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Alameda County Environmental Health



May 20, 2008

Mr. Paresh Khatri 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. Khatri:

SOMA's "Second Quarter 2008 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



Second Quarter 2008 Groundwater Monitoring Report

Texaco Gasoline Service Station 15101 Freedom Avenue San Leandro, California

May 20, 2008

Project 2551

Prepared for

Mr. Mohammad Pazdel 1770 Pistacia Court Fairfield, California

CERTIFICATION

SOMA Environmental Engineering, Inc. has prepared this report on behalf of Mr. Mohammad Pazdel, property owner of 15101 Freedom Avenue, San Leandro, California, to comply with Alameda County Health Care Services requirements for the Second Quarter 2008 groundwater monitoring event.

Mansour Sepehr, PhD, PE Principal Hydrogeologist

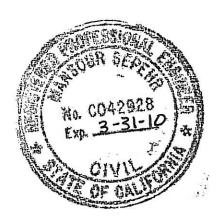


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April 15 and 16, 2008

1. INTRODUCTION

SOMA Environmental Engineering, Inc. (SOMA) has prepared this report on behalf of Mr. Mohammad Pazdel, property owner of 15101 Freedom Avenue, San Leandro, California. The site is located in an area of primarily residential properties and adjacent commercial areas (Figure 1).

This report summarizes results of the Second Quarter 2008 groundwater monitoring event conducted on April 15 and 16, 2008, and includes physical and chemical properties measured in the field for each groundwater sample. This report also includes laboratory analysis results for groundwater samples.

1.1 Field Activities

On April 15 and 16, 2008, SOMA's field crew conducted a groundwater monitoring event in accordance with procedures and guidelines of the Alameda County Health Care Services (ACHCS) and the California Regional Water Quality Control Board (CRWQCB). Figure 2 shows well locations.

On April 15, 2008, five on-site monitoring wells (MW-1 to MW-5), four off-site wells (MW-6 to MW-9) in the First water bearing zone (WBZ), and three on-site monitoring wells (MW-1D, MW-3D, and MW-4D) in the Second WBZ were measured for depth to groundwater. On April 15 and 16, 2008, additional field measurements and grab groundwater samples were collected from all monitoring wells. Properties measured include pH, temperature, and electrical conductivity (EC). Dissolved oxygen (DO) and oxidation reduction potential (ORP) measurements were taken for onsite wells.

1.2 Laboratory Analysis

Pacific Analytical Laboratory, a California state-certified laboratory, analyzed the groundwater samples for total petroleum hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene, total xylenes (collectively termed BTEX), methyl tertiary-butyl ether (MtBE), gasoline oxygenates, ethanol and lead scavengers. Samples were prepared using EPA Method 5030B and analyzed using Method 8260B.

2. RESULTS

Following are results of field measurements and laboratory analyses for the April 15 and 16, 2008 groundwater monitoring event.

2.1 Field Measurements for First WBZ Wells

Table 1 presents calculated groundwater elevations and depths to groundwater for each monitoring well. Depths to groundwater ranged from 10.56 feet in well MW-9 to 22.89 feet in MW-1. Corresponding groundwater elevations ranged from 29.70 feet in MW-8 and MW-9 to 31.57 feet in MW-1.

Figure 3 displays the contour map of groundwater elevations. Groundwater flows south to southwesterly across the site at a gradient of 0.0042 feet/feet. The groundwater flow direction has remained consistent with the previous monitoring event (First Quarter 2008); however, the gradient has decreased slightly.

Upon equalization with the surrounding aquifer at each well location, when the purge cycle was terminated, DO concentrations in the First WBZ ranged from 0.14 mg/L in well MW-2 to 0.86 mg/L in MW-7. ORP showed negative redox potentials in all First WBZ monitoring wells. Therefore, oxidation of petroleum hydrocarbons could have occurred in these monitoring wells. Negative redox potentials indicate that contaminants in the groundwater are conducive to anaerobic biodegradation.

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

2.2 Laboratory Analysis for First WBZ Wells

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

Table 1 presents TPH-g, BTEX, and MtBE analysis results for the current and historical groundwater monitoring events.

TPH-g concentrations were below the laboratory-reporting limit in off-site wells MW-8 and MW-9. Detectable TPH-g concentrations ranged from 852 μ g/L in MW-2 to 20,700 μ g/L in MW-3. The TPH-g concentration in MW-3 was significantly higher than in the other site wells.

Figure 4 displays the contour map of TPH-g concentrations in the groundwater. As illustrated, the highest TPH-g impact is in the vicinity of the dispenser islands and former underground storage tanks (USTs).

The following BTEX concentrations were observed during this monitoring event.

- Toluene was below the laboratory-reporting limit in all wells except MW-3 and MW-5.
- In MW-2, benzene was below the laboratory-reporting limit.
- In MW-8 and MW-9, all BTEX analytes were below the laboratory-reporting limit.

 The highest BTEX concentrations were detected at MW-3, at 2,790 μg/L, 182 μg/L, 860 μg/L, and 3,389 μg/L, respectively.

Figure 5 displays the contour map of benzene concentrations in the groundwater. The highest benzene impact is in the vicinity of the dispenser islands and former USTs. The benzene concentration detected in well MW-3 was several orders of magnitude higher than in the other site wells. Benzene appears to have only minimally impacted off-site well MW-6 and was non-detectable in the remaining off-site wells.

Low or non-detectable levels of MtBE were observed throughout the site except for groundwater samples collected at wells MW-3 to MW-5 and MW-7. Detectable MtBE concentrations ranged from 17.3 μ g/L at MW-7 to 674 μ g/L at MW-4. Figure 6 displays the contour map of MtBE concentrations in the groundwater. The highest MtBE impact was in the vicinity of the dispenser islands and former USTs, around wells MW-4 and MW-3.

As shown in Table 1, since the previous monitoring event (First Quarter 2008), all TPH-g, BTEX, and MtBE analytes, except for benzene, have decreased in the more impacted MW-3.

Table 2 shows analysis results for gasoline oxygenate and lead scavenger concentrations for the current as well as historical events.

The following gasoline oxygenate and lead scavenger concentrations were observed during this monitoring event.

- All isopropyl ether (DIPE) and ethanol constituents were either below the laboratory-reporting limit or at low levels in all groundwater samples collected during this monitoring event. Analysis results for ethanol are shown in Appendix C.
- Ethyl tertiary-butyl ether (ETBE) was detected at 11.7 μg/L in well MW-4 and was below the laboratory-reporting limit in the remaining tested wells.
- 1,2-dichloroethane (1,2-DCA) was detected in all groundwater samples collected during this monitoring event, except those from MW-7 through MW-9. Detectable concentrations ranged from 2.44 μg/L in MW-2 to 1,850 μg/L in MW-3.
- 1,2-dibromoethane (EDB) was detected in groundwater samples collected from wells MW-3, MW-5, MW-6, and MW-7. Detectable concentrations ranged from 1.26 µg/L in MW-7 to 12.1 µg/L in MW-3.
- Tertiary-butyl alcohol (TBA) was the major gasoline oxygenate observed during this monitoring event. TBA was below the laboratory-reporting limit in wells MW-2, MW-6, MW-8, and MW-9.

Figure 7 displays the contour map of TBA concentrations in the groundwater. The most TBA-impacted regions were in the vicinity of the dispenser islands and former USTs, around wells MW-3 to MW-5. Due to the high mobility rate of TBA in groundwater, the TBA plume appears to have migrated southwesterly with the flow of groundwater from the UST cavity and pump islands toward MW-4.

 Tertiary-amyl methyl ether (TAME) was below the laboratory-reporting limit in all groundwater samples except for the samples from MW-5, where TAME was detected at 29.6 μg/L.

Figure 8 displays the map showing concentrations of ETBE, 1,2-DCA, EDB, and TAME in First WBZ wells.

2.3 Field Measurements for Second WBZ Wells

Table 1 presents calculated groundwater elevations and depths to groundwater for each monitoring well. Depths to groundwater ranged from 21.67 feet in well MW-4D to 23.10 feet in MW-1D. Corresponding groundwater elevations ranged from 31.32 feet in MW-1D to 31.46 feet in MW-3D.

Figure 9 displays the contour map of groundwater elevations in the Second WBZ. Groundwater flows northwesterly at a gradient of 0.0013 feet/feet. The groundwater flow direction has remained consistent with the previous monitoring event (First Quarter 2008); however, the gradient has decreased.

Upon equalization with the surrounding aquifer at each well location, when the purge cycle was terminated, DO concentrations in the Second WBZ ranged from 0.08 mg/L in well MW-3D to 0.28 mg/L in MW-4D. ORP showed negative redox potentials in all Second WBZ monitoring wells. Therefore, oxidation of petroleum hydrocarbons could have occurred in these monitoring wells. Negative redox potentials indicate that contaminants in the groundwater are conducive to anaerobic biodegradation.

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

2.4 Laboratory Analysis for Second WBZ Wells

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

Table 1 presents TPH-g, BTEX, and MtBE analysis results for the current and historical groundwater monitoring events.

TPH-g concentrations were below the laboratory-reporting limit in all Second WBZ wells.

All BTEX analytes were below the laboratory-reporting limit in all groundwater samples collected from second WBZ wells.

MtBE was below laboratory-reporting limits in MW-1D. In wells MW-3D and MW-4D, MtBE was detected at 71.1 μ g/L and 27 μ g/L, respectively. MtBE concentrations in these wells have decreased since the previous monitoring event (First Quarter 2008).

Table 2 shows analysis results for gasoline oxygenate and lead scavenger concentrations for the current as well as historical events.

The following gasoline oxygenate and lead scavenger concentrations were observed during this monitoring event.

- All DIPE, ETBE, TAME, 1,2-DCA, EDB, and ethanol constituents were below laboratory-reporting limits in all groundwater samples collected from the Second WBZ during this monitoring event. Analytical results for 1,2-DCA, ethanol, and EDB constituents are shown in Table 2.
- TBA was below laboratory reporting limit in well MW-1D. TBA was detected at 17.7 μg/L and 25.7 μg/L in wells MW-3D and MW-4D, respectively. In general, TBA concentrations decreased in second WBZ wells, since the previous (First Quarter 2008) monitoring event.

Figure 10 displays concentrations of MtBE and TBA in Second WBZ wells. In general, the most impacted region is in the vicinity of dispenser islands at wells MW-3D and MW-4D.

3. CONCLUSIONS AND RECOMMENDATIONS

Results of the Second Quarter 2008 groundwater monitoring event are summarized below.

- The groundwater flow direction has remained south to southwesterly in the First WBZ throughout the site. In the Second WBZ, groundwater flow direction was northwesterly.
- The hydrocarbon source area remains in the vicinity of the former UST cavity, near well MW-3, where a previous release of petroleum hydrocarbons occurred.
- The southerly migration of impacted groundwater from the source area of the former UST cavity is evidenced by high MtBE and TBA concentrations at well MW-4. However, in general, the contaminant region appears to be centrally located in the vicinity of the former UST cavity and pump islands, especially at MW-3.

- Based on 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 in well MW-6, at 2,070 µg/L, remained significantly lower this quarter than the historical peak value of 34,000 µg/L observed in September 2004. TPH-g has historically remained nondetectable in MW-8 and MW-9.
- In the Second WBZ, the contaminant region appears to be in the vicinity of wells MW-3D and MW-4D.

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

- Continue quarterly groundwater monitoring to increase understanding of seasonal variations in groundwater quality conditions.
- Prepare a revised corrective action plan (CAP) and updated site conceptual model (SCM) to identify the most feasible, technically effective, and cost-effective alternative for removing petroleum hydrocarbons from the subsurface. (SOMA is preparing a response letter in connection with ACEHS comments on SOMA's CAP).
- Based on continued low to non-detectable levels of all tested constituents in off-site wells MW-7 to MW-9, modify the existing quarterly sampling schedule to annual sampling for these off-site wells.

4. REPORT LIMITATIONS

This report is the summary of work done by SOMA, including observations and descriptions of Site conditions. It includes analysis results produced by Pacific Analytical Laboratory for the current groundwater-monitoring event. Numbers and locations of wells were selected to provide the required information, but may not be completely representative of entire Site conditions. All conclusions and recommendations are based on laboratory analysis results. Conclusions beyond those specifically stated in this document should not be inferred from this report.

