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*By lopprojectop at 10:34 am, May 25, 2006*

May 23, 2006

Mr. Steven Plunkett  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Subject: **Texaco Gasoline Service Station (Formerly Freedom ARCO Station)**  
Site Address: 15101 Freedom Avenue, San Leandro, California  
**STID 4473/RO0000473**

Dear Mr. Hwang:

SOMA's "Second Quarter 2006 Groundwater Monitoring Report" for the subject property 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 questions or comments.

Sincerely,

Mansour Sepehr, Ph.D., PE  
Principal Hydrogeologist



cc: Mr. Mohammad Pazdel w/report enclosure



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**SECOND QUARTER 2006  
GROUNDWATER MONITORING REPORT  
TEXACO GASOLINE SERVICE STATION  
15101 FREEDOM AVENUE  
SAN LEANDRO, CALIFORNIA**

**May 23, 2006**

Project 2551

Prepared for

**Mr. Mohammad Pazdel  
1770 Pistacia Court  
Fairfield, 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. Mohammad Pazdel, the property owner of 15101 Freedom Avenue, San Leandro, California, to comply with the Alameda County Health Care Services' requirements for the Second Quarter 2006 groundwater monitoring event.



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



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## 1.0 INTRODUCTION

This report has been prepared by SOMA Environmental Engineering, Inc. (SOMA) on behalf of Mr. Mohammad Pazdel, the property owner of 15101 Freedom Avenue, San Leandro, California (“the Site”), as shown in Figure 1. The Site is located in an area consisting primarily of residential properties and adjacent commercial areas.

This report summarizes the results of the Second Quarter 2006 groundwater monitoring event conducted at the Site on May 9, 2006. Included in this report are the physical and chemical properties measured in the field for each groundwater sample. The physical and chemical properties consisted of measurements of pH, temperature, and electrical conductivity (EC). This report also includes the laboratory analytical results on the groundwater samples.

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

### 1.1 Previous Activities

On May 20, 1999, three 10,000-gallon single-walled USTs were removed and replaced with new double-walled fuel tanks. On July 7, 1999, a 20,000-gallon gasoline UST, an 8,000-gallon gasoline UST, and a 6,000-gallon diesel UST were installed in the tank cavity.

In July 2001, additional soil and groundwater investigations were conducted to further examine potential petroleum hydrocarbon contamination discovered during the removal and upgrade of the USTs. During this investigation five soil borings (SB-1 through SB-5) were drilled. The maximum concentrations of total petroleum hydrocarbons as gasoline (TPH-g) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) in the soil samples collected between 19 and 25.5 feet below ground surface (bgs) were 470, 2.6, 16, 12, and 73 mg/Kg, respectively. Methyl tertiary Butyl Ether (MtBE) was below the laboratory reporting limit of 0.005 mg/Kg in all the soil samples collected. The maximum concentrations of TPH-g and BTEX in the groundwater samples collected from the soil borings were 83, 19, 1.8, 1.5, and 73 mg/L, respectively. The maximum reported MtBE concentration was 87 mg/L in soil boring SB-2. The soil boring locations are shown in Figure 2.

On April 22 and 23, 2002, SOMA installed 5 (4-inch diameter) on-site groundwater monitoring wells (MW-1 to MW-5) to evaluate the groundwater flow gradient and the extent of petroleum hydrocarbons and MtBE contamination beneath the Site. Figure 2 displays the locations of the monitoring wells.

On July 22, 2003, an additional off-site investigation was conducted by SOMA to evaluate the lateral extent of the soil and groundwater contamination. The off-site investigation included a sensitive receptor survey to locate water supply wells and/or water bodies within a 2,000-foot radius of the Site. In September 2003, six temporary well boreholes were advanced to depths of at least 40 feet bgs. Figure 2 shows the locations of the temporary well boreholes.

In September 2004, SOMA installed four off-site wells (MW-6 to MW-9). Figure 2 shows the locations of the off-site monitoring wells.

## **2.0 RESULTS**

The following sections provide the results of the field measurements and laboratory analyses for the May 9, 2006 groundwater monitoring event.

### **2.1 Field Measurements**

Table 1 presents the calculated groundwater elevations, as well as the depths to groundwater for each monitoring well. Depths to groundwater ranged from 9.06 feet in well MW-9 to 21.68 feet in well MW-1. The corresponding groundwater elevations ranged from 31.20 feet in well MW-9 to 33.00 feet in well MW-2.

Figure 3 displays the contour map of groundwater elevations. The groundwater flow direction is south to southwesterly across the Site, at a gradient of 0.0046 feet/feet.

The field measurements taken during this monitoring event are shown in Appendix B.

### **2.2 Laboratory Analysis**

Table 1 also presents the TPH-g, BTEX, and MtBE analytical results, as well as the historical groundwater analytical results.

TPH-g concentrations were below the laboratory reporting limit in both off-site wells MW-8 and MW-9. Detectable TPH-g concentrations ranged from 444 ug/L in well MW-1 to 48,100 ug/L in well MW-3. The TPH-g concentration in well MW-3 was several orders of magnitude higher than the remaining site wells. Figure 4 displays the contour map of TPH-g concentrations in the groundwater. As illustrated in Figure 4, the most impacted TPH-g region was in the vicinity of the dispenser islands and former USTs, around well MW-3.

In wells MW-1, MW-4, MW-5, and MW-6, toluene was below the laboratory reporting limit. In wells MW-2 and MW-7, both benzene and toluene were below the laboratory reporting limit. In wells MW-8 and MW-9, all BTEX analytes were below the laboratory reporting limit. The most impacted BTEX sample was

collected from well MW-3. BTEX concentrations in the groundwater sample collected from well MW-3 were detected at 2,510 ug/L, 1,140 ug/L, 1,950 ug/L, and 5,030 ug/L, respectively.

Figure 5 displays a contour map of benzene concentrations in the groundwater. The most impacted benzene region was in the vicinity of the dispenser islands and former USTs, around well MW-3. The benzene concentration detected in well MW-3 was several orders of magnitude higher than the remaining site wells.

MtBE, when using EPA Method 8260B, was either at low levels or below the laboratory reporting limit in all of the off-site wells and wells MW-1 and MW-2. Detectable MtBE concentrations ranged from 1.75 ug/L in well MW-1 to 2,210 ug/L in well MW-3. Figure 6 displays the contour map of MtBE concentrations in the groundwater. The most impacted MtBE region was in the vicinity of the dispenser islands and former USTs, around well MW-3.

Table 2 shows the analytical results for gasoline oxygenates, as well as the historical groundwater gasoline oxygenate results.

All Isopropyl Ether (DIPE), 1,2-Dibromoethane (EDB), Ethanol, and Ethyl tertiary Butyl Ether (EtBE) constituents, with the exception of EtBE in well MW-4 (at 2.95 ug/L), were below the laboratory reporting limit in all of the groundwater samples collected during this monitoring event. 1,2-Dichloroethane (1,2-DCA) was only detected in the groundwater samples collected from wells MW-1 and MW-9, at 0.51 ug/L and 2.80 ug/L, respectively. The analytical results for 1,2-DCA, ethanol, and EDB constituents are shown in the laboratory report in Appendix C.

Tert-Butyl-Alcohol (TBA) was only detected in the groundwater samples collected from wells MW-3, MW-4, and MW-5 at 367 ug/L, 405 ug/L, and 91.8 ug/L, respectively. Figure 7 displays the contour map of TBA concentrations in the groundwater. TBA appears to have only minimally impacted the Site's groundwater. The most impacted region was in the vicinity of the dispenser islands, around well MW-4. However, TBA has shown a decreasing trend in well MW-4 since August 2005.

Methyl tert-Amyl Ether (TAME) was only detected in wells MW-3 to MW-5 at 594 ug/L, 31.3 ug/L, and 163 ug/L, respectively. Figure 8 displays the contour map of TAME concentrations in the groundwater.

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

Refer to Tables 1 and 2 for further detailed historical concentration trends.



### 3.0 CONCLUSION AND RECOMMENDATIONS

The results of the Second Quarter 2006 groundwater monitoring event can be summarized as follows:

- The groundwater flow direction has remained in a south to southwesterly direction throughout the Site; however, the groundwater gradient has slightly decreased.
- The hydrocarbon source area still remains in the vicinity of the former UST cavity, near well MW-3, where a previous release of petroleum hydrocarbons occurred. The highest TPH-g, BTEX, MtBE, and TAME concentrations were detected in well MW-3.
- The southerly migration of impacted groundwater from the source area of the former UST cavity is evident by the higher TBA concentrations in well MW-4. However, the TBA plume appears to be a shrinking plume based on the decreasing trend observed in well MW-4.
- Based on the quarterly groundwater monitoring results, in general, all BTEX, MtBE and gasoline oxygenates have remained at low or non-detectable levels in the off-site wells. The TPH-g concentration this quarter is significantly lower than the historical peak value in well MW-6. TPH-g has historically remained at non-detectable levels in wells MW-8 and MW-9.

Based on the results of this monitoring event, SOMA recommends the following action items:

- Continuing the quarterly monitoring programs to better understand the seasonal variations in the groundwater quality conditions.
- SOMA is currently in the process of coordinating efforts with the property owner and ACHCS to conduct a site investigation. This investigation will aid in determining the vertical extent of the contamination and whether the dissolved contaminant plume has migrated to nearby residential areas.

### 4.0 REPORT LIMITATIONS

This report is the summary of work done by SOMA, including observations and descriptions of the Site's conditions. It includes the analytical results produced by Pacific Analytical Laboratory for the current groundwater monitoring event. The number and location of the wells were selected to provide the required information, but may not be completely representative of the entire site's conditions. All conclusions and recommendations are based on the results of the

laboratory analysis. Conclusions beyond those specifically stated in this document should not be inferred from this report.

SOMA warrants that the services provided were done in accordance with the generally accepted practices in the environmental engineering and consulting field at the time of this sampling.

