0.5
LS-1,3-Dichloronronene	ND	10
ruene		0.5
ans-1,3-Dichloropropers	ND	0.5
1,2-Trichloroethane	ND	0.5
Hexanone	ND	0.5
3-Dichlore	ND	
3-Dichloropropane	ND	10
trachloroethene	ND	0.5
bromochloromethane		0.5
2-Dibromoethane	ND	0.5
lorobenzene	ND	0.5
1,1,2-Tetrachloroethane	ND	0.5
hylbenzene	ND	
nyibenzene p-Xylenes	ND	0.5
Anjone Nationes	ND	0.5
Xylene	ND	0.5
yrene	ND	0.5
omoform		0.5
opropylbenzene	ND	1.0
1,2,2-Tetrachloroethane	ND	0.5
	ND	

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



		Gasoline	by GC/Ms	
Project#:	192361 SOMA Environmental 2841	Engineering Inc.	Location: Prep: Analysis:	5565 Tesla Rd, Livermore EPA 5030B EPA 8260B
Type: Lab ID: Matrix: Units:	BLANK QC373646 Water ug/L		Diln Fac: Batch#: Analyzed:	1.000 121706 01/31/07

Analyte	Result	RL
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
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	98	80-120	
1,2-Dichloroethane-d4	100	80-130	
Toluene-d8	101	80-120	
Bromofluorobenzene	103	80-122	



- 1 D		Gasolin	∍ by GC/MS	
Lab #: 192361 Client: SOMA E: Project#: 2841 Matrix: Units: Diln Fac:	nvironmental E Water ug/L 1.000	ngineering Inc.	Location: Prep: Analysis: Batch#: Analyzed:	5565 Tesla Rd, Livermore EPA 5030B EPA 8260B 121706 01/31/07

Type:

BS

Lab ID:

QC373642

Analyte		, ·	3642		
tert-Butyl Alcohol (TBA) Isopropyl Ether (DIPE) Ethyl tert-Butyl Ether (ETBE) Methyl tert-Amyl Ether (TAME) 1,1-Dichloroethene Benzene Trichloroethene Toluene Chlorobenzene	Spiked  125.0  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00	Result  156.3 26.19 25.48 27.51 26.26 26.66 25.93 26.12 26.30	%REC 125 105 102 110 105 107 104 104 105	Limits 64-141 68-123 77-129 77-120 77-128 80-120 80-120 80-120 80-120	
Surrogate 3-	17-17-2000000 ; 200-2000000 for score and score				

Surrogate	%REC	800000 100 poscoo ur san	26.30 105 80-120
Dibromofluoromethane 1,2-Dichloroethane-d4	101 100	80-120	
Toluene-d8 Bromofluorobenzene	101 98	80-130 80-120	
		80-122	

Type:

BSD

Lab ID:

QC373643

Analyte		QC37	3643			
tert-Butyl Alcohol (TBA) Isopropyl Ether (DIPE) Ethyl tert-Butyl Ether (ETBE) Methyl tert-Amyl Ether (TAME) 1,1-Dichloroethene Benzene Trichloroethene Toluene Chlorobenzene	Spiked  125.0 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00 25.00	Result 150.5 25.68 24.93 26.66 26.52 26.24 26.23 25.94 25.90	120 103 100 107 106 105 105 104 104	Limits 64-141 68-123 77-129 77-120 77-128 80-120 80-120 80-120 80-120	RPD 4 2 2 3 1 2 1	22 20 20 20 20 20 20 20 20 20
Surrogate 95	1177 200000 200 20000			00-120		20

Surrogate	%REC	Liumits	25.90	104	80-120	2	20
Dibromofluoromethane 1,2-Dichloroethane-d4	103	80-120					
Toluene-d8 Bromofluorobenzene	103 100	80-130 80-120					
enerracionenzene	97	80-122					



	Gasoline	by GC/MS	
Project#:	192361 SOMA Environmental Engineering Inc. 2841	Location: Prep: Analysis:	5565 Tesla Rd, Livermore EPA 5030B EPA 8260B
Matrix: Units: Diln Fac:	Water ug/L 1.000	Batch#: Analyzed:	121706 01/31/07

Type:

BS

Lab ID:

QC373644

Analyte Gasoline C7-C12	<b>Spiked</b>	Result	%REC	Limits
	1,000	1,003	100	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	98	80-130
Toluene-d8	102	80-120
Bromofluorobenzene	99	80-122

Type:

BSD

Lab ID:

QC373645

	Gasoline C7-C12		Result	%REC Limits	RPD Lim
1,000	Gaborine C7-C12	1,000		~ -	6 20