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

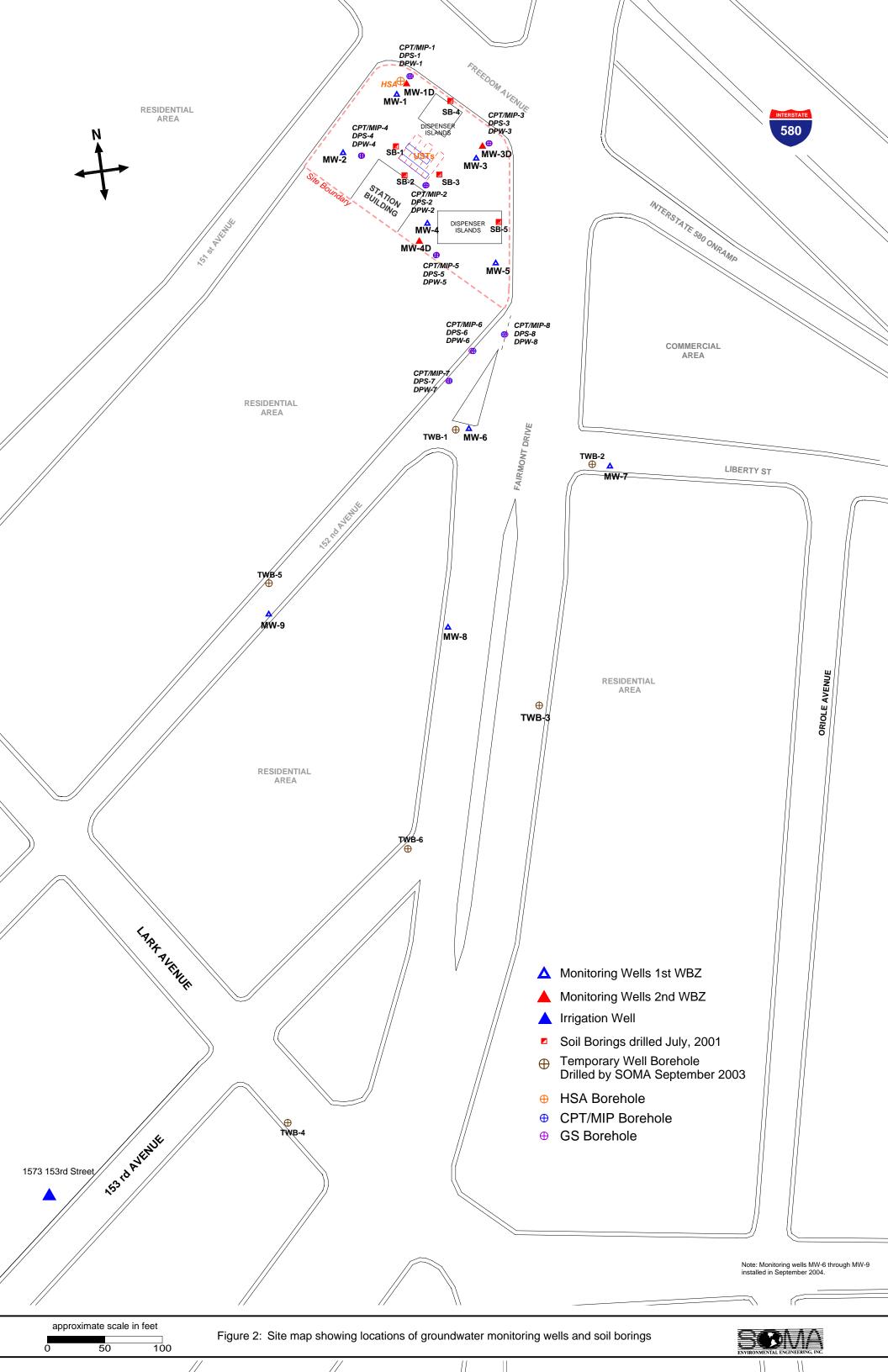
Figures

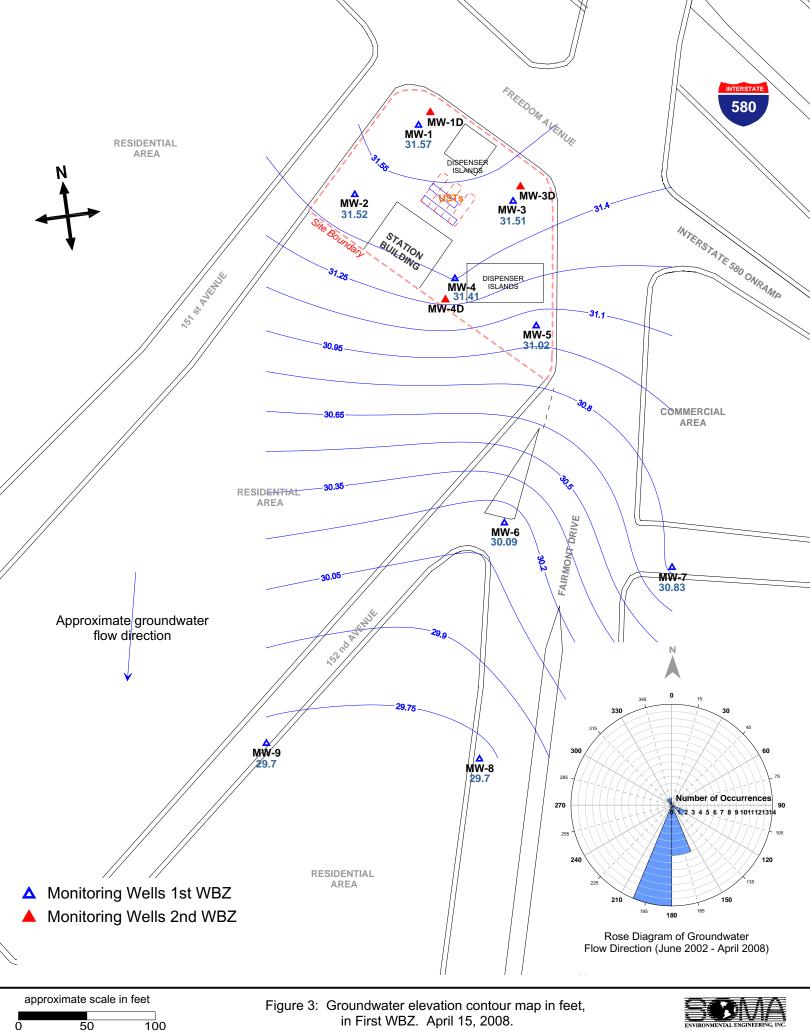




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in First WBZ. April 15, 2008.



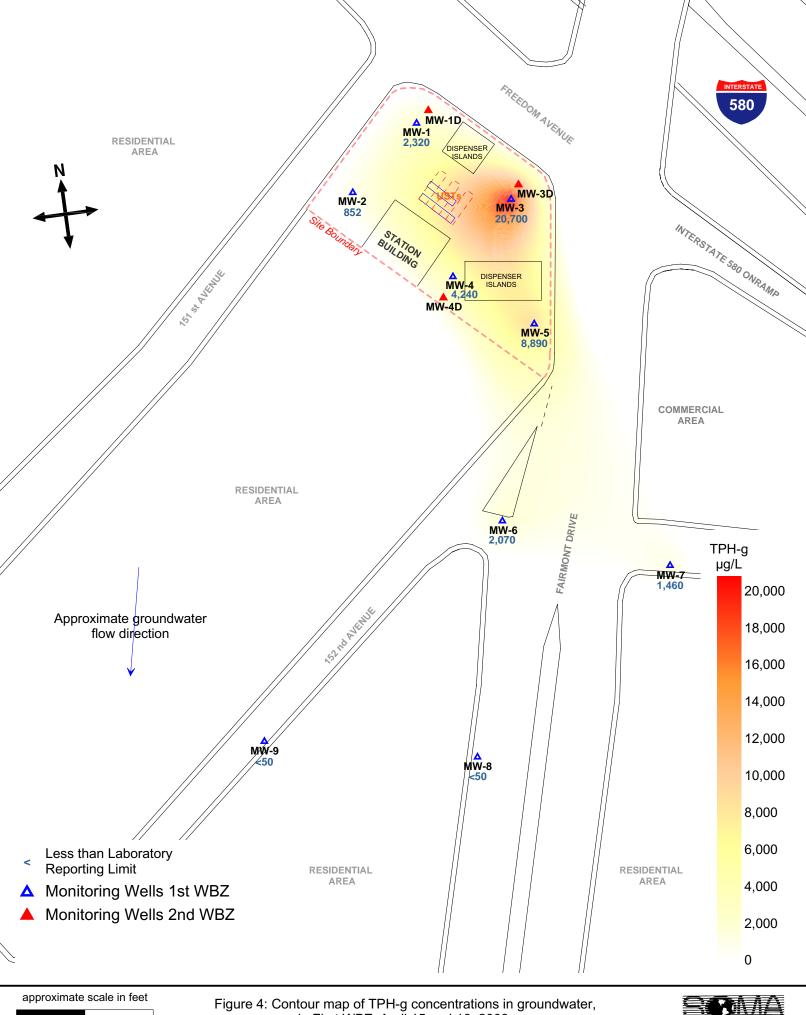
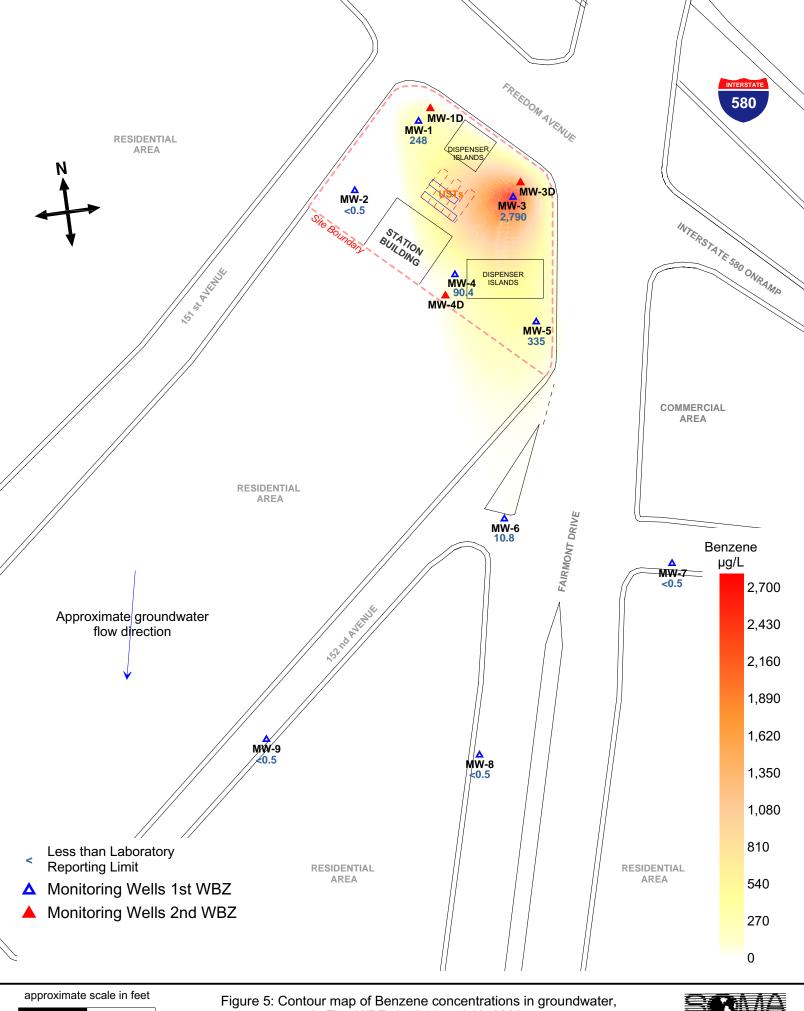


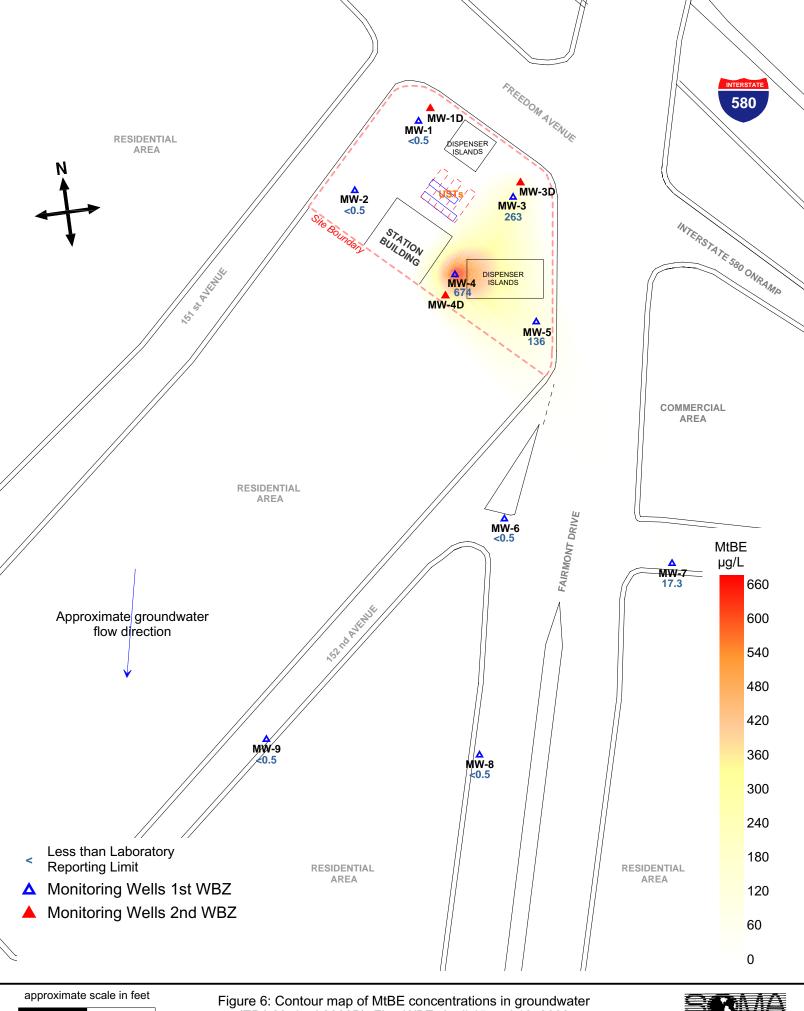
Figure 4: Contour map of TPH-g concentrations in groundwater, in First WBZ. April 15 and 16, 2008.