# Figures

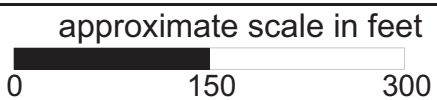
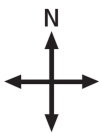
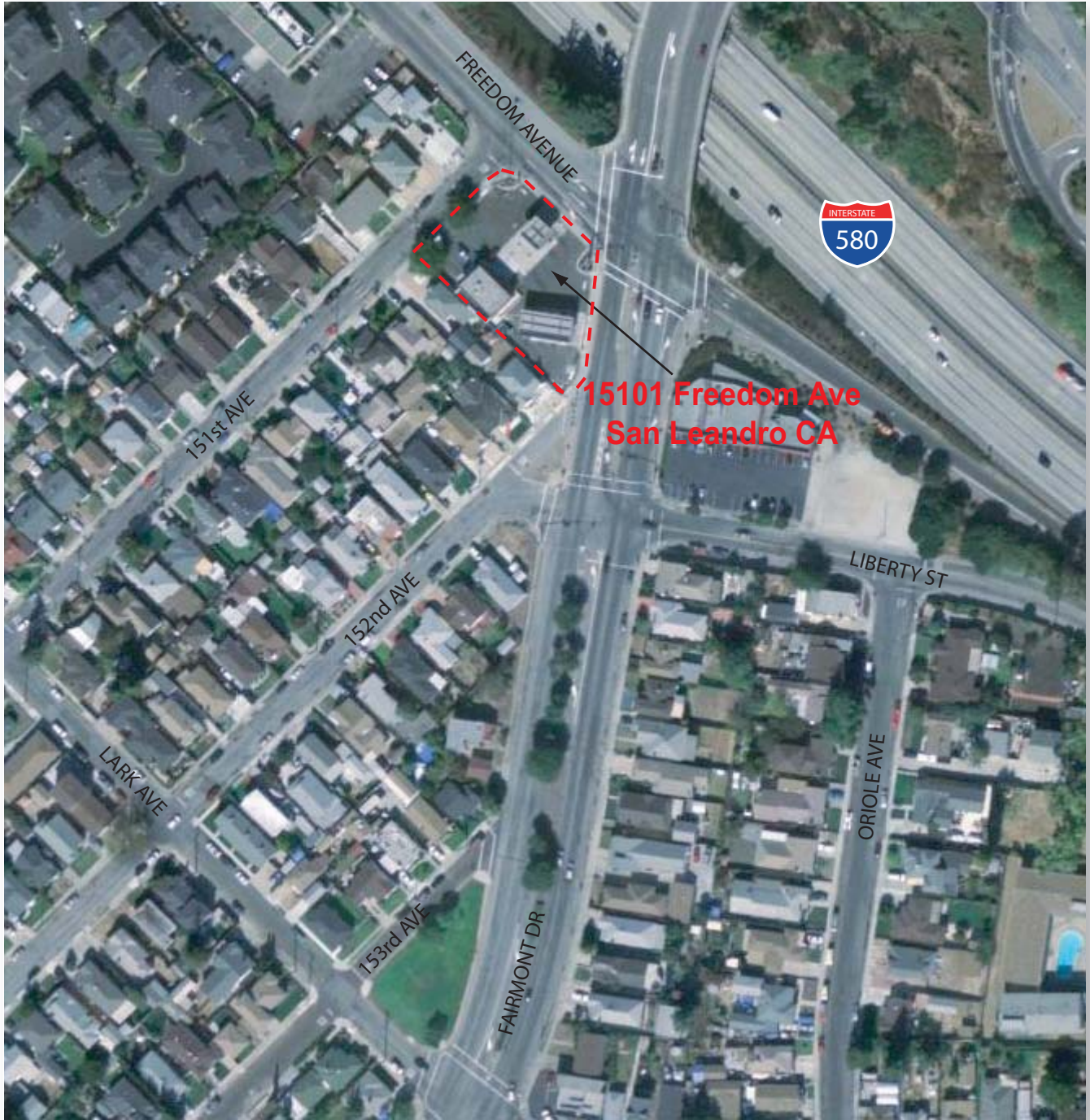


Figure 1: Site vicinity map.

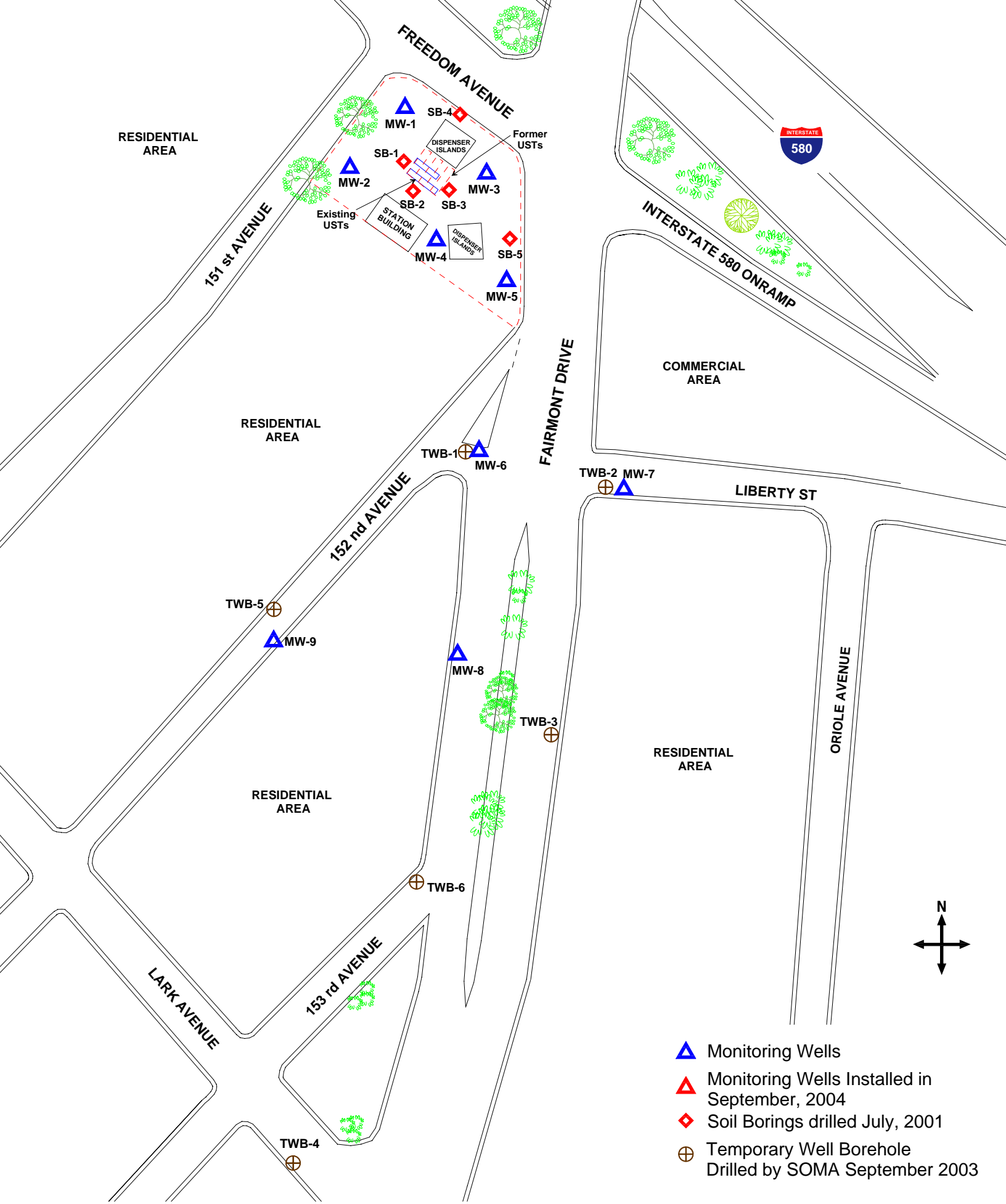
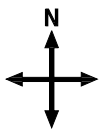


Figure 2: Site map showing locations of groundwater monitoring wells and soil borings.



RESIDENTIAL AREA

FREEDOM AVENUE



151 st AVENUE



Former USTs

Existing USTs



INTERSTATE 580 ONRAMP

COMMERCIAL AREA

RESIDENTIAL AREA

152 nd AVENUE



FAIRMONT DRIVE

LIBERTY ST

Approximate droundwater flow direction



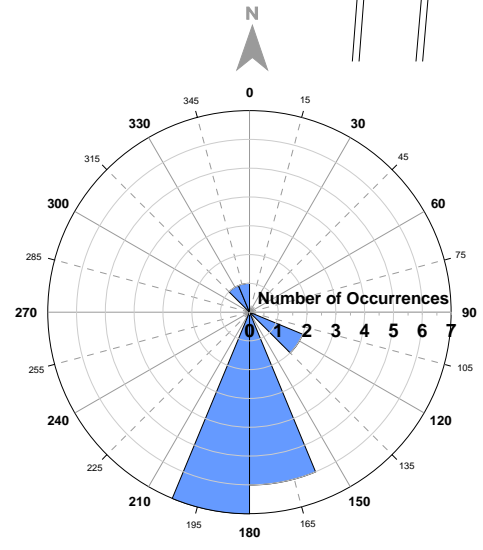
RESIDENTIAL AREA

ORIOLE AVENUE

RESIDENTIAL AREA

LARK AVENUE

153 rd AVENUE



Rose Diagram of Groundwater Flow Direction (June 2002 - April 2006)

▲ Monitoring Wells

Note: Monitoring wells MW-6 through MW-9 installed in September 2004.

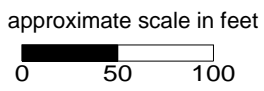
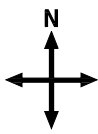


Figure 3: Groundwater elevation contour map in feet. May 9, 2006.





RESIDENTIAL AREA

FREEDOM AVENUE



151 st AVENUE

MW-1  
444

MW-2  
1,100

MW-3  
48,100

Existing USTs

MW-4  
1,290

MW-5  
8,360

INTERSTATE 580 ONRAMP

COMMERCIAL AREA

RESIDENTIAL AREA

FAIRMONT DRIVE

MW-6  
3,730

LIBERTY ST

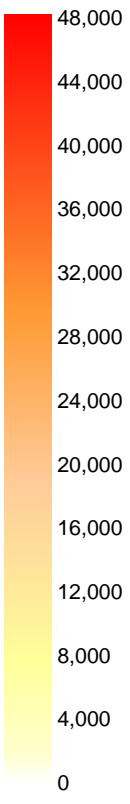
152 nd AVENUE

MW-9  
<50

MW-8  
<50

MW-7  
1,400

TPH-g  
µg/L

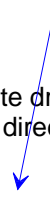


RESIDENTIAL AREA

ORIOLE AVENUE

RESIDENTIAL AREA

Approximate groundwater flow direction



▲ Monitoring Wells

< Less than Laboratory Reporting Limit

Note: Monitoring wells MW-6 through MW-9 installed in September 2004.

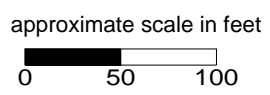
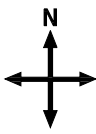


Figure 4: Contour map of TPH-g concentrations in groundwater. May 9, 2006.





RESIDENTIAL AREA

FREEDOM AVENUE



151 st AVENUE

MW-1  
7.8

MW-2  
<0.5

MW-3  
2,510

Former USTs

Existing USTs

STATION BUILDING

DISPENSER ISLANDS

DISPENSER ISLANDS

MW-4  
18.1

MW-5  
111

INTERSTATE 580 ONRAMP

COMMERCIAL AREA

RESIDENTIAL AREA

FAIRMONT DRIVE

MW-6  
25

LIBERTY ST

152 nd AVENUE

MW-9  
<0.50

MW-8  
<0.50

MW-7  
<0.5

RESIDENTIAL AREA

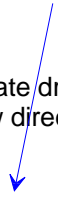
ORIOLE AVENUE

RESIDENTIAL AREA

LARK AVENUE

153 rd AVENUE

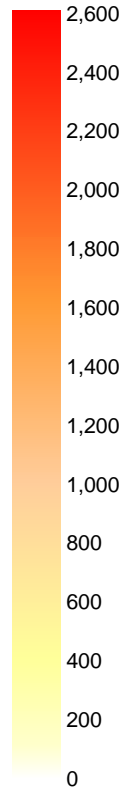
Approximate groundwater flow direction



▲ Monitoring Wells

< Less than Laboratory Reporting Limit

Benzene  $\mu\text{g/L}$



Note: Monitoring wells MW-6 through MW-9 installed in September 2004.

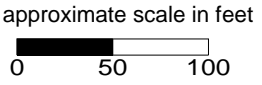
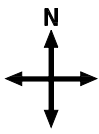


Figure 5: Contour map of Benzene concentrations in groundwater. May 9, 2006.







RESIDENTIAL AREA

FREEDOM AVENUE



151 st AVENUE

MW-1  
1.75

MW-2  
<0.5

MW-3  
2,210

Former USTs

Existing USTs

MW-4  
799

MW-5  
566

INTERSTATE 580 ONRAMP

COMMERCIAL AREA

RESIDENTIAL AREA

FAIRMONT DRIVE

MW-6  
5.87

152 nd AVENUE

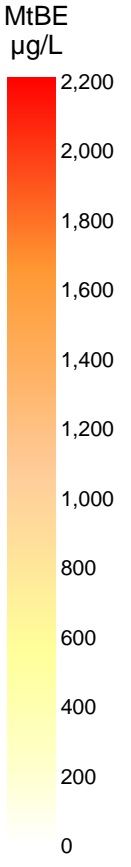
LIBERTY ST

MW-9  
<0.50

MW-8  
<0.50

MW-7  
2.3

RESIDENTIAL AREA



Approximate groundwater flow direction

▲ Monitoring Wells

< Less than Laboratory Reporting Limit

LARK AVENUE

153 rd AVENUE

ORIOLE AVENUE

Note: Monitoring wells MW-6 through MW-9 installed in September 2004.