Surrogate	%RBC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	100	80-130
Toluene-d8	101	80-120
Bromofluorobenzene	100	80-122



Dissolved Metals Analytical Report 5565 Tesla Rd, Livermore Lab #: 192361 Location: Client: SOMA Environmental Engineering Inc. Prep: 200.8 Analysis: EPA 6020 Project#: 2841 Units: ug/L Received: 01/30/07 121710 Prepared: 01/31/07 Batch#: 01/30/07 Analyzed: 01/31/07 Sampled:

Field ID:

OFF-SITE SUPPLY WELL

Lab ID:

192361-001

Type:

SAMPLE

Matrix:

Filtrate

Analyte	Result	RL	Diln Fac
Cadmium	ND	1.0	10.00
Chromium	ND	1.0	10.00
Lead	ND	1.0	10.00
Lead Nickel Zinc	4.0	1.0	10.00
Zinc	7,200	5.0	50.00

Field ID:

ON-SITE SUPPLY WELL

Matrix:

Filtrate

Type:

SAMPLE

Diln Fac:

10.00

Lab ID:

192361-002

Analyte	Result	RL	
Cadmium	ND	1.0	***************************************
Chromium	2.3	1.0	
Lead Nickel	ND	1.0	
Nickel	1.9	1.0	1
Zinc	31	5.0	

Type: Lab ID: BLANK QC373657 Matrix:

Diln Fac:

Water 1.000

Analyte	Result	RL
Cadmium	ND	1.0
Chromium	ND	1.0
Lead Nickel Zinc	ND	1.0
Nickel	ND	1.0
Zinc	ND	5.0

ND= Not Detected RL= Reporting Limit

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	Dissolved Metals	Analytical	Report
Lab #:	192361	Location:	5565 Tesla Rd, Livermore
Client:	SOMA Environmental Engineering Inc.	Prep:	200.8
Project#:	2841	Analysis:	EPA 6020
Matrix:	Water	Batch#:	121710
Units:	ug/L	Prepared:	01/31/07
Diln Fac:	1.000	Analyzed:	01/31/07

Type:

BS

Lab ID: QC373658

Analyte	Spiked	Result	%RE(	: Limits
Cadmium	100.0	92.11	92	80-120
Chromium	100.0	91.80	92	80-120
Lead	100.0	91.17	91	80-120
Nickel	100.0	93.49	93	80-120
Zinc	100.0	94.23	94	80-120

Type:

BSD

Lab ID: QC373659

Analyte	Spiked	Result	%REC	Limits	RPL	Lim
Cadmium	100.0	93.80	94	80-120	2	20
Chromium	100.0	93.01	93	80-120	1	20
Lead	100.0	91.62	92	80-120	0	20
Nickel	100.0	94.93	95	80-120	2	20
Zinc	100.0	99.30	99	80-120	5	20



		D:	issolved Metals	Analytical	Report
	19236 SOMA 2841		Engineering Inc.	Location: Prep: Analysis:	5565 Tesla Rd, Livermore 200.8
Field ID: MSS Lab ID: Matrix: Units: Batch#:		ZZZZZZZZZ 192353-001 Water ug/L 121710		Sampled: Received: Prepared: Analyzed:	EPA 6020 01/29/07 01/30/07 01/31/07 01/31/07

Type:

MS

Lab ID: QC373660

Analyte	MSS Result	Spiked	Result	%REC	2000.00
Cadmium	21.34	100.0			Limits Diln Fac
Chromium			114.4	93	76-120 10.00
Lead	350.8	100.0	455.8	105	78-120 10.00
	33.76	100.0	114.5	81	
Nickel	215.7	100.0	-		80-120 10.00
Zinc		<del>-</del>	309.5	94	77-120 10.00
	5,217	100.0	5,554	337 NI	M 60-124 50.00

Type:

MSD

Lab ID:

QC373661

Analyte	Spiked	Result	%REC	Limits	Section de referencies		Manager (1990)
Cadmium	100.0	110.1		sociale emposition and a	RPD	Lilm	Diln Fac
Chromium	100.0		89	76-120	4	20	10.00
Lead	· · · -	434.9	84	78-120	5	20	10.00
Nickel	100.0	111.5	78 *	80-120	3	20	10.00
<del></del>	100.0	296.5	81	77-120	4	20	10.00
Zinc	100.0	5,403	186 NM	60-124	2		- <del>-</del>
			T 0.0 TAIL	00-124	د	20	50.00

<sup>\*=</sup> Value outside of QC limits; see narrative

NM= Not Meaningful: Sample concentration > 4X spike concentration

PD= Relative Percent Difference