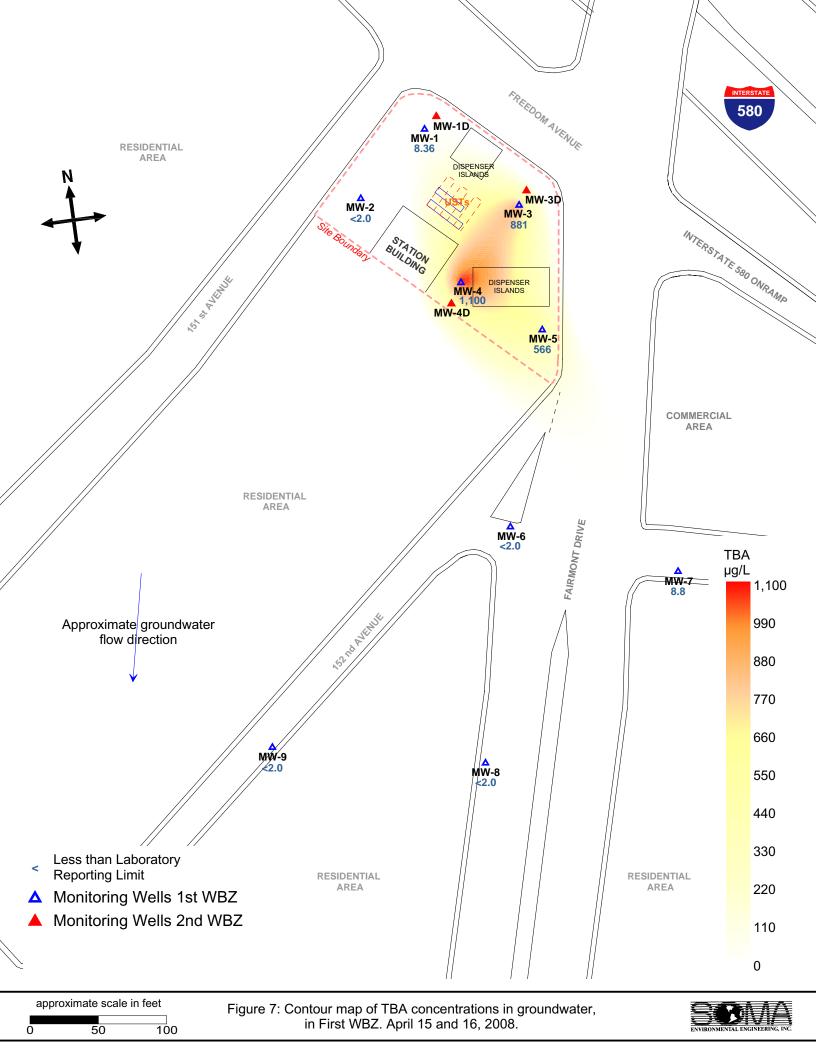
in First WBZ. April 15 and 16, 2008.





(EPA Method 8260B), First WBZ. April 15 and 16, 2008.





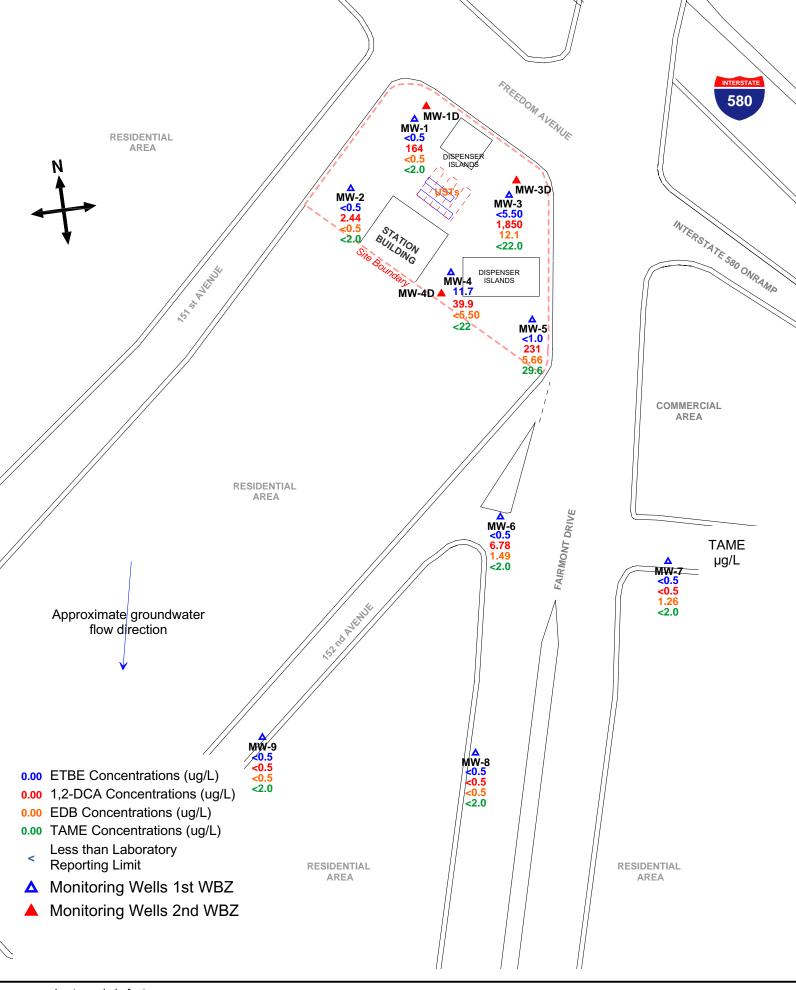


Figure 8: Map showing concentrations of ETBE, 1,2-DCA, EDB, and TAME, in First WBZ. April 15 and 16, 2008.

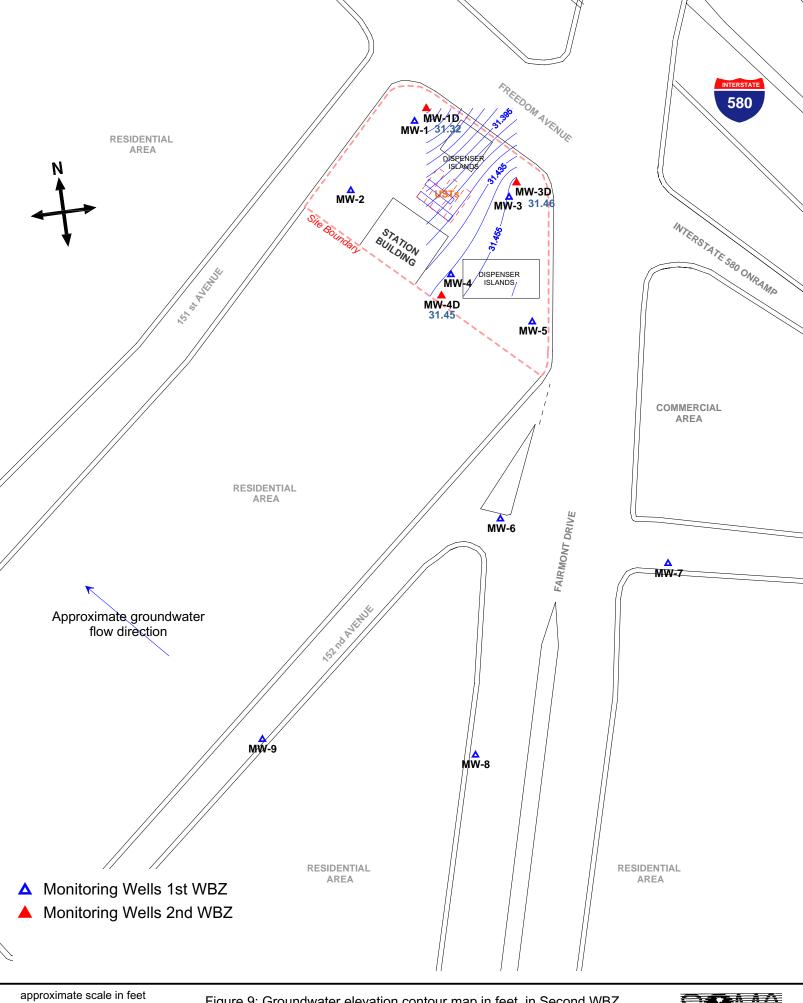


Figure 9: Groundwater elevation contour map in feet, in Second WBZ. April 15, 2008.



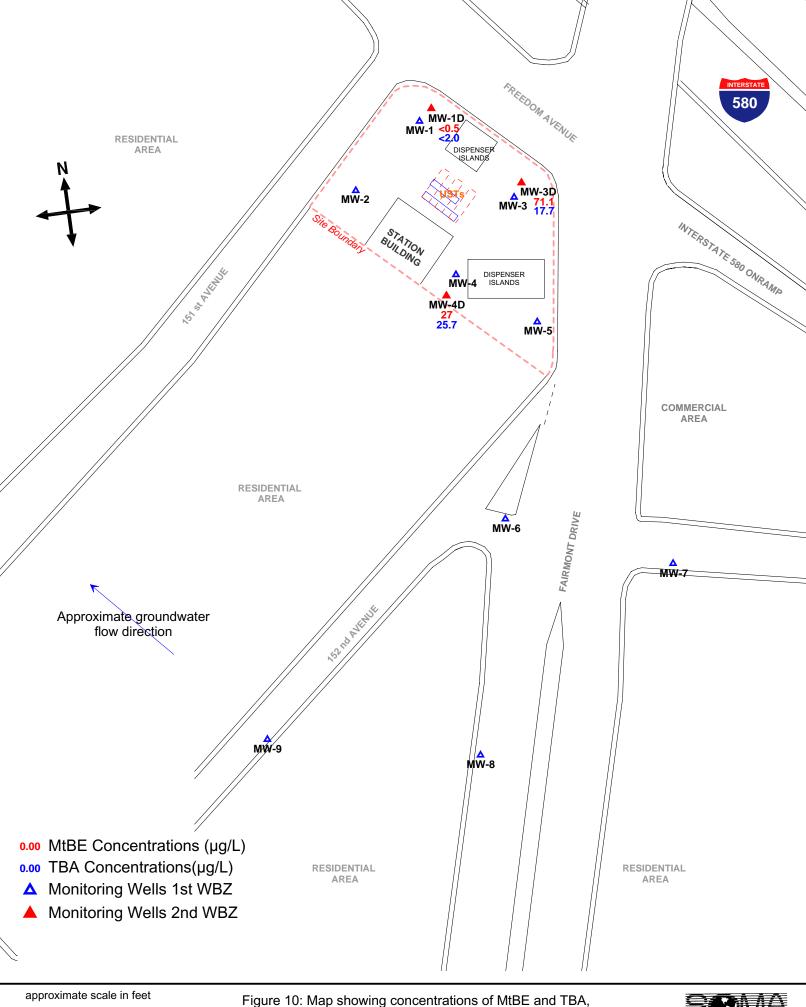


Figure 10: Map showing concentrations of MtBE and TBA, in Second WBZ. April 15 and 16, 2008.



Tables

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

Monitoring Well	Date	Casing Elevation ¹ (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 ² (μg/L)
				1st WB	Z					
MW-1	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

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15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Casing Elevation ¹ (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 ² (μg/L)
MW-1 cont	2/9/2006	54.46	21.81	32.65	775	14	<2.0	12.6	10.32	4.01
	5/9/2006	54.46	21.68	32.78	444	7.80	<2.0	12.1	6.31	1.75
	8/10/2006	54.46	22.79	31.67	5,090	324	<8.60	108	59.9	8.24
	10/26/2006	54.46	23.19	31.27	6,950	556	<4.0	190	136.09	8.61
	1/25/2007	54.46	22.82	31.64	2,640	196	<2.0	105	25.5	7.92
	4/26/2007	54.46	22.67	31.79	861	95.5	<2.0	17	6.36	4.00
	7/25/2007	54.46	23.25	31.21	4,520	412	<4.0	182	77.9	7.48
	10/23/2007	54.46	23.42	31.04	3,900	117	<2.0	87.1	23.87	4.54
	1/22/2008	54.46	22.59	31.87	2,260	81.3	<2.0	17.5	<2.0	4.23
	4/16/2008	54.46	22.89	31.57	2,320	248	<2.0	54.1	37.3	<0.5
MW-2	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
	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

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

Monitoring Well	Date	Casing Elevation ¹ (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 ² (μg/L)
MW-2 cont.	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
	5/9/2006	52.41	19.41	33.00	1,100	<0.5	<2.0	86.5	17	<0.5
	8/10/2006	52.41	20.8	31.61	3,180	2.87	<2.0	88.9	24.8	<0.50
	10/26/2006	52.41	21.22	31.19	1,200	<0.5	<2.0	23.5	4.79	0.6
	1/25/2007	52.41	20.89	31.52	623	0.64	<2.0	42.4	4.37	0.66
	4/26/2007	52.41	20.65	31.76	169	<0.5	<2.0	15.2	2.3	<0.5
	7/25/2007	52.41	21.43	30.98	276	0.78	<2.0	22.1	4.04	<0.5
	10/23/2007	52.41	21.59	30.82	535	<0.5	<2.0	18	5.11	<0.5
	1/22/2008	52.31	20.45	31.86	132	<0.5	<2.0	12.2	<2.0	<0.5
	4/15/2008	52.41	20.89	31.52	852	<0.5	<2.0	27.2	4.78	<0.5
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