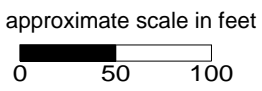
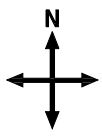


Figure 6: Contour map of MtBE concentrations in groundwater (EPA Method 8260B). May 9, 2006.





RESIDENTIAL AREA

FREEDOM AVENUE



151 st AVENUE

MW-1  
<10

Former USTs

DISPENSER ISLANDS

MW-2  
<10

MW-3  
367

STATION BUILDING

Existing USTs

MW-4  
405

DISPENSER ISLANDS

MW-5  
91.8

INTERSTATE 580 ONRAMP

COMMERCIAL AREA

RESIDENTIAL AREA

FAIRMONT DRIVE

MW-6  
<10

152 nd AVENUE

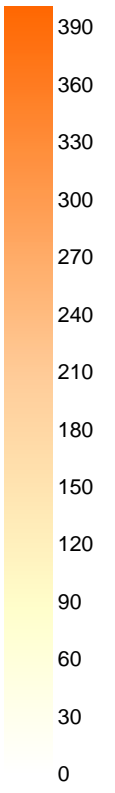
LIBERTY ST

MW-7  
<10

MW-9  
<10

MW-8  
<10

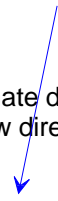
TBA  
µg/L





RESIDENTIAL AREA

ORIOLE AVENUE

Approximate droundwater flow direction



-  Monitoring Wells
-  Less than Laboratory Reporting Limit

Note: Monitoring wells MW-6 through MW-9 installed in September 2004.

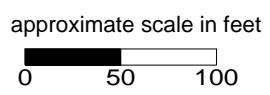
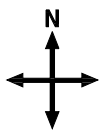


Figure 7: Contour map of TBA concentrations in groundwater. May 9, 2006.





RESIDENTIAL AREA

FREEDOM AVENUE



151 st AVENUE

MW-1  
<2.0

Former USTs

MW-3  
594

MW-2  
<2.0

STATION BUILDING

MW-4  
31.3

MW-5  
163

Existing USTs

MW-6  
<2.0

INTERSTATE 580 ONRAMP

COMMERCIAL AREA

RESIDENTIAL AREA

FAIRMONT DRIVE

152 nd AVENUE

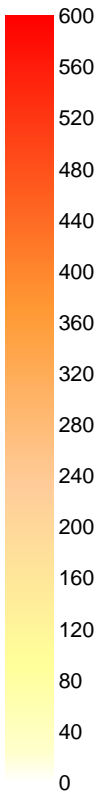
LIBERTY ST

MW-9  
<2.0

MW-8  
<2.0

MW-7  
<2.0

TAME  
µg/L



RESIDENTIAL AREA

RESIDENTIAL AREA

ORIOLE AVENUE

LARK AVENUE

153 rd AVENUE

Approximate groundwater flow direction



▲ Monitoring Wells

< Less than Laboratory Reporting Limit

Note: Monitoring wells MW-6 through MW-9 installed in September 2004.

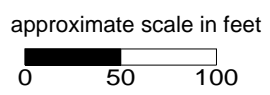


Figure 8: Contour map of TAME concentrations in groundwater. May 9, 2006.



# Tables

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
<b>MW-1</b>	5/10/2002	51.71	22.85	28.86	5,700	360	4.5	340	450	2
	8/8/2002	51.71	23.31	28.40	9,100	590	2.6	830	362	<1.3
	11/8/2002	51.71	23.58	28.13	7,900	570	3.1	680	392	< 1.0
	2/21/2003	51.71	22.62	29.09	2,900	160	1.6 C	170	211	<0.5
	5/28/2003	51.71	22.43	29.28	1,700	55	<0.5	90	115	2.00
	8/12/2003	51.71	21.30	30.41	2,600	2.5	<0.5	190	130	<0.5
	10/9/2003	51.71	23.49	28.22	9,200	560.0	2.7 C	670	648	<1.0
	1/15/2004	51.71	22.43	29.28	5,500	190	<1.0	220	124.4	<0.5
	5/25/2004	51.71	22.94	28.77	8,000	400	1.50	420	393	3.40
	9/21/2004	54.46	23.49	30.97	9,300	580	9.30	690	683	4.60
	12/14/2004	54.46	23.01	31.45	7,360	337	<4.3	731	633	<4.3
	3/11/2005	54.46	21.48	32.98	2,510	45.2	<0.5	23.2	39.63	2.80
	6/15/2005	54.46	22.42	32.04	1,690	36.3	<2.0	59.5	28.73	2.01
	8/26/2005	54.46	23.00	31.46	7,310	318	<8.60	475	316	5.15
	11/11/2005	54.46	21.40	33.06	9,640	341	<8.6	467	329.7	6.04
	2/9/2006	54.46	21.81	32.65	775	14	<2.0	12.6	10.32	4.01
	<b>5/9/2006</b>	<b>54.46</b>	<b>21.68</b>	<b>32.78</b>	<b>444</b>	<b>7.80</b>	<b>&lt;2.0</b>	<b>12.1</b>	<b>6.31</b>	<b>1.75</b>
<b>MW-2</b>	5/10/2002	49.66	22.83	26.83 *	3,100	67	8	250	215	56
	8/8/2002	49.66	21.41	28.25	2,700	4.6	<0.5	310	140	<0.5
	11/8/2002	49.66	21.79	27.87	3,400	4.6	< 0.5	310	160	< 0.5
	2/21/2003	49.66	20.51	29.15	890	1.7 C	0.80 C	68	38.92 C	<0.5
	5/28/2003	49.66	20.33	29.33	2,700	5.2 C	<0.5	120	140	1.2
	8/12/2003	49.66	23.18	26.48*	8,500	640	<2.5	560	659	<0.8
	10/9/2003	49.66	21.71	27.95	3100 H	4.3 C	<0.5	210	160	<0.5

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
MW-2 cont.	1/15/2004	49.66	20.31	29.35	660 H	1.5 C	<0.5	8.9	25	<0.5
	5/25/2004	49.66	21.09	28.57	4,500	5.1 C	<0.5	190	230	0.70
	9/21/2004	52.41	21.71	30.70	370	0.76 C	<0.5	25	16	0.50
	12/14/2004	52.41	21.20	31.21	880	1.0	<0.5	66	52	<0.5
	3/11/2005	52.41	19.15	33.26	564	<0.5	<0.5	21	11.9	<0.5
	6/15/2005	52.41	20.30	32.11	2,040	1.2	<2.0	78.2	22	<0.5
	8/26/2005	52.41	20.97	31.44	1,500	0.930	<2.00	87.6	21	0.86
	11/11/2005	52.41	25.30	27.11	2,140	1.08	<2.0	104	29	0.79
	2/9/2006	52.41	19.41	33.00	1,410	<0.5	<2.0	99.6	21.4	0.72
	<b>5/9/2006</b>	<b>52.41</b>	<b>19.41</b>	<b>33.00</b>	<b>1,100</b>	<b>&lt;0.5</b>	<b>&lt;2.0</b>	<b>86.5</b>	<b>17</b>	<b>&lt;0.5</b>
MW-3	5/10/2002	51.16	22.28	28.88	44,000	6,000	900	1,500	6,200	2,400
	8/8/2002	51.16	22.88	28.28	40,000	5,800	1,100	1,600	6,500	1,300
	11/8/2002	51.16	23.19	27.97	47,000	5,300	1,200	2,200	8,600	1,000
	2/21/2003	51.16	22.02	29.14	39,000	5,500	1,500	2,000	8,600	1,300
	5/28/2003	51.16	21.89	29.27	52,000	7,300	3,000	2,800	12,700	2,100
	8/12/2003	51.16	22.66	28.50	31,000	6,100	860	1,500	6,900	1,200
	10/9/2003	51.16	23.06	28.10	41,000	6,100	1,100	2,200	10,200	960
	1/15/2004	51.16	21.85	29.31	51,000	4,100	1,100	2,000	8,400	590
	5/25/2004	51.16	22.55	28.61	65,000	4,300	1,300	2,500	10,500	720
	9/21/2004	53.91	23.08	30.83	42,000	4,900	890	2,200	8,700	480
	12/14/2004	53.91	22.52	31.39	35,151	4,066	972	2,942	13,032	491
	3/11/2005	53.91	20.90	33.01	42,600	3,040	1,100	1,530	6,670	968
	6/15/2005	53.91	21.85	32.06	84,100	5,110	2,160	3,030	8,800	2,670
	8/26/2005	53.91	22.49	31.42	43,500	3,630	1,080	2,500	6,830	1,440
	11/11/2005	53.91	22.81	31.10	47,700	4,240	520	2,170	6,320	1,390
	2/9/2006	53.91	21.12	32.79	44,500	5,070	1360	1,920	4,840	3,280
	<b>5/9/2006</b>	<b>53.91</b>	<b>21.09</b>	<b>32.82</b>	<b>48,100</b>	<b>2,510</b>	<b>1,140</b>	<b>1,950</b>	<b>5,030</b>	<b>2,210</b>

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
<b>MW-4</b>	5/10/2002	50.54	21.78	28.76	880	25	1.0C	110	52	12,000
	8/8/2002	50.54	22.50	28.04	3,800	70	<5.0	300	115	4,800
	11/8/2002	50.54	22.81	27.73	5,100	150	10	460	258	2,400
	2/21/2003	50.54	21.48	29.06	3,200	98	66	220	360	6,600
	5/28/2003	50.54	21.24	29.30	6,200	140	46	200	790	2,300
	8/12/2003	50.54	22.32	28.22	7,500	180	57	220	1450	1,900
	10/9/2003	50.54	22.74	27.80	5,800	250	32	300	970	7,800
	1/15/2004	50.54	21.19	29.35	5,900	270	17 C	150	640	7,300
	5/25/2004	50.54	22.03	28.51	9,100	210	51	200	1190	1800
	9/21/2004	53.31	22.76	30.55	5,200	290	12	370	600	7300
	12/14/2004	53.31	21.99	31.32	8,937	538	114	416	2379	5021
	3/11/2005	53.31	20.01	33.30	12,300	225	39.6	80.1	1465	3870
	6/15/2005	53.31	21.25	32.06	7,690	114	32.6	77.1	555	1150
	8/26/2005	53.31	22.03	31.28	8,850	175	24.6	150	851	1380
	11/11/2005	53.31	22.43	30.88	9,990	356	<43	196	700	3,640
2/9/2006	53.31	20.31	33.00	6,850	205	<43	67.2	255.2	5,120	
<b>5/9/2006</b>	<b>53.31</b>	<b>20.33</b>	<b>32.98</b>	<b>1,290</b>	<b>18.1</b>	<b>&lt;8.6</b>	<b>12.9</b>	<b>25.87</b>	<b>799</b>	
<b>MW-5</b>	5/10/2002	47.79	19.02	28.77	25,000	1,000	1200	1,100	3,060	1,800
	8/8/2002	47.79	19.80	27.99	18,000	1,000	660	950	1,720	1,500
	11/8/2002	47.79	20.14	27.65	16,000	1,300	380	930	1,550	1,200
	2/21/2003	47.79	18.70	29.09	12,000	390	71	770	1,100	860
	5/28/2003	47.79	18.52	29.27	9,100	210	31	560	790	600
	8/12/2003	47.79	19.54	28.25	12,000	660	75	660	1,110	1,000
	10/9/2003	47.79	20.06	27.73	15,000	1,000	130	1,000	1,430	1,700
	1/15/2004	47.79	18.42	29.37	9,900	450 C	16	500	431	1,100