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

Monitoring Well	Date	Casing Elevation ¹ (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 ² (μg/L)
MW-3 cont.	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
	5/9/2006	53.91	21.09	32.82	48,100	2,510	1,140	1,950	5,030	2,210
	8/10/2006	53.91	22.26	31.65	42,100	3,450	869	1,760	5,650	3,570
	10/26/2006	53.91	22.73	31.18	33,400	4,800	331	1,170	3,510	4,790
	1/25/2007	53.91	22.34	31.57	19,300	4,820	167	1,540	3,740	3,430
	4/26/2007	53.91	22.24	31.67	30,700	2,350	158	1,470	4,320	1,330
	7/25/2007	53.91	22.83	31.08	34,900	5,400	364	2,080	6,360	1,980
	10/23/2007	53.91	23.01	30.9	22,600	4,070	<86	1,120	3,095	970
	1/22/2008	53.96	22.04	31.92	22,100	1,280	453	1,330	3,520	490
	4/16/2008	53.91	22.4	31.51	20,700	2,790	182	860	3,389	263
MW-4	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

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

Monitoring Well	Date	Casing Elevation ¹ (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 ² (μg/L)
MW-4 cont.	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
	5/9/2006	53.31	20.33	32.98	1,290	18.1	<8.6	12.9	25.87	799
	8/10/2006	53.31	21.74	31.57	7,830	118	<8.60	25.3	174.6	919
	10/26/2006	53.31	22.29	31.02	1,540	81.9	<43	96	46.4	3,610
	1/25/2007	53.31	21.86	31.45	4,370	163	<8.6	85.1	269.1	1,050
	4/26/2007	53.31	21.63	31.68	4,380	140	<8.6	67	276.8	576
	7/25/2007	53.31	22.49	30.82	4,970	220	<8.60	198	241.5	1,040
	10/23/2007	53.31	22.69	30.62	4,200	267	<8.6	147	155.5	1,220
	1/22/2008	53.36	21.39	31.97	2,180	133	<22.0	43.1	32.2	1,800
	4/15/2008	53.31	21.9	31.41	4,240	90.4	<22.0	107	380	674

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

Monitoring Well	Date	Casing Elevation ¹ (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 ² (μg/L)
MW-5	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
	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
	5/9/2006	50.53	17.54	32.99	8,360	111	<8.6	300	75.84	566
	8/10/2006	50.53	19.02	31.51	16,100	250	<22	455	187.4	1,590
	10/26/2006	50.53	19.61	30.92	10,100	430	<22	375	192.6	3,060

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

Monitoring Well	Date	Casing Elevation ¹ (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 ² (μg/L)
MW-5 cont.	1/25/2007	50.53	19.19	31.34	3,960	340	<22	323	150.1	1,740
	4/26/2007	50.53	18.89	31.64	4,590	187	<8.6	307	116.5	861
	7/25/2007	50.53	19.81	30.72	6,490	419	21.8	413	223.2	913
	10/23/2007	50.53	19.98	30.55	6,120	550	11	284	141.4	433
	1/22/2008	50.18	18.69	31.49	9,810	572	22	574	184.1	126
	4/15/2008	50.18	19.16	31.02	8,890	335	15.1	477	397.5	136
MW-6	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
	5/9/2006	45.82	13.95	31.87	3,730	25	<2.0	213	207.82	5.87
	8/10/2006	45.82	15.28	30.54	4,800	41.9	<2.0	201	189	10.4
	10/26/2006	45.82	16.11	29.71	6,080	37.4	<2.0	116	183	9.78
	1/25/2007	45.82	15.76	30.06	3,220	25.2	<2.0	219	174	14.7
	4/26/2007	45.82	15.18	30.64	3,110	28	<2.0	165	138.47	14.6
	7/25/2007	45.82	16.82	29.00	4,960	54.1	<2.0	199	255.87	8.05
	10/23/2007	45.82	16.91	28.91	9,610	64.3	<2.0	188	302.6	5.81
	1/21/2008	45.82	15.36	30.46	3,290	33	<2.0	149	131.31	3.86
	4/15/2008	45.82	15.73	30.09	2,070	10.8	<2.0	51.1	67	<0.5
MW-7	9/21/2004	44.74	15.21	29.53	2,900	<0.5	<0.5	52	61	8.1
	12/14/2004	44.74	13.90	30.84	<50	1.6	<0.5	29	58	6.0

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

Monitoring Well	Date	Casing Elevation ¹ (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 ² (μg/L)
MW-7 cont	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
	5/9/2006	44.74	12.02	32.72	1,400	<0.5	<2.0	19.8	12.4	2.30
	8/10/2006	44.74	13.72	31.02	604	<0.50	<2.0	6.2	4.63	1.42
	10/26/2006	44.74	14.38	30.36	1350	<0.50	<2.0	16.6	10.8	1.87
	1/25/2007	44.74	13.93	30.81	340	<0.5	<2.0	6.84	2.44	1.63
	4/26/2007	44.74	14.44	30.30	552	<0.5	<2.0	11.4	6.11	4.12
	7/25/2007	44.74	14.79	29.95	1,230	<0.5	<2.0	27	19.24	3.2
	10/23/2007	44.74	14.88	29.86	1,730	0.67	<2.0	20.7	17.31	8.44
	1/21/2008	44.74	13.34	31.40	610	1.15	<2.0	8.4	4.34	17.2
	4/15/2008	44.74	13.91	30.83	1,460	<0.5	<2.0	15.9	19.7	17.3
MW-8	9/21/2004	41.14	12.98	28.16	<50	<0.5	<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

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

Monitoring Well	Date	Casing Elevation ¹ (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 ² (μg/L)
MW-8 cont.	2/9/2006	41.14	9.74	31.40	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	5/9/2006	41.14	9.90	31.24	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	8/10/2006	41.14	10.9	30.24	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	10/26/2006	41.14	11.68	29.46	<50	<0.50	<2.0	3.37	<1.0	<0.50
	1/25/2007	41.14	11.44	29.70	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	4/26/2007	41.14	10.81	30.33	<50	<0.5	<2.0	4.29	<2.0	<0.5
	7/25/2007	41.14	12.31	28.83	<50	<0.5	<2.0	4.39	<2.0	<0.5
	10/23/2007	41.14	12.37	28.77	<50	<0.5	<2.0	4.31	<2.0	<0.5
	1/21/2008	41.14	11.02	30.12	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	4/15/2008	41.14	11.44	29.70	<50	<0.5	<2.0	<0.5	<2.0	<0.5
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
	5/9/2006	40.26	9.06	31.20	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	8/10/2006	40.26	10.01	30.25	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	10/26/2006	40.26	10.81	29.45	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	1/25/2007	40.26	10.67	29.59	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	4/26/2007	40.26	10.05	30.21	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	7/25/2007	40.26	11.44	28.82	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	10/23/2007	40.26	11.59	28.67	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	1/21/2008	40.26	10.37	29.89	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	4/15/2008	40.26	10.56	29.70	<50	<0.5	<2.0	<0.5	<2.0	<0.5

Table 1
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15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Casing Elevation ¹ (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 ² (μg/L)
				2nd WB	Z					
MW-1D	1/3/2008	54.42		-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
	1/22/2008	54.42	22.85	31.57	<50	<0.50	<2.0	<0.50	<2.0	<0.50
	4/16/2008	54.42	23.10	31.32	<50	<0.5	<2.0	<0.5	<2.0	<0.5
						1				
MW-3D	1/3/2008	54.10		-	<50	<0.50	<2.0	<0.50	<2.0	87.6
	1/22/2008	54.10	22.31	31.79	<50	<0.50	<2.0	<0.50	<2.0	88.3
	4/16/2008	54.10	22.64	31.46	<50	<0.5	<2.0	<0.5	<2.0	71.1
						T				
MW-4D	1/4/2008	53.12		-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
	1/22/2008	53.12	21.11	32.01	91.5	18.7	<2.0	7.08	11.42	219
	4/15/2008	53.12	21.67	31.45	<50	<0.5	<2.0	<0.5	<2.0	27
EB-PMP	1/21/2008	-	-	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
EB-PRB	1/21/2008	-	-	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
EB-PMP2	1/22/2008	ı	1	•	<50	<0.50	<2.0	<0.50	<2.0	<0.50
EB-PRB2	1/22/2008	-	-	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
ESL (ug/L)	-	-	-	-	100	1	40	30	20	5

Table 1

Historical Groundwater Elevation Data and Analytical Results

15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	Casing Elevation ¹ (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 ² (μg/L)
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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.
- 1: 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.
- 2 Mars 11, 2004, the was to dereyed by Harrington Carbon, Or Walnut Creek, Or to a data in a callinating
- $^{2}\,\,$ MtBE analyzed by EPA Method 8021B, and confirmed by EPA Method 8260B.
- <: Not detected above the laboratory reporting limit.
- ^C 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.

EB-PMP/EB-PRB: Equipment Blanks for Pump and Probe

ESL: Environmental Screening Levels per CRWQCB SFBay Region Interim Final Nov. 2007;

Table F-1a, Groundwater Screening Levels (groundwater is a current or potential drinking water resource)

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)	1,2-DCA (μg/L)	EDB (μg/L)				
1st WBZ											
MW-1	8/8/2002	78	<1.3	<1.3	<1.3	NA	NA				
	11/1/2002	42	< 1.0	< 1.0	< 1.0	NA	NA				
	2/21/2003	47	<0.5	<0.5	<0.5	NA	NA				
	5/28/2003	25	<0.5	<0.5	<0.5	NA	NA				
	8/12/2003	<10	<0.5	<0.5	<0.5	NA	NA				
	10/9/2003	70	<1.0	<1.0	<1.0	NA	NA				
	1/15/2004	55	<0.5	<0.5	<0.5	NA	NA				
	5/25/2004	62	<0.7	<0.7	<0.7	NA	NA				
	9/21/2004	<10	<0.5	<0.5	<0.5	NA	NA				
	12/14/2004	<21.5	<4.3	<4.3	<17.2	NA	NA				
	3/11/2005	81	<0.5	<0.5	<2.0	NA	NA				
	6/15/2005	<10	<0.5	<0.5	<2.0	NA	NA				
	8/26/2005	68.9	<2.15	<2.15	<8.6	NA	NA				
	11/11/2005	46	<2.15	<2.15	<8.6	NA	NA				
	2/9/2006	11.3	<0.5	<0.5	<2.0	NA	NA				
	5/9/2006	<10	<0.5	<0.5	<2.0	0.51	<0.5				
	8/10/2006	<43	<2.15	<2.15	<8.60	3.37	<2.15				
	10/26/2006	39.4	<1.0	<1.0	<4.0	2.92	<1.0				
	1/25/2007	41.4	<0.5	<0.5	<2.0	1.36	<0.5				
	4/26/2007	39.6	<0.5	<0.5	<2.0	<0.5	<0.5				
	7/25/2007	46.5	<1.0	<1.0	<4.0	<1.0	<1.0				
	10/23/2007	53.7	<0.5	<0.5	<2.0	<0.5	<0.5				
	1/22/2008	23.8	<0.5	<0.5	2.16	<0.5	<0.5				
	4/16/2008	8.36	<0.5	<0.5	<2.0	164	<0.5				
MW-2	8/8/2002	21	<0.5	<0.5	<0.5	NA	NA				
"""	11/1/2002	15	<0.5	<0.5	<0.5	NA NA	NA NA				
	2/21/2003	12	<0.5	<0.5	<0.5	NA NA	NA NA				
	5/28/2003	31	<0.5	<0.5	<0.5	NA NA	NA NA				
	8/12/2003	69	<0.8	<0.8	<0.8	NA NA	NA NA				
	10/9/2003	12	<0.5	<0.5	<0.5	NA NA	NA NA				
	1/15/2004	<10	<0.5	<0.5	<0.5	NA NA	NA NA				
	5/25/2004	14	<0.5	<0.5	<0.5 <0.5	NA NA	NA NA				
	9/21/2004	<10	<0.5	<0.5	<0.5	NA NA	NA NA				
	12/14/2004	<2.5	<0.5	<0.5	<2.0	NA NA	NA NA				
	12/14/2004	\ 2.J	\ 0.5	\ 0.5	\ Z.U	IVA	INA				

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

Monitoring Well	Date	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB
		(μg/L)	(μg/L)	(μ g/L)	(μg/L)	(μg/L)	(μg/L)
MW-2 cont.	3/11/2005	<2.5	<0.5	<0.5	<2.0	NA	NA
	6/15/2005	<10	<0.5	<0.5	<2.0	NA	NA
	8/26/2005	<10	<0.5	<0.5	<2.0	NA	NA
	11/11/2005	<10	<0.5	<0.5	<2.0	NA	NA
	2/9/2006	<10	<0.5	<0.5	<2.0	NA	NA
	5/9/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	8/10/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	10/26/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	1/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	4/26/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	7/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/23/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	1/22/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	4/15/2008	<2.0	<0.5	<0.5	<2.0	2.44	<0.5
MW-3	8/8/2002	<330	<8.3	<8.3	330	NA	NA
	11/1/2002	85	< 1.3	<1.3	220	NA	NA
	2/21/2003	140	<5.0	<5.0	320	NA	NA
	5/28/2003	520	<10	<10	530	NA	NA
	8/12/2003	180	<4.2	<4.2	270	NA	NA
	10/9/2003	<170	<8.3	<8.3	200	NA	NA
	1/15/2004	<100	<5.0	<5.0	150	NA	NA
	5/25/2004	<100	<5.0	<5.0	270	NA	NA
	9/21/2004	<140	<7.1	<7.1	110	NA	NA
	12/14/2004	<100	<20	<20	154	NA	NA
	3/11/2005	<215	<43	<43	256	NA	NA
	6/15/2005	<215	<10.8	<10.8	374	NA	NA
	8/26/2005	699	<21.5	<21.5	277	NA	NA
	11/11/2005	<430	<21.5	<21.5	171	NA	NA
	2/9/2006	<430	<21.5	<21.5	620	NA	NA
	5/9/2006	367	<10.8	<10.8	594	<10.8	<10.8
	8/10/2006	365	<10.8	<10.8	727	<10.8	<10.8
	10/26/2006	591	<10.8	<10.8	899	<10.8	<10.8
	1/25/2007	711	<10.8	<10.8	768	<10.8	<10.8
	4/26/2007	690	<10.8	<10.8	369	<10.8	<10.8
	7/25/2007	1,340	<10.8	<10.8	565	<10.8	<10.8
	10/23/2007	1,050	<21.5	<21.5	301	<21.5	<21.5
	1/22/2008	373	<10.8	<10.8	170	<0.5	<0.5
	4/16/2008	881	<5.50	<5.50	<22.0	1,850	12.1
MW-4	8/8/2002	1500	<17	<17	18	NA	NA
	11/1/2002	580	< 5.0	6	13	NA	NA

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

Monitoring	Date	ТВА	DIPE	ETBE	TAME	1,2-DCA	EDB
Well	Date	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)
MW-4 cont.	2/21/2003	1600	<20	22	<20	NA	NA
	5/28/2003	690	<8.3	<8.3	17	NA	NA
	8/12/2003	550	<7.1	7.3	18	NA	NA
	10/9/2003	1400	<31	50	<31	NA	NA
	1/15/2004	1,300	<20	25	21	NA	NA
	5/25/2004	560	<8.3	<8.3	24	NA	NA
	9/21/2004	1,300	<50	<50	<50	NA	NA
	12/14/2004	826	<10.75	21	49	NA	NA
	3/11/2005	1,110	<10.8	12.1	<43	NA	NA
	6/15/2005	<110	<5.5	<5.5	22.9	NA	NA
	8/26/2005	902	<5.50	<5.50	37.4	NA	NA
	11/11/2005	884	<10.8	<10.8	<43	NA	NA
	2/9/2006	769	<10.8	16.4	45.6	NA	NA
	5/9/2006	405	<2.15	2.95	31.3	<2.15	<2.15
	8/10/2006	306	<2.15	<2.15	35.3	<2.15	<2.15
	10/26/2006	3430	<10.8	13.8	<43	<10.8	<10.8
	1/25/2007	822	<2.15	2.4	28	2.25	<2.15
	4/26/2007	556	<2.15	2.28	29.2	<2.15	<2.15
	7/25/2007	1,860	<2.15	9.94	24	<2.15	<2.15
	10/23/2007	3,400	<2.15	18.4	25.9	<2.15	<2.15
	1/22/2008	2,580	<5.50	64.7	<22	<0.5	<0.5
	4/15/2008	1,100	<5.50	11.7	<22	39.9	<5.50
MW-5	8/8/2002	<250	<6.3	<6.3	510	NA	NA
	11/1/2002	66	< 2.0	< 2.0	560	NA	NA
	2/21/2003	<63	<3.1	<3.1	280	NA	NA
	5/28/2003	<33	<1.7	<1.7	110	NA	NA
	8/12/2003	130	<3.6	<3.6	270	NA	NA
	10/9/2003	<100	<5.0	<5.0	740	NA	NA
	1/15/2004	<63	<3.1	<3.1	300	NA	NA
	5/25/2004	<100	<5.0	<5.0	210	NA	NA
	9/21/2004	<130	<6.3	<6.3	550	NA	NA
	12/14/2004	40	<5.5	<5.5	444	NA	NA
	3/11/2005	88.8	<5.5	<5.5	448	NA	NA
	6/15/2005	<43	<2.15	<2.15	88.1	NA	NA
	8/26/2005	274	<5.50	<5.50	195	NA	NA
	11/11/2005	192	<5.50	<5.50	360	NA	NA
	2/9/2006	218	<5.50	<5.50	523	NA	NA
	5/9/2006	91.8	<2.15	<2.15	163	<2.15	<2.15
	8/10/2006	138	<5.50	<5.50	342	<5.50	<5.50
	10/26/2006	322	<5.50	<5.50	712	<5.50	<5.50

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

Monitoring	Date	ТВА	DIPE	ETBE	TAME	1,2-DCA	EDB
Well		(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μ g/L)
MW-5 cont.	1/25/2007	878	<5.50	<5.50	552	<5.50	<5.50
	4/26/2007	708	<2.15	<2.15	310	<2.15	<2.15
	7/25/2007	1,020	<2.15	<2.15	356	<2.15	<2.15
	10/23/2007	1,510	<2.15	<2.15	181	<2.15	<2.15
	1/22/2008	470	<0.5	4.56	62.1	<0.5	<0.5
	4/15/2008	566	<1.0	<1.0	29.6	231	5.66
B4047.0	0/04/0004	-110	10 F	-0.5	-0.5	NIA	NIA
MW-6	9/21/2004	<10	<0.5	<0.5	<0.5	NA	NA
	12/14/2004	<5.5	<5.5	<5.5	<22	NA NA	NA
	3/11/2005	2.54	<0.5	<0.5	<2.0	NA	NA
	6/15/2005	<20	<1.0	<1.0	<4.0	NA	NA
	8/26/2005	<43	<2.15	<2.15	<8.6	NA	NA
	11/11/2005	<43	<2.15	<2.15	<8.6	NA	NA
	2/9/2006	<43	<2.15	<2.15	<8.6	NA .o. F	NA
	5/9/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	8/10/2006	<10	<0.5	<0.5	<2.0	<0.5	< 0.5
	10/26/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	1/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	4/26/2007	7.21	<0.5	<0.5	<2.0	<0.5	<0.5
	7/25/2007	5.66	<0.5	<0.5	<2.0	<0.5	<0.5
	10/23/2007	6.68	<0.5	<0.5	<2.0	<0.5	<0.5
	1/21/2008	13.9	<0.5	<0.5	<2.0	<0.5	<0.5
	4/15/2008	<2.0	<0.5	<0.5	<2.0	6.78	1.49
MW-7	9/21/2004	<10	<0.5	<0.5	1.5	NA	NA
141 4 4 - 7	12/14/2004	<2.5	<0.5	<0.5	<2.0	NA NA	NA
	3/11/2005	<12.5	<2.5	<2.5	<10	NA NA	NA NA
			<0.5	<0.5	2.23	NA NA	NA NA
	6/15/2005			~0.5			
	6/15/2005 8/26/2005	<10		<0.5			
	8/26/2005	<10	<0.5	<0.5	<2.0	NA	NA
	8/26/2005 11/11/2005	<10 <10	<0.5 <0.5	<0.5	<2.0 <2.0	NA NA	NA NA
	8/26/2005 11/11/2005 2/9/2006	<10 <10 NA	<0.5 <0.5 NA	<0.5 NA	<2.0 <2.0 NA	NA NA NA	NA NA NA
	8/26/2005 11/11/2005 2/9/2006 5/9/2006	<10 <10 NA <10	<0.5 <0.5 NA <0.5	<0.5 NA <0.5	<2.0 <2.0 NA <2.0	NA NA NA <0.5	NA NA NA <0.5
	8/26/2005 11/11/2005 2/9/2006 5/9/2006 8/10/2006	<10 <10 NA <10 <10	<0.5 <0.5 NA <0.5 <0.5	<0.5 NA <0.5 <0.5	<2.0 <2.0 NA <2.0 <2.0	NA NA NA <0.5 <0.5	NA NA NA <0.5 <0.5
	8/26/2005 11/11/2005 2/9/2006 5/9/2006 8/10/2006 10/26/2006	<10 <10 NA <10 <10 <10	<0.5 <0.5 NA <0.5 <0.5 <0.5	<0.5 NA <0.5 <0.5 <0.5	<2.0 <2.0 NA <2.0 <2.0 <2.0	NA NA NA <0.5 <0.5 <0.5	NA NA NA <0.5 <0.5 <0.5
	8/26/2005 11/11/2005 2/9/2006 5/9/2006 8/10/2006 10/26/2006 1/25/2007	<10 <10 NA <10 <10 <10 <2.0	<0.5 <0.5 NA <0.5 <0.5 <0.5	<0.5 NA <0.5 <0.5 <0.5	<2.0 <2.0 NA <2.0 <2.0 <2.0 <2.0	NA NA NA <0.5 <0.5 <0.5 <0.5	NA NA NA <0.5 <0.5 <0.5 <0.5
	8/26/2005 11/11/2005 2/9/2006 5/9/2006 8/10/2006 10/26/2006 1/25/2007 4/26/2007	<10 <10 NA <10 <10 <10 <2.0 <2.0	<0.5 <0.5 NA <0.5 <0.5 <0.5 <0.5	<0.5 NA <0.5 <0.5 <0.5 <0.5	<2.0 <2.0 NA <2.0 <2.0 <2.0 <2.0 <2.0	NA NA V0.5 <0.5 <0.5 <0.5 <0.5	NA NA NA <0.5 <0.5 <0.5 <0.5
	8/26/2005 11/11/2005 2/9/2006 5/9/2006 8/10/2006 10/26/2006 1/25/2007 4/26/2007 7/25/2007	<10 <10 NA <10 <10 <10 <2.0 <2.0 <2.0	<0.5 <0.5 NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<2.0 <2.0 NA <2.0 <2.0 <2.0 <2.0 <2.0 <2.0	NA NA V0.5 <0.5 <0.5 <0.5 <0.5 <0.5	NA NA V0.5 V0.5 V0.5 V0.5 V0.5 V0.5 V0.5
	8/26/2005 11/11/2005 2/9/2006 5/9/2006 8/10/2006 10/26/2006 1/25/2007 4/26/2007 7/25/2007 10/23/2007	<10 <10 NA <10 <10 <10 <2.0 <2.0 <2.0 <2.0 6.49	<0.5 <0.5 NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<2.0 <2.0 NA <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0	NA NA V0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	NA NA V0.5 V0.5 V0.5 V0.5 V0.5 V0.5 V0.5 V0.5
	8/26/2005 11/11/2005 2/9/2006 5/9/2006 8/10/2006 10/26/2006 1/25/2007 4/26/2007 7/25/2007 10/23/2007 1/21/2008	<10 <10 NA <10 <10 <10 <2.0 <2.0 <2.0 <2.0 6.49 <2.0	<0.5 <0.5 NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<2.0 <2.0 NA <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0	NA NA V0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	NA NA V0.5 V0.5 V0.5 V0.5 V0.5 V0.5 V0.5 V0.5
	8/26/2005 11/11/2005 2/9/2006 5/9/2006 8/10/2006 10/26/2006 1/25/2007 4/26/2007 7/25/2007 10/23/2007	<10 <10 NA <10 <10 <10 <2.0 <2.0 <2.0 <2.0 6.49	<0.5 <0.5 NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<2.0 <2.0 NA <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0	NA NA V0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	NA NA V0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5
MW-8	8/26/2005 11/11/2005 2/9/2006 5/9/2006 8/10/2006 10/26/2006 1/25/2007 4/26/2007 7/25/2007 10/23/2007 1/21/2008 4/15/2008	<10 <10 NA <10 <10 <10 <2.0 <2.0 <2.0 <2.0 6.49 <2.0 8.8	<0.5 <0.5 NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<2.0 <2.0 NA <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0	NA NA NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	NA NA NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <1.26
MW-8	8/26/2005 11/11/2005 2/9/2006 5/9/2006 8/10/2006 10/26/2006 1/25/2007 4/26/2007 7/25/2007 10/23/2007 1/21/2008 4/15/2008	<10 <10 NA <10 <10 <10 <2.0 <2.0 <2.0 <2.0 6.49 <2.0 8.8	<0.5 <0.5 NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<2.0 <2.0 NA <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0	NA NA NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	NA NA NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <1.26 NA
MW-8	8/26/2005 11/11/2005 2/9/2006 5/9/2006 8/10/2006 10/26/2006 1/25/2007 4/26/2007 7/25/2007 10/23/2007 1/21/2008 4/15/2008	<10 <10 NA <10 <10 <10 <2.0 <2.0 <2.0 <2.0 6.49 <2.0 8.8	<0.5 <0.5 NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<2.0 <2.0 NA <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0	NA NA NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	NA NA NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <1.26 NA NA
MW-8	8/26/2005 11/11/2005 2/9/2006 5/9/2006 8/10/2006 10/26/2006 1/25/2007 4/26/2007 7/25/2007 10/23/2007 1/21/2008 4/15/2008	<10 <10 NA <10 <10 <10 <20 <2.0 <2.0 <2.0 6.49 <2.0 8.8 <10 <2.5 NA	<0.5 <0.5 NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<2.0 <2.0 NA <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0	NA NA NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	NA NA NA NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <1.26 NA NA NA NA
MW-8	8/26/2005 11/11/2005 2/9/2006 5/9/2006 8/10/2006 10/26/2006 1/25/2007 4/26/2007 7/25/2007 10/23/2007 1/21/2008 4/15/2008	<10 <10 NA <10 <10 <10 <2.0 <2.0 <2.0 <2.0 6.49 <2.0 8.8	<0.5 <0.5 NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<2.0 <2.0 NA <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0	NA NA NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	NA NA NA <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <1.26 NA NA NA