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Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
<b>MW-5 cont.</b>	5/25/2004	47.79	19.30	28.49	9,200	380	24	490	536	720
	9/21/2004	50.53	20.15	30.38	10,000	980	71	560	770	1200
	12/14/2004	50.53	19.30	31.23	10,502	587	64	1040	1133	1015
	3/11/2005	50.53	17.20	33.33	8,390	407	<5.5	83	42.5	1530
	6/15/2005	50.53	18.54	31.99	9,350	147	18.3	435	146.2	573
	8/26/2005	50.53	19.31	31.22	9,500	261	<22	726	321.3	749
	11/11/2005	50.53	19.75	30.78	10,000	443	41.5	527	278.5	1,430
	2/9/2006	50.53	17.58	32.95	7,640	237	<22	187	50.2	2,050
	<b>5/9/2006</b>	<b>50.53</b>	<b>17.54</b>	<b>32.99</b>	<b>8,360</b>	<b>111</b>	<b>&lt;8.6</b>	<b>300</b>	<b>75.84</b>	<b>566</b>
<b>MW-6</b>	9/21/2004	45.82	17.64	28.18	34,000	150	130	2200	8100	0.6
	12/14/2004	45.82	15.75	30.07	5,161	137	7	436	1136	<5.5
	3/11/2005	45.82	13.80	32.02	6,040	125	3.22	260	722.1	4.94
	6/15/2005	45.82	14.78	31.04	5,590	44.3	6.60	272	382	5.85
	8/26/2005	45.82	15.91	29.91	6,130	99	<8.6	378	492.9	5.66
	11/11/2005	45.82	16.55	29.27	11,400	101	<8.6	645	834.7	4.33
	2/9/2006	45.82	13.92	31.90	2,790	32.3	<8.6	131	131.22	7.30
	<b>5/9/2006</b>	<b>45.82</b>	<b>13.95</b>	<b>31.87</b>	<b>3,730</b>	<b>25</b>	<b>&lt;2.0</b>	<b>213</b>	<b>207.82</b>	<b>5.87</b>
	<b>MW-7</b>	9/21/2004	44.74	15.21	29.53	2,900	<0.5	<0.5	52	61
12/14/2004		44.74	13.90	30.84	<50	1.6	<0.5	29	58	6.0
3/11/2005		44.74	11.46	33.28	2,230	<2.5	<2.5	39.4	51.4	12.4
6/15/2005		44.74	12.97	31.77	2,940	0.85	<2.0	50.6	31.9	13.7
8/26/2005		44.74	14.10	30.64	2,310	<0.50	<2.0	55.7	29.6	4.01
11/11/2005		44.74	14.59	30.15	3,030	<0.5	<2.0	66.5	42.3	9.76
2/9/2006		44.74	NM	NM	NA	NA	NA	NA	NA	NA
<b>5/9/2006</b>		<b>44.74</b>	<b>12.02</b>	<b>32.72</b>	<b>1,400</b>	<b>&lt;0.5</b>	<b>&lt;2.0</b>	<b>19.8</b>	<b>12.4</b>	<b>2.30</b>
<b>MW-8</b>		9/21/2004	41.14	12.98	28.16	<50	<0.5	<0.5	<0.5	<0.5
	12/14/2004	41.14	11.22	29.92	<50	<0.5	<0.5	<0.5	<1.0	<0.5
	3/11/2005	41.14	NM	NM	NA	NA	NA	NA	NA	NA
	6/15/2005	41.14	10.46	30.68	<200	0.53	<2.0	<0.5	<1.0	<0.5
	8/26/2005	41.14	11.53	29.61	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	11/11/2005	41.14	11.92	29.22	<50	<0.5	<2.0	1.36	1.8	<0.5
	2/9/2006	41.14	9.74	31.40	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	<b>5/9/2006</b>	<b>41.14</b>	<b>9.90</b>	<b>31.24</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;2.0</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>&lt;0.50</b>



**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
MW-9	9/21/2004	40.26	12.18	28.08	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	12/14/2004	40.26	10.91	29.35	<50	<0.5	<0.5	<0.5	<1.0	<0.5
	3/11/2005	40.26	10.52	29.74	<200	<0.5	<0.5	<0.5	<1.0	<0.5
	6/15/2005	40.26	14.73	25.53	<200	<0.5	<2.0	<0.5	<1.0	<0.5
	8/26/2005	40.26	10.59	29.67	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	11/11/2005	40.26	11.25	29.01	<50	<0.5	<2.0	<0.5	<1.0	<0.5
	2/9/2006	40.26	10.05	30.21	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	<b>5/9/2006</b>	<b>40.26</b>	<b>9.06</b>	<b>31.20</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;2.0</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>&lt;0.50</b>

Notes:

The first time SOMA monitored this Site was in May 2002.

\*: Due to minimal recharge rates in well MW-2, the groundwater elevation recorded on these dates did not match the overall site conditions, May 2002 & August 2003.

<sup>1</sup> : Top of casing elevations were surveyed to a datum of 67.07 M.S.L by Kier & Wright Civil Engineers & Land Surveyors on May 7, 2002

On October 11, 2004, the site was re-surveyed by Harrington Surveys, Inc. of Walnut Creek, CA to a datum of California Coordinate System, Zone 3, NAD 83.

<sup>2</sup> MtBE analyzed by EPA Method 8021B, and confirmed by EPA Method 8260B.

<: Not detected above the laboratory reporting limit.

<sup>c</sup> Presence confirmed, but confirmation concentration differed by more than a factor of two

C: Presence confirmed, but RPD between columns exceeds 40%.

H: Heavier hydrocarbons contributed to the quantitation.

NA: Not Analyzed. Well MW-8 was inaccessible during the First Quarter 2005, car was parked over well.

Not Analyzed. Well MW-7 was inaccessible during the First Quarter 2006, car was parked over well.

NM: Not Measured. Well MW-8 was inaccessible during the First Quarter 2005, car was parked over well.

Not Measured. Well MW-7 was inaccessible during the First Quarter 2006, car was parked over well.

The first time SOMA monitored wells MW-6 to MW-9 was in September 2004.

**Table 2**  
**Historical Gasoline Oxygenates Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
<b>MW-1</b>	8/8/2002	78	<1.3	<1.3	<1.3
	11/1/2002	42	< 1.0	< 1.0	< 1.0
	2/21/2003	47	<0.5	<0.5	<0.5
	5/28/2003	25	<0.5	<0.5	<0.5
	8/12/2003	<10	<0.5	<0.5	<0.5
	10/9/2003	70	<1.0	<1.0	<1.0
	1/15/2004	55	<0.5	<0.5	<0.5
	5/25/2004	62	<0.7	<0.7	<0.7
	9/21/2004	<10	<0.5	<0.5	<0.5
	12/14/2004	<21.5	<4.3	<4.3	<17.2
	3/11/2005	81	<0.5	<0.5	<2.0
	6/15/2005	<10	<0.5	<0.5	<2.0
	8/26/2005	68.9	<2.15	<2.15	<8.6
	11/11/2005	46	<2.15	<2.15	<8.6
	2/9/2006	11.3	<0.5	<0.5	<2.0
	<b>5/9/2006</b>	<b>&lt;10</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>
<b>MW-2</b>	8/8/2002	21	<0.5	<0.5	<0.5
	11/1/2002	15	<0.5	<0.5	<0.5
	2/21/2003	12	<0.5	<0.5	<0.5
	5/28/2003	31	<0.5	<0.5	<0.5
	8/12/2003	69	<0.8	<0.8	<0.8
	10/9/2003	12	<0.5	<0.5	<0.5
	1/15/2004	<10	<0.5	<0.5	<0.5
	5/25/2004	14	<0.5	<0.5	<0.5
	9/21/2004	<10	<0.5	<0.5	<0.5
	12/14/2004	<2.5	<0.5	<0.5	<2.0

**Table 2**  
**Historical Gasoline Oxygenates Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
<b>MW-2 cont.</b>	3/11/2005	<2.5	<0.5	<0.5	<2.0
	6/15/2005	<10	<0.5	<0.5	<2.0
	8/26/2005	<10	<0.5	<0.5	<2.0
	11/11/2005	<10	<0.5	<0.5	<2.0
	2/9/2006	<10	<0.5	<0.5	<2.0
	<b>5/9/2006</b>	<b>&lt;10</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;2.0</b>
<b>MW-3</b>	8/8/2002	<330	<8.3	<8.3	330
	11/1/2002	85	< 1.3	<1.3	220
	2/21/2003	140	<5.0	<5.0	320
	5/28/2003	520	<10	<10	530
	8/12/2003	180	<4.2	<4.2	270
	10/9/2003	<170	<8.3	<8.3	200
	1/15/2004	<100	<5.0	<5.0	150
	5/25/2004	<100	<5.0	<5.0	270
	9/21/2004	<140	<7.1	<7.1	110
	12/14/2004	<100	<20	<20	154
	3/11/2005	<215	<43	<43	256
	6/15/2005	<215	<10.8	<10.8	374
	8/26/2005	699	<21.5	<21.5	277
	11/11/2005	<430	<21.5	<21.5	171
	2/9/2006	<430	<21.5	<21.5	620
<b>5/9/2006</b>	<b>367</b>	<b>&lt;10.8</b>	<b>&lt;10.8</b>	<b>594</b>	
<b>MW-4</b>	8/8/2002	1500	<17	<17	18
	11/1/2002	580	< 5.0	6	13
	2/21/2003	1600	<20	22	<20
	5/28/2003	690	<8.3	<8.3	17
	8/12/2003	550	<7.1	7.3	18
	10/9/2003	1400	<31	50	<31
	1/15/2004	1,300	<20	25	21
	5/25/2004	560	<8.3	<8.3	24
	9/21/2004	1,300	<50	<50	<50
	12/14/2004	826	<10.75	21	49

**Table 2**  
**Historical Gasoline Oxygenates Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
<b>MW-4 cont.</b>	3/11/2005	1,110	<10.8	12.1	<43
	6/15/2005	<110	<5.5	<5.5	22.9
	8/26/2005	902	<5.50	<5.50	37.4
	11/11/2005	884	<10.8	<10.8	<43
	2/9/2006	769	<10.8	16.4	45.6
	<b>5/9/2006</b>	<b>405</b>	<b>&lt;2.15</b>	<b>2.95</b>	<b>31.3</b>
<b>MW-5</b>	8/8/2002	<250	<6.3	<6.3	510
	11/1/2002	66	< 2.0	< 2.0	560
	2/21/2003	<63	<3.1	<3.1	280
	5/28/2003	<33	<1.7	<1.7	110
	8/12/2003	130	<3.6	<3.6	270
	10/9/2003	<100	<5.0	<5.0	740
	1/15/2004	<63	<3.1	<3.1	300
	5/25/2004	<100	<5.0	<5.0	210
	9/21/2004	<130	<6.3	<6.3	550
	12/14/2004	40	<5.5	<5.5	444
	3/11/2005	88.8	<5.5	<5.5	448
	6/15/2005	<43	<2.15	<2.15	88.1
	8/26/2005	274	<5.50	<5.50	195
	11/11/2005	192	<5.50	<5.50	360
	2/9/2006	218	<5.50	<5.50	523
<b>5/9/2006</b>	<b>91.8</b>	<b>&lt;2.15</b>	<b>&lt;2.15</b>	<b>163</b>	
<b>MW-6</b>	9/21/2004	<10	<0.5	<0.5	<0.5
	12/14/2004	<5.5	<5.5	<5.5	<22
	3/11/2005	2.54	<0.5	<0.5	<2.0
	6/15/2005	<20	<1.0	<1.0	<4.0
	8/26/2005	<43	<2.15	<2.15	<8.6
	11/11/2005	<43	<2.15	<2.15	<8.6
	2/9/2006	<43	<2.15	<2.15	<8.6
	<b>5/9/2006</b>	<b>&lt;10</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;2.0</b>