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

Monitoring	Date	ТВА	DIPE	ETBE	TAME	1,2-DCA	EDB
Well	Date	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)
MW-8 cont	2/9/2006	<10	<0.5	<0.5	<2.0	NA	NA
	5/9/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	8/10/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	10/26/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	1/25/2007	<2.0	<0.5	<0.5	<0.5 <2.0	<0.5	<0.5
	4/26/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	7/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/23/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	1/21/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	4/15/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
MW-9	9/21/2004	<10	<0.5	<0.5	<0.5	NA	NA
	12/14/2004	<2.5	<0.5	<0.5	<2.0	NA	NA
	3/11/2005	<2.5	<0.5	<0.5	<2.0	NA	NA
	6/15/2005	<10	<0.5	<0.5	<2.0	NA	NA
	8/26/2005	<10	<0.5	<0.5	<2.0	NA	NA
	11/11/2005	<10	<0.5	<0.5	<2.0	NA	NA
	2/9/2006	<10	<0.5	<0.5	<2.0	NA	NA
	5/9/2006	<10	<0.5	<0.5	<2.0	2.8	<0.5
	8/10/2006	<10	<0.5	<0.5	<2.0	1.83	<0.5
	10/26/2006	25/2007 <2.0 <0.5		<0.5	<2.0	3.07	<0.5
	1/25/2007			<0.5	<2.0	2.92	<0.5
	4/26/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	7/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/23/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	1/21/2008	<2.0	<0.5	<0.5	<2.0	1.18	<0.5
	4/15/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
			2nd W				
MW-1D	1/3/2008	111	<0.5	<0.5	<2.0	NA	NA
	1/22/2008	12.9	<0.5	<0.5	<2.0	<0.5	<0.5
	4/16/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
MW-3D	1/3/2008	37.3	<0.5	3.12	15.3	NA	NA
02	1/22/2008	15.6	<0.5	3.1	15.3	<0.5	<0.5
	4/16/2008	17.7	< 0.5	<0.5	< 2.0	<0.5 <0.5	<0.5 <0.5
MW-4D	1/4/2008	25	<0.5	<0.5	<2.0	NA	NA
	1/22/2008	124	<0.5	4.9	3.32	<0.5	<0.5
	4/15/2008	25.7	<0.5	<0.5	<2.0	<0.5	<0.5

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)	1,2-DCA (μg/L)	EDB (μg/L)
EB-PMP	1/21/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
EB-PRB	1/21/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
EB-PMP2	1/22/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
EB-PRB2	1/22/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
ES	L	NE	NE	NE	NE	0.5	0.05

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.

NE: Not Established
TBA: tert-Butyl Alcohol
DIPE: Isopropyl Ether
ETBE: Ethyl tert-Butyl Ether
TAME: Methyl tert-Amyl Ether

ESL: Environmental Screening Levels per CRWQCB SFBay Region Interim Final Nov. 2007;

Table F-1a, Groundwater Screening Levels (groundwater is a current or potential drinking water resource)

Appendix A

Standard Operating Procedures for Conducting Groundwater Monitoring Activities

Standard Operating Procedures for Conducting Groundwater Monitoring Activities

Water Level Measurements

Prior to measurement of groundwater depth at each well, equalization with the surrounding aquifer must be achieved. Initially, the well cap is removed and the pressure is allowed to dissipate, creating a more stable water table level within the well. After about 10-15 minutes, once the water level in the well stabilizes, the depth to groundwater is measured from the top of the casing to the nearest 0.01 foot using an electric sounder.

Purging and Field Measurements

Prior to sample collection, each well is purged using a battery-operated, 2-inch-diameter pump (Model ES-60 DC). During purging, groundwater is measured for parameters such as dissolved oxygen (DO), pH, temperature, electrical conductivity (EC), and oxygen-reduction potential (ORP) using a Hanna HI-9828 multi-parameter instrument. Turbidity is measured using a Hanna HI-98703 portable turbidimeter. The equipment is calibrated at the Site using standard solutions and procedures provided by the manufacturer.

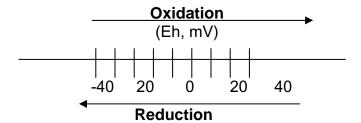
The pH of groundwater has an effect on the activity of microbial populations in the groundwater. The groundwater temperature affects the metabolic activity of bacteria. The groundwater EC is directly related to the concentration of total dissolved solids (TDS) in solution.

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 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 millivolt. 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_2 in water is low (9 mg/L at 25 °C and 11 mg/L at 5 °C), and because the rate of O_2 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 O₂ in the groundwater is consumed; however, the oxidizing agents (i.e., the constituents that undergo reduction) now become NO₃, MnO₂, Fe (OH)₃, SO₄²⁻

and others (Freeze and Cherry, 1979). As these oxidizing agents are consumed, the groundwater environment becomes more and more reduced. If the process advances far enough, the environment may become so strongly reduced that the petroleum hydrocarbons 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.



Purging of wells continues until the parameters for DO, pH, temperature, EC, turbidity, and redox stabilize, or three casing volumes are purged.

Once stabilization occurs, the groundwater samples are also tested on-site for ferrous iron (Fe^{+2}), nitrate (NO_3^-), and sulfate (SO_4^{-2}) concentrations.

 ${\rm Fe}^{+2}$, ${\rm NO_3}^-$, and ${\rm SO_4}^{-2}$ are measured colorimetrically using the Hach Colorimeter Model 890, a microprocessor-controlled photometer suitable for colorimetric testing in the laboratory or the field. The required reagents for each specific test are provided in AccuVac ampuls.

Sampling

For sampling purposes, after purging a disposable polyethylene bailer is used to collect sufficient samples from each monitoring well for laboratory analyses. Groundwater samples are transferred into 40-mL VOA vials and preserved with hydrochloric acid. The vials are sealed to prevent air bubbles from developing within the headspace. For TPH-d analysis, groundwater samples are collected using 1-L, amber, nonpreserved glass containers. Samples are placed in an ice-filled cooler and maintained at 4°C. A chain of custody form for all samples is prepared to accompany the samples, which are promptly delivered to a California state-certified analytical laboratory.

Appendix B

Table of Elevations and Coordinates on Monitoring Wells 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.

HORZONTAL 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

SURVEY REPORT 15101 FREEDOM AVE SAN LEANDRO, CA.

HARRINGTON SURVEYS INC. 2278 LARKEY LANE WALNUT CREEK, CA. 94597 925-935-7228 FAX. 935-5118

JOB NO. 2445 DATE: OCT. 12, 2004

1 2 2 2 51 2		EAST(sft)				
2 2 51 2	0097724 02	10 1 (011)	ELEV.	DESCRIPTION	LATITUDE (DMS)	LONGITUDE (DMS)
51 2	2001131.02	6094039.23	442.77	FD CHABOT B	37°43'02.71762"	122°07'00.46339"
	2088584.99	6093351.39	492.08	FD CHABOT A	37°43'11.04190"	122°07'09.20691"
52 2	2084348.54	6092159.32	55.44	FD. X-8		
12 2	2084073.17	6092141.24	46.15	MW-6 PAV		
53 2	2084072.72	6092140.95	46.15	MW-6 PUNCH		
54 2	2084072.47	6092140.95	45.82	MW-6 NOTCH	37°42'26.22635"	122°07'23.29643
55 2	2083909.71	6091947.10	40.61	MW-9 PAV		
56 2	2083909.10	6091946.97	40.61	MW-9 PUNCH		
57 2	2083908.71	6091947.00	40.26	MW-9 NOTCH	37°42'24.57425"	122°07'25.67431"
58 2	2083861.20	6092118.11	41.38	MW-8 PAV		
59 2	2083860.43	6092118.36	41.44	MW-8 PUNCH		
60 2	2083860.03	6092118.52	41.14	MW-8 NOTCH	37°42'24.12245"	122°07'23.52966"
61 2	2084008.21	6092290.11	44.94	MW-7 PAV		
62 2	2084007.88	6092290.27	44.95	MW-7 PVNCH		
63 2	2084007.68	6092290.40	44.74	MW-7 NOTCH	37°42'25.61150"	122°07'21.42290"
64 2	2084206.49	6092175.95	51.03	MW-5 PAV		
65 2	2084206.17	6092176.55	50.96	MW-5 PUNCH		
66-2	2084206.01	6092176.79	50.53	MW-5 NOTCH	37°42'27.55260	122°07'22.87930
67 2	2084670.41	6092307.68	69.79	FD BM FAIR580	The second section of the second section secti	was to a second
68 2	2084443.65	6092198.88	53.70	MW-4 PAV		
69 2	2084444.39	6092199.72	53.74	MW-4 PUNCH		
70 2	2084444.59	6092199.51	53.31	MW-4 NOTCH	37°42'29.91496"	122°07'22.64809"
71 2	2084399.10	6092145.43	54.37	MW-3 PAV		
72 2	2084399.78	6092145.28	54.33	MW-3 PUNCH		
73 2	2084400.15	6092145.27	53.91	MW-3 NOTCH	37°42'29.46636"	122°07'23.31339"
74 2	2084329.47	6092199.72	54.82	MW-1 PAV		
75 2	2084330.44	6092199.45	54.79	MW-1 PUNCH		
76 2	2084330.75	6092199.20	54.46	MW-1 NOTCH	37°42'28.78955"	122°07'22.62738"
77 2	2084367.59	6092256.38	52.88	MW-2 PAV		
78 2	2084368.15	6092256.14	52.92	MW-2 PUNCH		
79 2	2084368.53	6092256.06	52.41	MW-2 NOTCH	37°42'29.17277"	122°07'21.92804"
80 2	2084930.49	6091759.33	58.50	FD BM K1256	37°42'34.64279"	122°07'28.23011"
					CHSED LAND SO	
			N 17-10-01		18 1 Mg	
					CHARA HARA	431
		N 9			1 / /	
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					OF CALL	1

HARRINGTON SURVEYS INC. 2278 LARKEY LANE WALNUT CREEK, CA. 94597 925-935-7228 FAX. 935-5118

JOB NO.	2445
DATE: FEB. 21	2008

	NAD 83	NAD 83	NAVD 88		NORTH	WEST
PΤ	NORTH (sft)	EAST(sft)	ELEV.	DESCRIPTION	LATITUDE (DMS)	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	2084251.32	6092125.25	53.70	MW-4 PAV	Ammended 2\21\08	From here down
69	2084250.55	6092124.46	53.74	MW-4 PUNCH		
70	2084250.36	6092124.67	53.31	MW-4 NOTCH	37°42'27.98205"	122°07'23.53734"
71	2084298.86	6092176.07	54.37	MW-3 PAV		
72	2084298.19	6092176.26	54.33	MW-3 PUNCH		
73	2084297.82	6092176.29	53.91	MW-3 NOTCH	37°42'28.46009"	122°07'22.90536"
74	2084365.28	6092117.89	54.82	MW-1 PAV		
75	2084364.32	6092118.22	54.79	MW-1 PUNCH		
76	2084364.03	6092118.49	54.46	MW-1 NOTCH	37°42'29.10470"	122°07'23.63882"
77	2084323.98	6092063.51	52.88	MW-2 PAV		
78	2084323.44	6092063.77	52.92	MW-2 PUNCH	0=0.40100.00000	100000000000000000000000000000000000000
79	2084323.06	6092063.88	52.41	MW-2 NOTCH	37°42'28.69039"	122°07'24.30947"
80	2084930.49	6091759.33	58.50	FD BM K1256	37°42'34.64279"	122°07'28.23011"
			1			
			1			
-			1			
			1			
		 			+	
			1			
		İ	1			

DATE: 1/08/2008 JOB NUMBER 0208101 DATE OF SURVEY 1/03/07 INSTRUMENT LIECA SR520

TABLE OF ELEVATIONS & COORDINATES INS ON MONITORING WELLS SOMA ENVIRONMENTAL, PROJECT 15101 FREEDOM DRIVE - SAN LEANDRO

WELL ID#	NORTHING (ft.) LATITUDE	EASTING (ft.) LONGITUDE	ELEVATION (ft.)	DESCRIPTION
MW-1D	2084371.23	6092127.90	54.42	MW-1D NOTCH
	37.708104856	122.123200912	54.94	MW-1D RIM
	37° 42' 29.1" N	122° 07' 23" W	54.74	PAVEMENT
MW-3D	2084303.98	6092183.53	54.10	MW-3D NOTCH
	37.707922851	122.123004590	54.56	MW-3D RIM
	37° 42' 28.5" N	122° 07' 22" W	54.47	PAVEMENT
MW-4D	2084222.77	6092116.37	53.12	MW-4D NOTCH
	37.707696648	122.123231858	53.37	MW-4D RIM
	37° 42' 27.7" N	122° 07' 23" W	53.39	PAVEMENT

BENCH MARK: NGS BENCH MARK NO. HT1871

3.0 KM (1.85 MI) NORTH FROM SAM LORENZO. 1.85 MILES NORTH ALONG INTERSTATE HIGHWAY 580 FROM THE JUNCTION OF STATE HIGHWAY 238 IN SAN LORENZO, IN THE WEST CORNER OF THE CROSSING OF 150TH AVENUE, IN TOP OF THE CONCRETE BRIDGE DECK, 15.5 FEET NORTHWEST OF THE SOUTHWEST BOUND LANES OF THE AVENUE, 10.9 FEET NORTHEAST OF THE SOUTH CORNER OF THE SOUTHWEST END OF THE NORTHWEST CONCRETE GUARDRAIL, 0.7 FOOT NORTHEAST OF THE SOUTHWEST EDGE OF THE DECK, 0.9 FOOT SOUTHEAST OF THE NORTHWEST CONCRETE GUARDRAIL, AND ABOUT LEVEL WITH THE HIGHWAY.