**Table 2**  
**Historical Gasoline Oxygenates Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
<b>MW-7</b>	9/21/2004	<10	<0.5	<0.5	1.5
	12/14/2004	<2.5	<0.5	<0.5	<2.0
	3/11/2005	<12.5	<2.5	<2.5	<10
	6/15/2005	<10	<0.5	<0.5	2.23
	8/26/2005	<10	<0.5	<0.5	<2.0
	11/11/2005	<10	<0.5	<0.5	<2.0
	2/9/2006 <b>5/9/2006</b>	NA <b>&lt;10</b>	NA <b>&lt;0.5</b>	NA <b>&lt;0.5</b>	NA <b>&lt;2.0</b>
<b>MW-8</b>	9/21/2004	<10	<0.5	<0.5	<0.5
	12/14/2004	<2.5	<0.5	<0.5	<2.0
	3/11/2005	NA	NA	NA	NA
	6/15/2005	<10	<0.5	<0.5	<2.0
	8/26/2005	<10	<0.5	<0.5	<2.0
	11/11/2005	<10	<0.5	<0.5	<2.0
	2/9/2006 <b>5/9/2006</b>	<10 <b>&lt;10</b>	<0.5 <b>&lt;0.5</b>	<0.5 <b>&lt;0.5</b>	<2.0 <b>&lt;2.0</b>
<b>MW-9</b>	9/21/2004	<10	<0.5	<0.5	<0.5
	12/14/2004	<2.5	<0.5	<0.5	<2.0
	3/11/2005	<2.5	<0.5	<0.5	<2.0
	6/15/2005	<10	<0.5	<0.5	<2.0
	8/26/2005	<10	<0.5	<0.5	<2.0
	11/11/2005	<10	<0.5	<0.5	<2.0
	2/9/2006 <b>5/9/2006</b>	<10 <b>&lt;10</b>	<0.5 <b>&lt;0.5</b>	<0.5 <b>&lt;0.5</b>	<2.0 <b>&lt;2.0</b>

Notes:

August 8, 2002 was the first time that samples were analyzed for Gasoline Oxygenates

<: Not detected above the laboratory reporting limit.

NA: Not Analyzed. Well MW-8 was inaccessible during the 1Q05 & well MW-7 (1Q06) car was parked over each well.

TBA: tert-Butyl Alcohol

DIPE: Isopropyl Ether

ETBE: Ethyl tert-Butyl Ether

TAME: Methyl tert-Amyl Ether

# Appendix A

## SOMA's Groundwater Monitoring Procedures

## **Field Activities**

On May 9, 2006, 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 May 9, 2006, a total of five onsite monitoring wells (MW-1 to MW-5), and four off-site wells (MW-6 to MW-9) were measured for depth to groundwater. On May 9, 2006, additional field measurements and grab groundwater samples were collected from all of the monitoring wells.

Prior to measuring the groundwater depth at each monitoring well, equalization with the surrounding aquifer was achieved. The well cap was removed from each well, and the pressure in each well was then allowed to dissipate. This allowed for a more stable water table level within the well. After a few minutes, and once the water level in the well stabilized, the depth to groundwater in each monitoring well was measured from the top of the casing to the nearest 0.01 foot using an electric sounder.

The Site was re-surveyed by Harrington Surveys Inc., of Walnut Creek, on October 11, 2004. The survey datum was based on California Coordinate System, Zone 3, NAVD 83. The elevation data was based on a datum of 58.50 feet NAVD88. Top of casing elevation data and the depth to groundwater in each monitoring well was used to calculate the groundwater elevation.

The survey data is included in Appendix B.

## **Purging and Field Measurements**

Prior to collecting samples, each monitoring well was purged using a battery operated 2-inch diameter pump (Model ES-60 DC).

In order to ensure that the final samples were in equilibrium with and representative of the surrounding groundwater, several samples were taken during the purging for field measurements of pH, temperature and EC. These parameters were measured using a Hanna pH, conductivity, and temperature meter. The equipment was calibrated at the Site using standard solutions and procedures provided by the manufacturer.

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

The purging continued until these parameters stabilized or three casing volumes were purged.

### **Sampling**

On May 9, 2006, for sampling purposes, after purging, a disposable polyethylene bailer was used to collect sufficient samples from each monitoring well for laboratory analyses. The groundwater samples collected from each monitoring well were transferred to four 40-mL VOA vials, which had been prepared with a hydrochloric acid preservative. The vials were sealed to prevent the development of air bubbles within the headspace area.

After the groundwater samples were collected, they were placed in an ice chest and maintained at 4°C. A chain of custody (COC) form was completed for all of the samples and was submitted along with the samples to the laboratory. Upon completion of this monitoring event, SOMA's field crew delivered the groundwater samples to Pacific Analytical Laboratory in Alameda, California.

### **LABORATORY ANALYSIS**

Pacific Analytical Laboratory, a state certified laboratory, analyzed the groundwater samples for TPH-g, BTEX, MtBE, gasoline oxygenates, ethanol and lead scavengers. Samples for TPH-g, BTEX, MtBE, gasoline oxygenates, ethanol and lead scavengers measurements were prepared using EPA Method 5030B and analyzed using Method 8260B.



# Appendix B

Table of Elevations & Coordinates on Monitoring Wells  
Measured by Harrington Surveys, Inc.,  
and  
Field Measurements of Physical and Chemical  
Parameters of Groundwater Samples

**Harrington Surveys Inc.**  
**Land Surveying & Mapping**

2278 Larkey Lane, Walnut Creek, Ca. 94596 Phone (925)935-7228 Fax (925)935-5118  
Cel (925)788-7359 E-Mail (ben5132@pacbell.net)

Soma Environmental Engineering  
2680 Bishop Dr. # 203  
San Ramon, Ca. 94583

Oct. 14, 2004

Attn: Elena Manzo  
Job # 2445

Ref: 15101 Freedom Ave, San Leandro, Ca.

**HORIZONTAL CONTROL, NAD 88:**

Survey based on California Coordinate System, Zone 3, NAD 83.

CHABOT "B", NORTH 2,087,731.02 EAST 6,094,039.23 sft. LAT. N37°43'02.71762"  
W122°07'00.46339", NAVD 88, ELEV. 134.957.

CHABOT "A", NORTH 2,088,584.99 EAST 6,093,351.39 sft. LAT. N37°43'11.04190"  
W122°07'09.20691", NAVD 88, ELEV. 492.08.

**VERTICAL CONTROL, NAVD 88:**

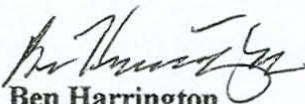
NGS 1974, STATION K 1256, NAVD 88 ELEV. 58.50.  
PID # HT1871

GPS: TRIMBLE 5800, LEICA TCA 1800, 1" HORZ. & VERT.

EPOCH DATE 1998.5

OBSERVATION: EPOCH=180.

FIELD SURVEY: OCT. 11, 2004.

  
Ben Harrington  
PLS 5132



PT	NAD 83 NORTH (sft)	NAD 83 EAST(sft)	NAVD 88 ELEV.	DESCRIPTION	NORTH LATITUDE (DMS)	WEST LONGITUDE (DMS)
1	2087731.02	6094039.23	442.77	FD CHABOT B	37°43'02.71762"	122°07'00.46339"
2	2088584.99	6093351.39	492.08	FD CHABOT A	37°43'11.04190"	122°07'09.20691"
51	2084348.54	6092159.32	55.44	FD. X-8		
52	2084073.17	6092141.24	46.15	MW-6 PAV		
53	2084072.72	6092140.95	46.15	MW-6 PUNCH		
54	2084072.47	6092140.95	45.82	MW-6 NOTCH	37°42'26.22635"	122°07'23.29643"
55	2083909.71	6091947.10	40.61	MW-9 PAV		
56	2083909.10	6091946.97	40.61	MW-9 PUNCH		
57	2083908.71	6091947.00	40.26	MW-9 NOTCH	37°42'24.57425"	122°07'25.67431"
58	2083861.20	6092118.11	41.38	MW-8 PAV		
59	2083860.43	6092118.36	41.44	MW-8 PUNCH		
60	2083860.03	6092118.52	41.14	MW-8 NOTCH	37°42'24.12245"	122°07'23.52966"
61	2084008.21	6092290.11	44.94	MW-7 PAV		
62	2084007.88	6092290.27	44.95	MW-7 PVNCH		
63	2084007.68	6092290.40	44.74	MW-7 NOTCH	37°42'25.61150"	122°07'21.42290"
64	2084206.49	6092175.95	51.03	MW-5 PAV		
65	2084206.17	6092176.55	50.96	MW-5 PUNCH		
66	2084206.01	6092176.79	50.53	MW-5 NOTCH	37°42'27.55260"	122°07'22.87930"
67	2084670.41	6092307.68	69.79	FD BM FAIR580		
68	2084443.65	6092198.88	53.70	MW-4 PAV		
69	2084444.39	6092199.72	53.74	MW-4 PUNCH		
70	2084444.59	6092199.51	53.31	MW-4 NOTCH	37°42'29.91496"	122°07'22.64809"
71	2084399.10	6092145.43	54.37	MW-3 PAV		
72	2084399.78	6092145.28	54.33	MW-3 PUNCH		
73	2084400.15	6092145.27	53.91	MW-3 NOTCH	37°42'29.46636"	122°07'23.31339"
74	2084329.47	6092199.72	54.82	MW-1 PAV		
75	2084330.44	6092199.45	54.79	MW-1 PUNCH		
76	2084330.75	6092199.20	54.46	MW-1 NOTCH	37°42'28.78955"	122°07'22.62738"
77	2084367.59	6092256.38	52.88	MW-2 PAV		
78	2084368.15	6092256.14	52.92	MW-2 PUNCH		
79	2084368.53	6092256.06	52.41	MW-2 NOTCH	37°42'29.17277"	122°07'21.92804"
80	2084930.49	6091759.33	58.50	FD BM K1256	37°42'34.64279"	122°07'28.23011"





**ENVIRONMENTAL ENGINEERING, INC**

Well No.: MW-1  
 Casing Diameter: 4 inch  
 Depth of Well: 30.40 ft  
 Top of Casing Elevation: 54.46 ft  
 Depth to Groundwater: 21.68 ft  
 Groundwater Elevation: 32.78 ft  
 Water Column Height: 8.72 ft  
 Purged Volume: 15 gallons

Project No.: 2551  
 Address: 15101 Freedom Ave.  
 San Leandro, CA  
 Date: May 9, 2006  
 Sampler: John Lohman  
 Eric Jennings

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: No  Yes  Describe \_\_\_\_\_

Sheen: No  Yes  Describe \_\_\_\_\_

Odor: No  Yes  Describe \_\_\_\_\_

**Field Measurements:**

Time <i>PM</i>	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
1 <sup>56</sup>	START PURGE						
1 <sup>59</sup>	4	2.65	7.06	21.23	937	357	-19
2 <sup>02</sup>	8	2.28	6.92	21.21	936	311	-39
2 <sup>05</sup>	12	2.19	6.89	21.20	936	273	-49
2 <sup>07</sup>	15	2.10	6.88	21.18	937	252	-52
2 <sup>09</sup>	SAMPLED						

Notes:



Well No.: MW-2  
 Casing Diameter: 4 inch  
 Depth of Well: 30.38 ft  
 Top of Casing Elevation: 52.41 ft  
 Depth to Groundwater: 19.41 ft  
 Groundwater Elevation: 33.00 ft  
 Water Column Height: 10.89 ft  
 Purged Volume: 16 gallons

Project No.: 2551  
 Address: 15101 Freedom Ave.  
 San Leandro, CA  
 Date: May 9, 2006  
 Sampler: John Lohman  
 Eric Jennings