ELEVATION = 58.50 NAVD 88 DATUM

HORIZONTAL AND VERTICAL CONTROL BASED ON HARRINGTON SURVEY DATED 10-12-2004 FD CHABOT A, CALIFORNIA STATE PLAIN COORDINATE SYSTEM, NAD 83, ZONE 3. NORTH 2,088,584.99 EAST 6,093,351.39. LAT N 37°43'11.04190" LONG W 122°07'09.20691", ELEVATION 492.08 NAVD 88.

FD CHABOT B, CALIFORNIA STATE PLAIN COORDINATE SYSTEM, NAD 83, ZONE 3. NORTH 2,087,731.02 EAST 6,094,039.23. LAT N 37°43'02.71762" LONG W 122°07'00.46339", ELEVATION 442.77 NAVD 88.



Well No.:	14/W - 1	Project No.: 2551
Casing Diameter:	inches	Address: 15101 Freedom Avenue
Depth of Well:	30.50 feet	San Leandro, CA
Top of Casing Elevation:	54.46 feet	Date: April ≯5,16, 2008
Depth to Groundwater:	22.8° feet	Sampler: Lizzie Hightower
Groundwater Elevation:	31.57 feet	Eticloassmar-Wellwage-
Water Column Height:	7.61 feet	
Purged Volume:	15gallons	
Purging Method:	Bailer □	Pump to
Sampling Method:	Bailer d	Pump
Coloni	Yes □ No d	Describe:
Color:	Yes □ No ⅓	Describe.
Sheen:	Yes □ No M	Describe:
Odor:	Yes 🗹 No □	Describe: Slight Petro Odor

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP
	(gallons)	mg/L		°C	(μS/cm)	NTU	
11:17	Startz	dp	wai	na wel	'L		
11:18	3	0.18	7.18	21.44	997	1.01	-232.5
11:19	6	0.15	7.22	21.49	1016	12.3	-231.4
11:20	9	0.18	7.17	21.52	1037	10.3	-233.0
11:21	12	0.24	7.16	21.52	1040	10.7	-232.2
11:22	15	0.31	7.15	21.53	1056	4.21	-228.4
11:25	Samp	lea					



Well No.:	MW-2	• _	Project No.:	2551
Casing Diameter:		inches	Address:	15101 Freedom Avenue
Depth of Well:	30.15	feet		San Leandro, CA
Top of Casing Elevation:	52.31	feet	Date:	April 15-1 X 2008
Depth to Groundwater:	20.89	_feet	Sampler:	Lizzie Hightower
Groundwater Elevation:	31.42	_feet		Eric Gassner-Wollwage
Water Column Height:	9.26	_feet		
Purged Volume:		_gallons		
				/
Purging Method:	Bailer		Pump 🕁	
Sampling Method:	Bailer 🗗		Pump	
Color:	Yes ⊓	No ta	Describe:	
COIOI.	Yes □	No th	Describe.	·
Sheen:	Yes □	No 🗒	Describe:	
		*		
Odor:	Yes 🖫	No □	Describe:	Musty

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP
	(gallons)	mg/L		°C	(μS/cm)	NTU	
13:33	Starte	2 pv	wain	a well	8		
13:34	3	0.17	6.92	21.11	885	7.38	-223.8
13:35	6	0.13	6.84	21.14	809	7.84	-219.7
13:37	12	0.13	6.82	21.17	838	10.7	-217.4
13:39	18	0.14	6.82	21.18	872	8.69	-215.7
13:42	Sampl	red					
	/	- 1		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		JH-410	



Well No.:	MW-D	Project No.: 2551
Casing Diameter:	<u> </u>	Address: 15101 Freedom Avenue
Depth of Well:	29.90 feet	San Leandro, CA
Top of Casing Elevation:	53.96 feet	Date: April 25-16, 2008
Depth to Groundwater:	22.40 feet	Sampler: Lizzie Hightower
Groundwater Elevation:	31.56 feet	Bib/Bats/Apra/Mollwage
Water Column Height:	7.50 feet	
Purged Volume:	gallons	
Purging Method:	Bailer 🗆	Pump 💆
Sampling Method:	Bailer 🗹	Pump
Color:	Yes □ No 🗹	Describe:
Sheen:	Yes ₩ No □	Describe: Slight Rainbow Sheen
Odor:	Yes by No 🗆	Describe: Petro Odor

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP
	(gallons)	mg/L		°C	(μS/cm)	NTU	
11:50	Stark	D DI	wair	a well			
11:51	3	0.38	6.76	ノ21.53	1120	11.5	-94.3
11:52	b	0.41	6.69	21.56	1162	11-1	-103.6
11:53	9	0.39	6.66	21.60	1170	8.16	-1127
11:54	12	0.37	6.64	21.60	(181	9.96	~125.9
11:55	15	0-34	6-63	21.63	1207	9.77	-127.2
11:58	Samy	bled					



Well No.:	MW-4	Project No.: 2551
Casing Diameter:	inches	Address: 15101 Freedom Avenue
Depth of Well:	_30.20 feet	San Leandro, CA
Top of Casing Elevation:	53.36 feet	Date: April 15-7€, 2008
Depth to Groundwater:	21.90 feet	Sampler: Lizzie Hightower
Groundwater Elevation:	31.46 feet	Eric Gassner-Wollwage
Water Column Height:	<u>8.30</u> feet	
Purged Volume:	(5gallons	
		/
Purging Method:	Bailer □	Pump tt
Sampling Method:	Bailer 🗹	Pump
Color:	Yes 🗆 No 🗹	Describe:
Sheen:	Yes 🗆 No 🖒	Describe:
Odor:	Yes No 🗆	Describe: Slight Petro Odor

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP
	(gallons)	mg/L		°C	(μS/cm)	NTU	
15:00	starte	y pu	mino	well ,			
15:01	3	0.22	6.69	20.67	1315	28.0	-108.9
15:03	9	0.35	6.70	20,69	1352	20.0	-134.2
15:04	12	0.45	6.73	20.70	1361	10.0	-134.5
15:05	(S	6.44	6.73	20.72	1369	11.2	-131.2
15.08	Sample	d					
	1						



Well No.:	<u> </u>	Project No.: 2551
Casing Diameter:	Hinches	Address: 15101 Freedom Avenue
Depth of Well:	29.80 feet	San Leandro, CA
Top of Casing Elevation:	50.18 feet	Date: April 15-1%, 2008
Depth to Groundwater:		Sampler: Lizzie Hightower
Groundwater Elevation:	31.02 feet	Eric Gassner-Wollwage
Water Column Height:	<u> 10.64</u> feet	
Purged Volume:	gallons	
Purging Method:	Bailer 🗆 /	Pump b
Considerate Internal Internal Internal	/	
Sampling Method:	Bailer b√	Pump
	/	
Color:	Yes □ No b	Describe:
Sheen:	Yes □ No b	Describe:
Odor:	Yes b√ No □	Describe: Slight Petro Odor

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP
	(gallons)	mg/L		°C	(μS/cm)	NTU	
13:55	Starte	d p	wai	og well)		
13.56	3	0.35	6.68	21.31	1102	11.0	-101.0
13:58	9	0.39	6.67	21.34	1011	9.51	-111.9
14:00	15	0.37	6.73	21.36	1098	8.57	-119.6
14:02	21	0.35	6.68	21.38	1099	10.3	-123.3
14:05	Samp	60					



Well No.:	MM-P	_	Project No.:	2551
Casing Diameter:	4	inches	Address:	15101 Freedom Avenue
Depth of Well:	27.30	feet		San Leandro, CA
Top of Casing Elevation:	45.82	feet	Date:	April 15-1x, 2008
Depth to Groundwater:	15.73	feet	Sampler:	Lizzie Hightower
Groundwater Elevation:	30.09	_feet		Eric Gassner-Wollwage
Water Column Height:	11.57	_feet		
Purged Volume:	18	gallons		
				/
Purging Method:	Bailer	,	Pump 🕁	/
Sampling Method:	Bailer 🔯		Pump	
Color:	Yes □	No 🗹	Describe:	
Sheen:	Yes □	No to	Describe:	
Odor:	Yes M	No 🗆	Describe:	Slight Petro

Time	Volume	D.O.	рН	Temp	E.C.	Turb.	ORP
	(gallons)	_mg/L		°C	(μS/cm)	NTU	
1130	Starter	Da	Pie P	well			
11:31	3	6.26	6.96	20 16	942	9.74	-239.6
11:33	9	0.14	695	20.69	947	8.8%	-256.7
11:35	15	0.19	6.96	20.72	948	9.49	-266.D
11:36	18	0.22	6.96	20.74	949	12.4	-261.8
11:39	Sampl	ed					
	- '						



Well No.:	MW-7	Project No.: 2551
Casing Diameter:	inches	Address: 15101 Freedom Avenue
Depth of Well:	2\.00feet	San Leandro, CA
Top of Casing Elevation:	<u>44.74</u> feet	Date: April 15-16 2008
Depth to Groundwater:	13.91 feet	Sampler: Lizzie Hightower
Groundwater Elevation:	30-83 feet	Eric Gassner-Wollwage
Water Column Height:	7.09 feet	
Purged Volume:	3.5gallons	
	/	
Purging Method:	Bailer 🔯	Pump
Sampling Method:	Bailer 🖢	Pump
	1	
Color:	Yes No 🗆	Describe: Cloudy
Sheen:	Yes 🗆 No 💆	Describe:
Odor:	Yes No 🗆	Describe: Slight fetro Odor

Time	Volume	D.O.	рН	Temp	E.C.	Turb.	ORP
	(gallons)	mg/L		°C	(μS/cm)	NTU	
13:06	Starte	d pu	Min	well	-		
13:09	1	0.92	6.92	18.63	9801	(00 D	-1019
13:12	2	0.69	6.90	18.49	1082	999	-114.6
13:15	3	1.13	6.95	18.37	1085	1999	-98.2
13:17	3.5	0.86	6.90	18.34	1084	999	-121.1
(3: 20	Samo						
	1						



Well No.:	8-WM		Project No.:	2551
Casing Diameter:	2	- inches	Address:	15101 Freedom Avenue
Depth of Well:	28.75	_ _feet		San Leandro, CA
Top of Casing Elevation:	41.14	feet	Date:	April 15-) (2008
Depth to Groundwater:	11.44	feet	Sampler:	Lizzie Hightower
Groundwater Elevation:	29.70	_feet		Eric Gassner-Wollwage
Water Column Height:	17.31	_feet		
Purged Volume:	9	_gallons		
				/
Purging Method:	Bailer 🗆		Pump 🗹	/
Sampling Method:	Bailer 🕁		Pump 🗆	
Color:	Yes d	No 🗆	Describe:	Cloudy
Sheen:	Yes □	No 🗹	Describe:	January Marketta Mar
Odor:	Yes □	No th	Describe:	

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP
	(gallons)	mg/L		°C	(μS/cm)	NTU	
11:57	Starte	d P	wai	na wel	R_		
11:58	3	0.25	7.06	79.73	1214	415	-85.8
11:59	b	0.18	7.02	19.77	1221	236	-92.9
12'.00	. A	0.18	7.01	19.78	1223	97.3	-95.2
12:03	Samo	led		E .			
		Post-					



Well No.:	WM-	<u> </u>	Project No.:	2551
Casing Diameter:	2	_inches	Address:	15101 Freedom Avenu
Depth of Well:	32.55	_feet		San Leandro, CA
Top of Casing Elevation:	40.26	_feet	Date:	April 15-1) 2008
Depth to Groundwater:	10.56	_feet	Sampler:	Lizzie Hightower
Groundwater Elevation:	29.70	_feet		Eric Gassner-Wollwage
Water Column Height:	21.99	_feet		
Purged Volume:	12	_gallons		
				/
Purging Method:	Bailer		Pump 🕁	
Sampling Method:	Bailer 🗗		Pump 🗆	
Color:	Yes □	No t	Describe:	
Sheen:	Yes □	No 🗹	Describe:	
Odor:	Yes □	No b	Describe:	

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP
	(gallons)	mg/L	**	°C	(μS/cm)	NTU	
11:01	Starte	& C	wa	ing w	ell		
11.02	3	1.90	7.20	49.56	1056	9.90	-45
11.03	6	1.15	7.14	19.53	1053	22.5	-15.5
11:04	9	0.70	7.09	19.77	1091	21.4	-39.5
11:05	12	0.30	7.09	19.83	1104	20.7	-45:8
01:11	Sam	pled					



Well No.:	\mathcal{W}	11-W	>		Project No.	2551
Casing Diameter:	2	2	inche	S	Address:	15101 Freedom Avenue
Depth of Well:	50	1.81	feet			San Leandro, CA
Top of Casing Elevation:	54	1.42	feet		Date:	April 15 -16, 2008
Depth to Groundwater:	23	.10	feet		Sampler:	Lizzie Hightower
Groundwater Elevation:	31	.32	feet			MANUAL SHEWARD HARDEN
Water Column Height:	36	,71	feet			
Purged Volume:	\	8	gallor	ıs		
Purging Method:	Baile	r 🛚	/		Pump	ts/
Sampling Method:	Baile	r o⊻∕	/		Pump	
				2		
Color:	Yes		No	M	Describe:	3
Sheen:	Yes		No		Describe:	1 <u></u>
Odor:	Yes		No		Describe:	

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP
	(gallons)	mg/L		°C	(μS/cm)	NTU	
10:02	Starte	2 pu	Mair	a well)		
10:03	3	0.23	7.28	20,33	1253	19.4	-31.0
10:05	9	0.11	7.26	20.25	1245	34.4	-45.3
10:07	15	0.09	7.25	20.23	1237	51.3	-52.1
10:08	18	0.09	7.22	20.23	1229	47.4	-55.7
11:01	SAMO	led					
	1						