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: No  Yes  Describe \_\_\_\_\_

Sheen: No  Yes  Describe \_\_\_\_\_

Odor: No  Yes  Describe \_\_\_\_\_

Field Measurements:

Time <i>PM</i>	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
135	START PURGE						
138	4	3.86	7.08	21.11	1310	230	67
141	8	2.86	6.99	21.06	950	327	16
144	12	2.36	6.95	21.02	1050	271	-12
146	16	2.18	6.95	21.02	1080	261	-18
148	SAMPLED						

Notes:



Well No.: MW-3  
 Casing Diameter: 4 inch  
 Depth of Well: 30.00 ft  
 Top of Casing Elevation: 53.91 ft  
 Depth to Groundwater: 21.09 ft  
 Groundwater Elevation: 32.82 ft  
 Water Column Height: 8.91 ft  
 Purged Volume: 11 gallons

Project No.: 2551  
 Address: 15101 Freedom Ave.  
 San Leandro, CA  
 Date: May 9, 2006  
 Sampler: John Lohman  
 Eric Jennings

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump   
 Color: No  Yes  Describe \_\_\_\_\_  
 Sheen: No  Yes  Describe \_\_\_\_\_  
 Odor: No  Yes  Describe \_\_\_\_\_

Field Measurements:

Time <i>PM</i>	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
2 <sup>20</sup>	START						
2 <sup>22</sup>	3	3.00	6.95	21.66	1390	316	25
2 <sup>24</sup>	6	2.60	6.82	21.65	1360	274	-11
2 <sup>26</sup>	9	2.20	6.76	21.64	1360	281	-33
2 <sup>28</sup>	12	2.02	6.73	21.64	1390	235	-46
2 <sup>30</sup>	SAMPLED						

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-4  
 Casing Diameter: 4 inch  
 Depth of Well: 30.10 ft  
 Top of Casing Elevation: 53.31 ft  
 Depth to Groundwater: 20.33 ft  
 Groundwater Elevation: 32.98 ft  
 Water Column Height: 9.77 ft  
 Purged Volume: 16 gallons

Project No.: 2551  
 Address: 15101 Freedom Ave.  
 San Leandro, CA  
 Date: May 9, 2006  
 Sampler: John Lohman  
 Eric Jennings

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump   
 Color: No  Yes  Describe \_\_\_\_\_  
 Sheen: No  Yes  Describe \_\_\_\_\_  
 Odor: No  Yes  Describe slight

Field Measurements:

Time PM	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
3:00	START PURGE						
3:03	4	2.68	6.88	20.67	1490	232	1
3:06	8	2.24	6.81	20.63	1530	217	-23
3:08	12	2.22	6.78	20.59	1590	230	-35
3:12	16	1.93	6.78	20.60	1600	217	-37
3:14	SAMPLED						

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-5  
 Casing Diameter: 4 inch  
 Depth of Well: 29.85 ft  
 Top of Casing Elevation: 50.53 ft  
 Depth to Groundwater: 17.54 ft  
 Groundwater Elevation: 32.99 ft  
 Water Column Height: 12.31 ft  
 Purged Volume: 15 gallons

Project No.: 2551  
 Address: 15101 Freedom Ave.  
 San Leandro, CA  
 Date: May 9, 2006  
 Sampler: John Lohman  
 Eric Jennings

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump   
 Color: No  Yes  Describe \_\_\_\_\_  
 Sheen: No  Yes  Describe \_\_\_\_\_  
 Odor: No  Yes  Describe slight

Field Measurements:

Time	Volume (gallons)	D.O. mg/L	pH	Temp °C	E.C. (µS/cm)	Turb. NTU	ORP
2:40	START	PURGE					
2:43	4	2.90	6.85	21.26	1370	337	1
2:46	8	2.82	6.81	21.35	1370	269	-33
2:49	12	1.96	6.79	21.31	1360	252	-50
2:51	15	1.88	6.79	21.31	1360	298	-56
2:53	SAMPLED						

Notes:





ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-6  
 Casing Diameter: 4 inch  
 Depth of Well: 27.90 ft  
 Top of Casing Elevation: 45.82 ft  
 Depth to Groundwater: 13.95 ft  
 Groundwater Elevation: 31.87 ft  
 Water Column Height: 13.95 ft  
 Purged Volume: 17 gallons

Project No.: 2551  
 Address: 15101 Freedom Ave.  
 San Leandro, CA  
 Date: May 9, 2006  
 Sampler: John Lohman  
 Eric Jennings

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump   
 Color: No  Yes  Describe \_\_\_\_\_  
 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
12 <sup>21</sup>	START		PHRGE				
12 <sup>24</sup>	4	<del>1.74</del>	7.11	20.59	915	333	97
12 <sup>27</sup>	8	1.74	6.98	20.56	913	273	67
12 <sup>29</sup>	11	1.58	6.92	20.58	911	217	39
12 <sup>31</sup>	14	1.52	6.90	20.59	915	198	12
12 <sup>33</sup>	17	1.59	6.90	20.60	914	223	2
12 <sup>35</sup>	SAMPLED						

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-7  
 Casing Diameter: 2 inch  
 Depth of Well: 21.00 ft  
 Top of Casing Elevation: 44.74 ft  
 Depth to Groundwater: 12.02 ft  
 Groundwater Elevation: 32.72 ft  
 Water Column Height: 8.98 ft  
 Purged Volume: 12 gallons

Project No.: 2551  
 Address: 15101 Freedom Ave.  
 San Leandro, CA  
 Date: May 9, 2006  
 Sampler: John Lohman  
 Eric Jennings

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: No  Yes  Describe \_\_\_\_\_

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
12 <sup>44</sup>	START @ 12:06						
12 <sup>46</sup>	3	2.74	6.88	18.44	1260	436	66
12 <sup>48</sup>	6	2.22	6.78	18.37	1250	331	46
12 <sup>50</sup>	9	2.03	6.74	18.39	1250	294	30
12 <sup>52</sup>	12	1.90	6.71	18.38	1250	247	13
12 <sup>54</sup>	SAMPLED						

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-8  
 Casing Diameter: 2 inch  
 Depth of Well: 28.75 ft  
 Top of Casing Elevation: 41.14 ft  
 Depth to Groundwater: 9.90 ft  
 Groundwater Elevation: 31.24 ft  
 Water Column Height: 18.85 ft  
 Purged Volume: 9 gallons

Project No.: 2551  
 Address: 15101 Freedom Ave.  
 San Leandro, CA  
 Date: May 9, 2006  
 Sampler: John Lohman  
 Eric Jennings

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump   
 Color: No  Yes  Describe SILTY  
 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
1150	START PURGE						
1152	3	11.29	6.75	19.92	1450	999	135
1154	6	9.94	6.80	19.92	1450	463	130
1156	9	9.90	6.84	19.91	1450	279	128
1158	SAMPLE ID						

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-9  
 Casing Diameter: 2 inch  
 Depth of Well: 32.60 ft  
 Top of Casing Elevation: 40.26 ft  
 Depth to Groundwater: 7.06 ft  
 Groundwater Elevation: 31.20 ft  
 Water Column Height: 23.54 ft  
 Purged Volume: 0 gallons

Project No.: 2551  
 Address: 15101 Freedom Ave.  
 San Leandro, CA  
 Date: May 9, 2006  
 Sampler: John Lohman  
 Eric Jennings

Purging Method: Bailer  Pump   
 Sampling Method: Bailer  Pump   
 Color: No  Yes  Describe \_\_\_\_\_  
 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
12 <sup>06</sup>	START PUMP & GE						
12 <sup>08</sup>	3	6.83	7.12	19.90	1140	310	122
12 <sup>10</sup>	6	5.93	7.14	19.78	1170	270	123
12 <sup>12</sup>	9	2.34	7.12	19.79	1160	999	123
12 <sup>14</sup>	SAMPLED						

Notes:

# Appendix C

Laboratory Report and Chain of Custody Form  
for the  
Second Quarter 2006 Monitoring Event

# CHAIN OF CUSTODY FORM

**PAL** Pacific Analytical Laboratory  
 851 West Midway Ave., Suite 201B  
 Alameda, CA 94501  
 510-864-0364 Telephone  
 510-864-0365 Fax

PAL  
 Login# 6050004

Project No: 2551				Sampler: John Lohman / Eric Jennings								Analyses/Method																			
Project Name: 15101 Freedom Avenue San Leandro				Report To: Tony Perini								TPH-g, BTEX, MIBE Gasoline Oxygenates & Lead Scavengers																			
				Company: SOMA Environmental Engineering, Inc.																											
Turnaround Time: Standard				Tel: 925-244-6600 Fax: 925-244-6601																											
		Sampling Date/Time		Matrix			# of Containers	Preservatives																							
Lab No.	Sample ID	Date	Time	Soil	Water	Waste		HCL	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE	Field Notes																			
	MW-1	5/9/06	2:09	X			4 VOAs	X			X	Grab Sample																			
	MW-2	5/9/06	1:48	X			4 VOAs	X			X	Grab Sample																			
	MW-3	5/9/06	2:30	X			4 VOAs	X			X	Grab Sample																			
	MW-4	5/9/06	3:14	X			4 VOAs	X			X	Grab Sample																			
	MW-5	5/9/06	2:53	X			4 VOAs	X			X	Grab Sample																			
	MW-6	5/9/06	12:35	X			4 VOAs	X			X	Grab Sample																			
	MW-7	5/9/06	12:54	X			4 VOAs	X			X	Grab Sample																			
	MW-8	5/9/06	11:54	X			4 VOAs	X			X	Grab Sample																			
	MW-9	5/9/06	12:14	X			4 VOAs	X			X	Grab Sample																			
Sampler Remarks:				Relinquished by:				Date/Time:				Received by:				Date/Time:															
EDF REQUIRED Ethanol				<i>Eric Jennings</i>				5/9/06 <del>4:15</del> 4:15 PM				<i>James Jennings</i>				MAY 9, 2006 / 4:45 PM															

19 May 2006

Mansour Sepehr  
SOMA Environmental Engineering Inc.  
6620 Owens Drive, Suite A  
Pleasanton, CA 94588

RE: 15101 Freedom Ave., San Leandro

Work Order Number: 6050004

This Laboratory report has been reviewed for technical correctness and completeness. This entire report was reviewed and approved by the Laboratory Director or the Director's designee, as verified by the following signature.

Sincerely,



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Maiid Akhavan  
Laboratory Director



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

Project: 15101 Freedom Ave., San Leandro  
Project Number: 2551  
Project Manager: Mansour Sepehr

**Reported:**  
19-May-06 13:25

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	6050004-01	Water	09-May-06 14:09	09-May-06 16:16
MW-2	6050004-02	Water	09-May-06 13:48	09-May-06 16:16
MW-3	6050004-03	Water	09-May-06 14:30	09-May-06 16:16
MW-4	6050004-04	Water	09-May-06 15:14	09-May-06 16:16
MW-5	6050004-05	Water	09-May-06 14:53	09-May-06 16:16
MW-6	6050004-06	Water	09-May-06 12:35	09-May-06 16:16
MW-7	6050004-07	Water	09-May-06 12:54	09-May-06 16:16
MW-8	6050004-08	Water	09-May-06 11:58	09-May-06 16:16
MW-9	6050004-09	Water	09-May-06 12:14	09-May-06 16:16





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

Project: 15101 Freedom Ave., San Leandro  
Project Number: 2551  
Project Manager: Mansour Sepehr

**Reported:**  
19-May-06 13:25

**Volatile Organic Compounds by EPA Method 8260B**  
**Pacific Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (605004-01) Water</b> <b>Sampled: 09-May-06 14:09</b> <b>Received: 09-May-06 16:16</b>									
<b>Gasoline (C6-C12)</b>	<b>444</b>	50.0	ug/l	1	BE61501	09-May-06	10-May-06	EPA 8260B	
<b>Benzene</b>	<b>7.80</b>	0.500	"	"	"	"	"	"	"
<b>Ethylbenzene</b>	<b>12.1</b>	0.500	"	"	"	"	"	"	"
<b>m&amp;p-Xylene</b>	<b>4.58</b>	1.00	"	"	"	"	"	"	"
<b>o-xylene</b>	<b>1.73</b>	0.500	"	"	"	"	"	"	"
Toluene	ND	2.00	"	"	"	"	"	"	"
<b>MTBE</b>	<b>1.75</b>	0.500	"	"	"	"	"	"	"
DIPE	ND	0.500	"	"	"	"	"	"	"
ETBE	ND	0.500	"	"	"	"	"	"	"
TAME	ND	2.00	"	"	"	"	"	"	"
TBA	ND	10.0	"	"	"	"	"	"	"
<b>1,2-dichloroethane</b>	<b>0.510</b>	0.500	"	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	"
Ethanol	ND	1000	"	"	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>		106 %		70-130	"	"	"	"	"
<i>Surrogate: Dibromofluoromethane</i>		90.2 %		70-130	"	"	"	"	"
<i>Surrogate: Perdeuterotoluene</i>		101 %		70-130	"	"	"	"	"
<b>MW-2 (605004-02) Water</b> <b>Sampled: 09-May-06 13:48</b> <b>Received: 09-May-06 16:16</b>									
<b>Gasoline (C6-C12)</b>	<b>1100</b>	50.0	ug/l	1	BE61501	09-May-06	10-May-06	EPA 8260B	
Benzene	ND	0.500	"	"	"	"	"	"	"
<b>Ethylbenzene</b>	<b>86.5</b>	0.500	"	"	"	"	"	"	"
<b>m&amp;p-Xylene</b>	<b>17.0</b>	1.00	"	"	"	"	"	"	"
o-xylene	ND	0.500	"	"	"	"	"	"	"
Toluene	ND	2.00	"	"	"	"	"	"	"
MTBE	ND	0.500	"	"	"	"	"	"	"
DIPE	ND	0.500	"	"	"	"	"	"	"
ETBE	ND	0.500	"	"	"	"	"	"	"
TAME	ND	2.00	"	"	"	"	"	"	"
TBA	ND	10.0	"	"	"	"	"	"	"
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	"
Ethanol	ND	1000	"	"	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>		110 %		70-130	"	"	"	"	"

Pacific Analytical Laboratory

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SOMA Environmental Engineering Inc. 6620 Owens Drive, Suite A Pleasanton CA, 94588	Project: 15101 Freedom Ave., San Leandro Project Number: 2551 Project Manager: Mansour Sepehr	<b>Reported:</b> 19-May-06 13:25
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**Volatile Organic Compounds by EPA Method 8260B**

**Pacific Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-2 (6050004-02) Water    Sampled: 09-May-06 13:48    Received: 09-May-06 16:16</b>									
<i>Surrogate: Dibromofluoromethane</i>		95.4 %	70-130		BE61501	09-May-06	10-May-06	EPA 8260B	
<i>Surrogate: Perdeuterotoluene</i>		107 %	70-130		"	"	"	"	
<b>MW-3 (6050004-03RE1) Water    Sampled: 09-May-06 14:30    Received: 09-May-06 16:16</b>									
<b>Gasoline (C6-C12)</b>	<b>48100</b>	1080	ug/l	21.5	BE61501	09-May-06	12-May-06	EPA 8260B	
<b>Benzene</b>	<b>2510</b>	10.8	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>1950</b>	10.8	"	"	"	"	"	"	
<b>m&amp;p-Xylene</b>	<b>2950</b>	21.5	"	"	"	"	"	"	
<b>o-xylene</b>	<b>2080</b>	10.8	"	"	"	"	"	"	
<b>Toluene</b>	<b>1140</b>	43.0	"	"	"	"	"	"	
<b>MTBE</b>	<b>2210</b>	10.8	"	"	"	"	"	"	
DIPE	ND	10.8	"	"	"	"	"	"	
ETBE	ND	10.8	"	"	"	"	"	"	
<b>TAME</b>	<b>594</b>	43.0	"	"	"	"	"	"	
<b>TBA</b>	<b>367</b>	215	"	"	"	"	"	"	
1,2-dichloroethane	ND	10.8	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	10.8	"	"	"	"	"	"	
Ethanol	ND	21500	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		115 %	70-130		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		88.8 %	70-130		"	"	"	"	
<i>Surrogate: Perdeuterotoluene</i>		99.4 %	70-130		"	"	"	"	
<b>MW-4 (6050004-04RE1) Water    Sampled: 09-May-06 15:14    Received: 09-May-06 16:16</b>									
<b>Gasoline (C6-C12)</b>	<b>1290</b>	215	ug/l	4.3	BE61501	09-May-06	12-May-06	EPA 8260B	
<b>Benzene</b>	<b>18.1</b>	2.15	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>12.9</b>	2.15	"	"	"	"	"	"	
<b>m&amp;p-Xylene</b>	<b>19.5</b>	4.30	"	"	"	"	"	"	
<b>o-xylene</b>	<b>6.37</b>	2.15	"	"	"	"	"	"	
Toluene	ND	8.60	"	"	"	"	"	"	
<b>MTBE</b>	<b>799</b>	2.15	"	"	"	"	"	"	
DIPE	ND	2.15	"	"	"	"	"	"	
<b>ETBE</b>	<b>2.95</b>	2.15	"	"	"	"	"	"	
<b>TAME</b>	<b>31.3</b>	8.60	"	"	"	"	"	"	
<b>TBA</b>	<b>405</b>	43.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	2.15	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.15	"	"	"	"	"	"	
Ethanol	ND	4300	"	"	"	"	"	"	

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

Project: 15101 Freedom Ave., San Leandro  
 Project Number: 2551  
 Project Manager: Mansour Sepehr

**Reported:**  
 19-May-06 13:25

**Volatile Organic Compounds by EPA Method 8260B**

**Pacific Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-4 (6050004-04RE1) Water</b> Sampled: 09-May-06 15:14 Received: 09-May-06 16:16									
<i>Surrogate: 4-Bromofluorobenzene</i>		109 %	70-130		BE61501	09-May-06	12-May-06	EPA 8260B	
<i>Surrogate: Dibromofluoromethane</i>		90.4 %	70-130		"	"	"	"	
<i>Surrogate: Perdeuterotoluene</i>		103 %	70-130		"	"	"	"	
<b>MW-5 (6050004-05RE1) Water</b> Sampled: 09-May-06 14:53 Received: 09-May-06 16:16									
<b>Gasoline (C6-C12)</b>	<b>8360</b>	215	ug/l	4.3	BE61501	09-May-06	12-May-06	EPA 8260B	
<b>Benzene</b>	<b>111</b>	2.15	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>300</b>	2.15	"	"	"	"	"	"	
<b>m&amp;p-Xylene</b>	<b>69.5</b>	4.30	"	"	"	"	"	"	
<b>o-xylene</b>	<b>6.34</b>	2.15	"	"	"	"	"	"	
Toluene	ND	8.60	"	"	"	"	"	"	
<b>MTBE</b>	<b>566</b>	2.15	"	"	"	"	"	"	
DIPE	ND	2.15	"	"	"	"	"	"	
ETBE	ND	2.15	"	"	"	"	"	"	
<b>TAME</b>	<b>163</b>	8.60	"	"	"	"	"	"	
<b>TBA</b>	<b>91.8</b>	43.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	2.15	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.15	"	"	"	"	"	"	
Ethanol	ND	4300	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		116 %	70-130		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		91.4 %	70-130		"	"	"	"	
<i>Surrogate: Perdeuterotoluene</i>		98.6 %	70-130		"	"	"	"	
<b>MW-6 (6050004-06) Water</b> Sampled: 09-May-06 12:35 Received: 09-May-06 16:16									
<b>Gasoline (C6-C12)</b>	<b>3730</b>	50.0	ug/l	1	BE61501	09-May-06	10-May-06	EPA 8260B	
<b>Benzene</b>	<b>25.0</b>	0.500	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>213</b>	0.500	"	"	"	"	"	"	
<b>m&amp;p-Xylene</b>	<b>202</b>	1.00	"	"	"	"	"	"	
<b>o-xylene</b>	<b>5.82</b>	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
<b>MTBE</b>	<b>5.87</b>	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	

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6620 Owens Drive, Suite A  
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Project: 15101 Freedom Ave., San Leandro  
Project Number: 2551  
Project Manager: Mansour Sepehr

**Reported:**  
19-May-06 13:25

**Volatile Organic Compounds by EPA Method 8260B**

**Pacific Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-6 (6050004-06) Water</b> <b>Sampled: 09-May-06 12:35</b> <b>Received: 09-May-06 16:16</b>									
Ethanol	ND	1000	ug/l	1	BE61501	09-May-06	10-May-06	EPA 8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>		111 %	70-130		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		92.0 %	70-130		"	"	"	"	
<i>Surrogate: Perdeuterotoluene</i>		99.6 %	70-130		"	"	"	"	
<b>MW-7 (6050004-07) Water</b> <b>Sampled: 09-May-06 12:54</b> <b>Received: 09-May-06 16:16</b>									
<b>Gasoline (C6-C12)</b>	<b>1400</b>	50.0	ug/l	1	BE61501	09-May-06	11-May-06	EPA 8260B	
Benzene	ND	0.500	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>19.8</b>	0.500	"	"	"	"	"	"	
<b>m&amp;p-Xylene</b>	<b>12.4</b>	1.00	"	"	"	"	"	"	
o-xylene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
<b>MTBE</b>	<b>2.30</b>	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		110 %	70-130		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		84.4 %	70-130		"	"	"	"	
<i>Surrogate: Perdeuterotoluene</i>		102 %	70-130		"	"	"	"	
<b>MW-8 (6050004-08) Water</b> <b>Sampled: 09-May-06 11:58</b> <b>Received: 09-May-06 16:16</b>									
Gasoline (C6-C12)	ND	50.0	ug/l	1	BE61501	09-May-06	11-May-06	EPA 8260B	
Benzene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	1.00	"	"	"	"	"	"	
o-xylene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	

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Project: 15101 Freedom Ave., San Leandro  
Project Number: 2551  
Project Manager: Mansour Sepehr

**Reported:**  
19-May-06 13:25

**Volatile Organic Compounds by EPA Method 8260B**

**Pacific Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-8 (6050004-08) Water Sampled: 09-May-06 11:58 Received: 09-May-06 16:16</b>									
1,2-Dibromoethane (EDB)	ND	0.500	ug/l	1	BE61501	09-May-06	11-May-06	EPA 8260B	
Ethanol	ND	1000	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		102 %	70-130		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		89.2 %	70-130		"	"	"	"	
<i>Surrogate: Perdeuterotoluene</i>		101 %	70-130		"	"	"	"	
<b>MW-9 (6050004-09) Water Sampled: 09-May-06 12:14 Received: 09-May-06 16:16</b>									
Gasoline (C6-C12)	ND	50.0	ug/l	1	BE61501	09-May-06	11-May-06	EPA 8260B	
Benzene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	1.00	"	"	"	"	"	"	
o-xylene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
MTBE	ND	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	10.0	"	"	"	"	"	"	
<b>1,2-dichloroethane</b>	<b>2.80</b>	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		104 %	70-130		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		89.0 %	70-130		"	"	"	"	
<i>Surrogate: Perdeuterotoluene</i>		101 %	70-130		"	"	"	"	



SOMA Environmental Engineering Inc.  
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Project: 15101 Freedom Ave., San Leandro  
Project Number: 2551  
Project Manager: Mansour Sepehr

Reported:  
19-May-06 13:25

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Pacific Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch BE61501 - EPA 5030 Water MS**

**Blank (BE61501-BLK1)**

Prepared & Analyzed: 15-May-06

Surrogate: 4-Bromofluorobenzene	50.8		ug/l	50.0		102	70-130			
Surrogate: Dibromofluoromethane	45.2		"	50.0		90.4	70-130			
Surrogate: Perdeuterotoluene	51.0		"	50.0		102	70-130			
MTBE	ND	0.500	"							
DIPE	ND	0.500	"							
ETBE	ND	0.500	"							
TAME	ND	2.00	"							
Gasoline (C6-C12)	ND	50.0	"							
TBA	ND	10.0	"							
1,2-dichloroethane	ND	0.500	"							
1,2-Dibromoethane (EDB)	ND	0.500	"							
Ethanol	ND	1000	"							
Benzene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
m&p-Xylene	ND	1.00	"							
o-xylene	ND	0.500	"							
Toluene	ND	2.00	"							

**LCS (BE61501-BS1)**

Prepared & Analyzed: 15-May-06

Surrogate: 4-Bromofluorobenzene	54.4		ug/l	50.0		109	70-130			
Surrogate: Dibromofluoromethane	43.7		"	50.0		87.4	70-130			
Surrogate: Perdeuterotoluene	48.2		"	50.0		96.4	70-130			
MTBE	74.0	0.500	"	100		74.0	70-130			
ETBE	85.5	0.500	"	100		85.5	70-130			
TAME	91.5	2.00	"	100		91.5	70-130			
Gasoline (C6-C12)	2160	50.0	"	2000		108	70-130			
TBA	507	10.0	"	500		101	70-130			
Benzene	110	0.500	"	100		110	70-130			
Toluene	120	2.00	"	100		120	70-130			



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**Reported:**  
 19-May-06 13:25

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Pacific Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch BE61501 - EPA 5030 Water MS**

**LCS Dup (BE61501-bsd1)**

Prepared & Analyzed: 15-May-06

Surrogate: 4-Bromofluorobenzene	53.1		ug/l	50.0		106	70-130			
Surrogate: Dibromofluoromethane	44.6		"	50.0		89.2	70-130			
Surrogate: Perdeuterotoluene	48.9		"	50.0		97.8	70-130			
MTBE	78.4	0.500	"	100		78.4	70-130	5.77	20	
ETBE	88.5	0.500	"	100		88.5	70-130	3.45	20	
TAME	95.4	2.00	"	100		95.4	70-130	4.17	20	
TBA	533	10.0	"	500		107	70-130	5.00	20	
Gasoline (C6-C12)	1720	50.0	"	2000		86.0	70-130	22.7	20	QR-02
Benzene	115	0.500	"	100		115	70-130	4.44	20	
Toluene	123	2.00	"	100		123	70-130	2.47	20	



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Pleasanton CA, 94588

Project: 15101 Freedom Ave., San Leandro  
Project Number: 2551  
Project Manager: Mansour Sepehr

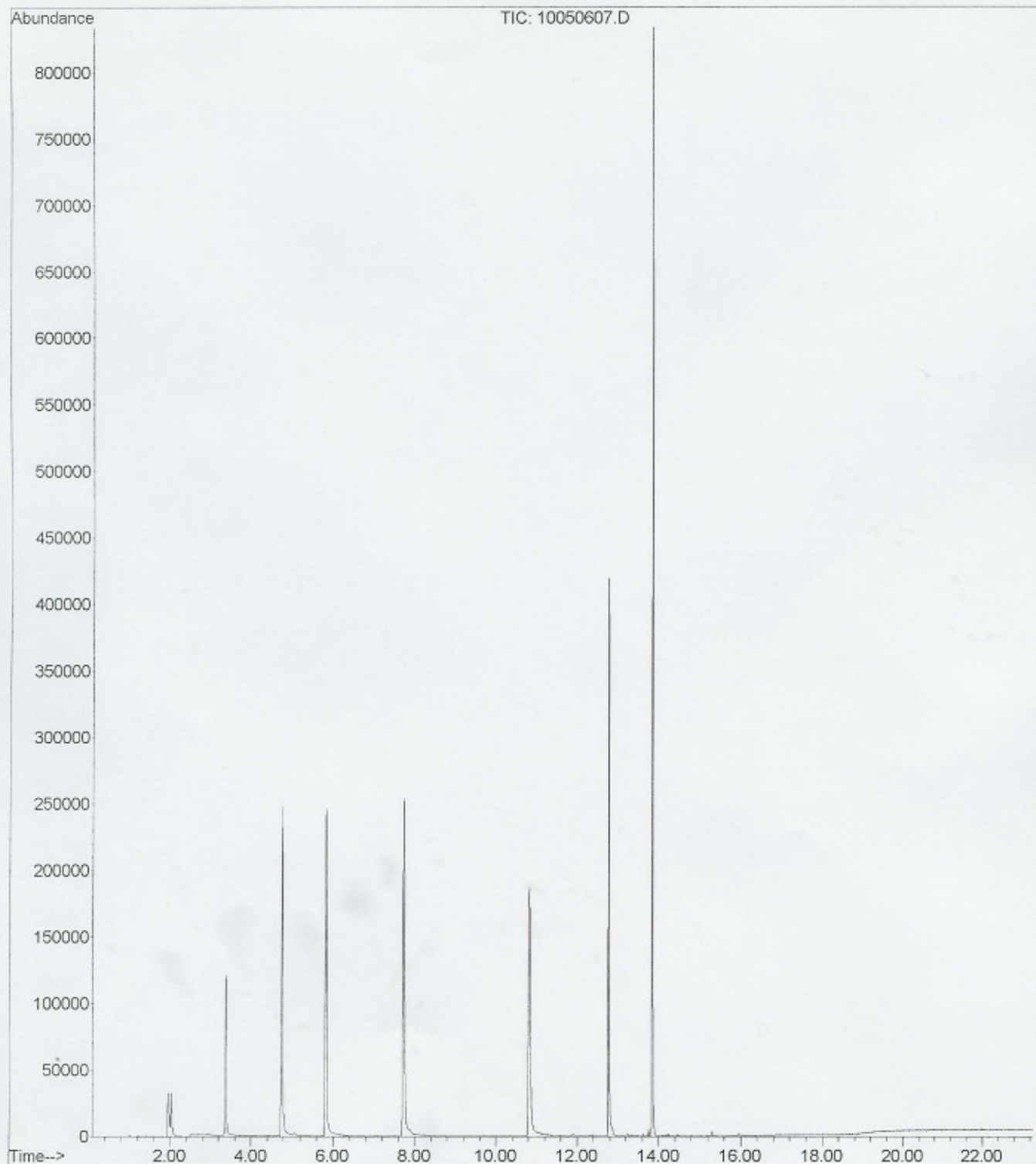
**Reported:**  
19-May-06 13:25

### Notes and Definitions

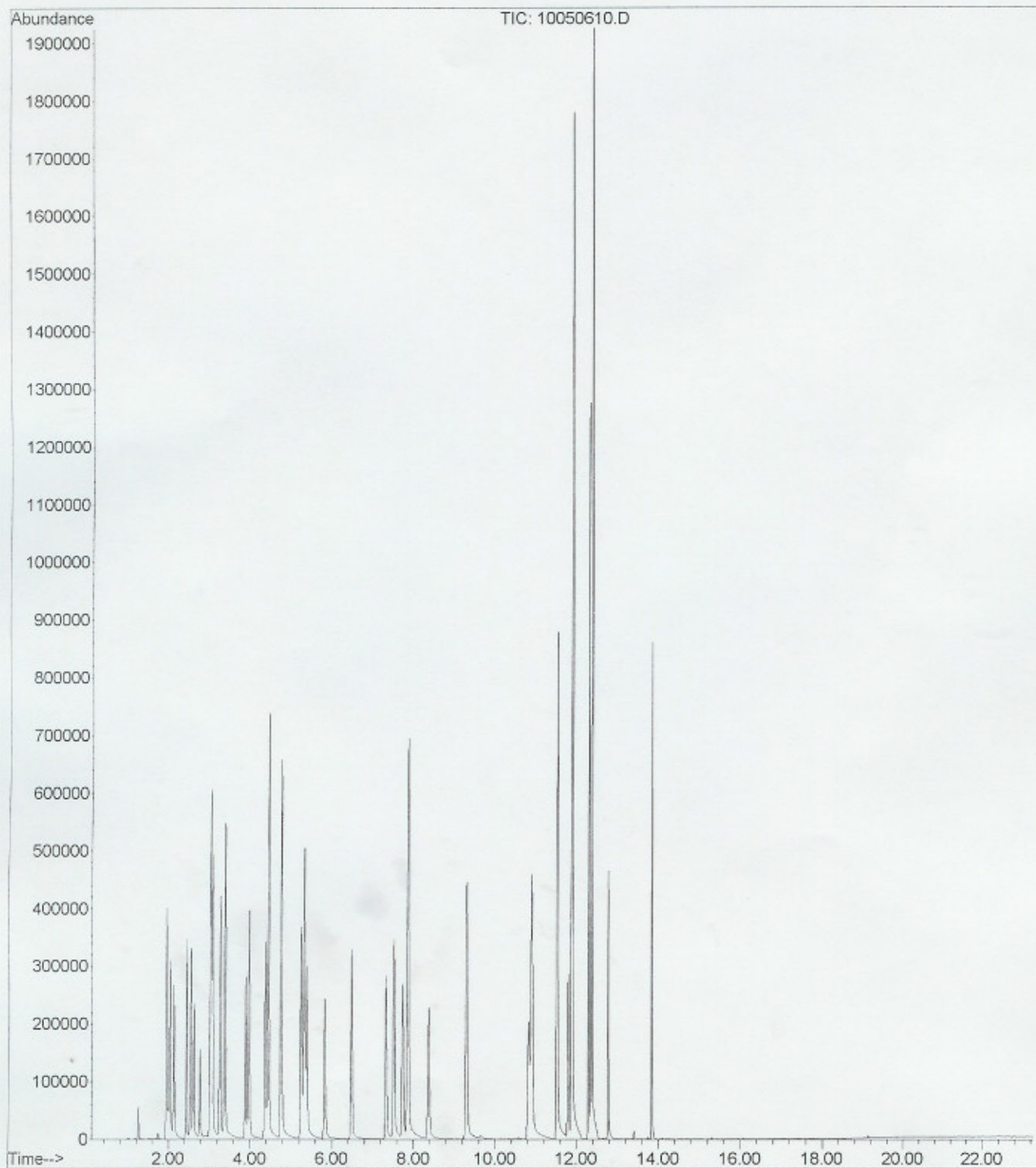
- QR-02      The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- DET        Analyte DETECTED
- ND        Analyte NOT DETECTED at or above the reporting limit
- NR        Not Reported
- dry        Sample results reported on a dry weight basis
- RPD        Relative Percent Difference



File :C:\MSDChem\1\DATA\2006-May-10-0946.b\10050607.D  
Operator :  
Acquired : 10 May 2006 2:38 pm using AcqMethod OXY21506.M  
Instrument : PAL GCMS  
Sample Name: BE61501-BLK1  
Misc Info :  
Vial Number: 7



File : C:\MSDCHEM\1\DATA\2006-May-10-0946.b\10050610.D  
Operator :  
Acquired : 10 May 2006 5:27 pm using AcqMethod OXY21506.M  
Instrument : PAL GCMS  
Sample Name: BE61501-BS1@voc  
Misc Info :  
Vial Number: 10



File : C:\MSDCHEM\1\DATA\2006-May-10-0946.b\10050606.D  
Operator :  
Acquired : 10 May 2006 1:49 pm using AcqMethod OXY21506.M  
Instrument : PAL GCMS  
Sample Name: BE61501-BS1@gas  
Misc Info :  
Vial Number: 6