Well No.:	MV	<u>v-3</u>	D		Project No	.:	2551
Casing Diameter:		2	inche	s	Address:		15101 Freedom Avenue
Depth of Well:	55	3.59	feet				San Leandro, CA
Top of Casing Elevation:	5	1.10	feet		Date:		April 18-16, 2008
Depth to Groundwater:	22	2.64	feet		Sampler:		Lizzie Hightower
Groundwater Elevation:	<u>31</u>	.46	feet				Aric 63580enWollwage
Water Column Height:	35		feet				
Purged Volume:	(8	gallor	าร			
							/
Purging Method:	Baile	r 👝	/		Pump	⊌	/
Sampling Method:	Baile	r b⊴∕			Pump		
				,			
Color:	Yes	0	No	A	Describe:		
Sheen:	Yes		No	4	Describe:		
Odor:	Yes		No	10	Describe:		

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP
	(gallons)	mg/L		°C	(μS/cm)	NTU	
10.43	Starte	el pi	wair	a well			
10-44	3	0.25	7.19	20.47	1801	9.49	-24.1
10:46	9	0.11	7,12	20.47	1078	8.67	-33.1
10:48	15	0.09	7.11	20.49	1072	13.5	-44,4
10:49	18	0.08	7.11	20.51	1076	8.80	-49.1
10:52	Sam	oled			1 (2000) 20 (2000) 10 (2000) 10 (2000)		
		()					



Well No.:	MW-4D	Project No.:	2551
Casing Diameter:	inches	Address:	15101 Freedom Avenue
Depth of Well:	58.79 feet		San Leandro, CA
Top of Casing Elevation:	53.12 feet	Date:	April 15-1) 2008
Depth to Groundwater:	21.67 feet	Sampler:	Lizzie Hightower
Groundwater Elevation:	31.45 feet		Eric Gassner-Wollwage
Water Column Height:	37.12 feet		
Purged Volume:	gallons		
Purging Method: Sampling Method:	Bailer □ Bailer □	Pump 🗹	
Color:	Yes No 🗆	Describe:	cloudy
Sheen:	Yes 🗆 No 🛱	Describe:	
Odor:	Yes □ No □	Describe:	

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP
	(gallons)	mg/L		°C	(μS/cm)	NTU	
1431	Starte	of pe	2-51	LO HE	11		
1432	3	0-22	7.40	019.75	1106	999	-67.2
1434	9	0.21	7.28	19.76	1107	1000	-70.6
1436	15	0.24	7.22	19.77	1097	454	-72.2
7437	18	0.28	7.26	19.78	1088	355	-88-3
1440	Samo	red					
	7						

Appendix C

Laboratory Report and Chain of Custody Form for the Second Quarter 2008 Monitoring Event

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

PAL Login# 8040016

Proje	ct No: 2551			Sar	mple	er:	Lizzie High	towe	r/Erio	Ga	ssner	-Wollwage			Ana	alyses	Meth	od	
Proje	ct Name: 15101 San L	l Freedom A eandro, CA	ve.	Rep	Report To: Joyce Bobek									MtBE	nates				
				Co	mpa	any:	SOMA En	viror	nmer	ntal	Engi	neering, Inc.		×	/ge				
Turn	around Time: \$	Standard		Tel Faz							TPH-g, BTEX, MtBE	Gasoline Oxygenates & Lead Scavengers							
		Samplin	g Date/Time	М	Iatri	x	# of Containers	1	Prese	rvati	ives			TPH	Gasol & Lea				
Lab No.	Sample ID	Date	Time	Soil	Water	Waste		HCL	H2S04	HNO3	ICE	F	ield Notes						
	MW-1	4/16/09	11:25		X		3 VOAS	X			X	Gr	ab Sample	X	X				
	MW-1D		8 10:11		X		3 VOAS	X			X	Gr	rab Sample	X	X				
	MW-2		3 13:42		X		3 VOAS	X			X		rab Sample	X	X				
	MW-3		11:58		X		3 VOAS	X			X	Gr	rab Sample	X	X				
	MW-3D	4/16/0	8 10:52		X		3 VOAS	X			X	Gr	rab Sample	X	X				
	MW-4	4 15 08	15:08		X		3 VOAS	X			X	Gr	rab Sample	X	X				
	MW-4D	4/15/0	3 14:40		X		3 VOAS	X			X	Gr	rab Sample	X	X				
	MW-5	4 15 02	14:05		X		3 VOAS	X			X		rab Sample	X	X				
	MW-6	4/15/08	11:39		X		3 VOAS	X			X		rab Sample	X	X				
	MW-7	4 15 0	13:20		X		3 VOAS	X			X		rab Sample	X	X		-		
Sam	pler Remarks:						Relinquis	ned	by:		Date	e/Time:	Received by:			Date			
Ethai	REQUIRED						ZHigh	to	~	-	102	7108 8:06	Rudin	lathu	ռ	4/1	7/0	8 : 08	
Ho	d: EB-PM	P, EB-P	RB, B-PRE	32			EAist	На	thu	الم	41	17/08	V. Vasqu	at		41	171	8 : 08 08	

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

PAL SO40016

Proje	ct No: 2551				Sai	mple	r:	Lizzie High	towe	r/Eric	c Ga	ssne	r-Wollwage		Analyses/Method					
Proje	ct Name: 15101 San Le			ve.	Report To: Joyce Bobek										MtBE	nates				
					Company: SOMA Environmental Engineering, Inc.										×	/ger				
Turn	around Time: S	tanda	ard		Tel Fa:			5-734-6400 5-734-6401							TPH-g, BTEX, MtBE	Scave				
		5	Sampling	Date/Time	Matrix		×.	# of Containers	1	Prese	rvati	ves			TPH-	Gasoline Oxygenates & Lead Scavengers				
Lab No.	Sample ID		Date	Time	Soil	Water	Waste		HCL	H2S04	HNO ₃	ICE	F	ield Notes						
	MW-8	4	15/08	12:03		Х		3 VOAS	X			Х	Gra	ab Sample	X	X				
	MW-9		15/08			Х		3 VOAS	X			Х		ab Sample	X	X				1
	EB-PMP		15/08			Х		3 VOAS	X			X		oment Blank		,				
	EB-PRB	4	15/08	10:10		Х		3 VOAS	Х			X	Equi	oment Blank			1	1	1 -	0
	EB-PMP2	4	16/08	12:25		Х		3 VOAS	X			X	Equi	oment Blank				>+	0	X
EB-PRB2 4/16/08 EB-PRB2 4/16/08		12:30		X		3 VOAS	X			X	Equi	oment Blank				ľ				
					,															
Samı	l oler Remarks:							Relinquisl	hed	bv:		Date	e/Time:	Received by:			Date	e/Ti	me.	
EDF	REQUIRED							E. High	do		-	4/1	7/08	V. Vaszua	t		4/	117	ne: 08 5	
Hol	d: EB-PN EB-PN	192	EB.	PRB, 3-PRB	2			Sueli'	Ma	the	us,	41	0:15	0						
	0	•)

10 May 2008

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

RE: 15101 Freedom Ave., San Leandro

Work Order Number: 8040016

Mapad Ach

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,

Maiid Akhavan

Laboratory Director



6620 Owens Drive, Suite AProject Number: 2551Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr10-May-08 15:17

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	8040016-01	Water	16-Apr-08 11:25	17-Apr-08 18:42
MW-1D	8040016-02	Water	16-Apr-08 10:11	17-Apr-08 18:42
MW-2	8040016-03	Water	15-Apr-08 13:42	17-Apr-08 18:42
MW-3	8040016-04	Water	16-Apr-08 11:58	17-Apr-08 18:42
MW-3D	8040016-05	Water	16-Apr-08 10:52	17-Apr-08 18:42
MW-4	8040016-06	Water	15-Apr-08 15:08	17-Apr-08 18:42
MW-4D	8040016-07	Water	15-Apr-08 14:40	17-Apr-08 18:42
MW-5	8040016-08	Water	15-Apr-08 14:05	17-Apr-08 18:42
MW-6	8040016-09	Water	15-Apr-08 11:39	17-Apr-08 18:42
MW-7	8040016-10	Water	15-Apr-08 13:20	17-Apr-08 18:42
MW-8	8040016-11	Water	15-Apr-08 12:03	17-Apr-08 18:42
MW-9	8040016-12	Water	15-Apr-08 11:10	17-Apr-08 18:42



6620 Owens Drive, Suite AProject Number: 2551Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr10-May-08 15:17

Volatile Organic Compounds by EPA Method 8260B Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (8040016-01) Water Sampled: 16-A	pr-08 11:25 Recei	ved: 17-Apr-0	08 18:42						
Gasoline (C6-C12)	2320	50.0	ug/l	1	BD81401	17-Apr-08	17-Apr-08	EPA 8260B	
Benzene	248	0.500	"	"	"	"	"	"	
Ethylbenzene	54.1	0.500	"	"	"	"	"	"	
m&p-Xylene	37.3	2.00	"	"	"	"	"	"	
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	8.36	2.00	"	"	"	"	"	"	
1,2-dichloroethane	164	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		132 %	70-	130	"	"	"	"	S-GC
Surrogate: Dibromofluoromethane		103 %	70-	130	"	"	"	"	
Surrogate: Perdeuterotoluene		121 %	70-	130	"	"	"	"	
MW-1D (8040016-02) Water Sampled: 16-	-Apr-08 10:11 Rec	eived: 17-Apr	-08 18:42						
Gasoline (C6-C12)	ND	50.0	ug/l	1	BD81401	17-Apr-08	17-Apr-08	EPA 8260B	
Benzene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	2.00	"	"	"	"	"	"	
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	2.00	"	"	"	"	"	"	
	ND	0.500	"	"	"	"	"	"	
1,2-dichloroethane						,,	,,		
,	ND	0.500	"	"	"	"	"	"	
1,2-dichloroethane 1,2-Dibromoethane (EDB) Ethanol	ND ND	0.500 1000	"	"	"	"	"	"	

Pacific Analytical Laboratory



6620 Owens Drive, Suite AProject Number: 2551Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr10-May-08 15:17

Volatile Organic Compounds by EPA Method 8260B Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-1D (8040016-02) Water Sampled: 16	-Apr-08 10:11 Re	ceived: 17-Apı	-08 18:42						
Surrogate: Dibromofluoromethane		111 %	70-	-130	BD81401	17-Apr-08	17-Apr-08	EPA 8260B	
Surrogate: Perdeuterotoluene		110 %	70-	-130	"	"	"	"	
MW-2 (8040016-03) Water Sampled: 15-A	Apr-08 13:42 Rece	ived: 17-Apr-0	08 18:42						
Gasoline (C6-C12)	852	50.0	ug/l	1	BD81401	17-Apr-08	17-Apr-08	EPA 8260B	
Benzene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	27.2	0.500	"	"	"	"	"	"	
m&p-Xylene	4.78	2.00	"	"	"	"	"	"	
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	2.00	"	"	"	"	"	"	
1,2-dichloroethane	2.44	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		127 %	70-	-130	"	"	"	"	
Surrogate: Dibromofluoromethane		113 %	70-	-130	"	"	"	"	
Surrogate: Perdeuterotoluene		113 %	70-	-130	"	"	"	"	
MW-3 (8040016-04) Water Sampled: 16-A	Apr-08 11:58 Rece	ived: 17-Apr-0	08 18:42						
Gasoline (C6-C12)	20700	550	ug/l	11	BD81401	17-Apr-08	17-Apr-08	EPA 8260B	
Benzene	2790	5.50	"	"	"	"	"	"	
Ethylbenzene	860	5.50	"	"	"	"	"	"	
m&p-Xylene	2710	22.0	"	"	"	"	"	"	
o-xylene	679	5.50	"	"	"	"	"	"	
Toluene	182	22.0	"	"	"	"	"	"	
MTBE	263	5.50	"	"	"	"	"	"	
DIPE	ND	5.50	"	"	"	"	"	"	
ETBE	ND	5.50	"	"	"	"	"	"	
TAME	ND	22.0	"	"	"	"	"	"	
TBA	881	22.0	"	"	"	"	"	"	
1,2-dichloroethane	1850	5.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	12.1	5.50	"	"	"	"	"	"	
Ethanol	ND	11000	"	"	"	"		"	

Pacific Analytical Laboratory



6620 Owens Drive, Suite AProject Number: 2551Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr10-May-08 15:17

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
				Dilution	DalCII	терагец	Anaryzeu	IAICHIOA	NOI
MW-3 (8040016-04) Water Sampled: 16-A	Apr-08 11:58 Rece								
Surrogate: 4-Bromofluorobenzene		120 %		130	BD81401	17-Apr-08	17-Apr-08	EPA 8260B	
Surrogate: Dibromofluoromethane		106 %		130	"	"	"	"	
Surrogate: Perdeuterotoluene		111 %	70-	130	"	"	"	"	
MW-3D (8040016-05) Water Sampled: 16	-Apr-08 10:52 Rec	ceived: 17-Apr	-08 18:42						
Gasoline (C6-C12)	ND	50.0	ug/l	1	BD81401	17-Apr-08	18-Apr-08	EPA 8260B	
Benzene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	2.00	"	"	"	"	"	"	
o-xylene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
MTBE	71.1	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	17.7	2.00	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	70-	130	"	"	"	"	
Surrogate: Dibromofluoromethane		111 %	70-	130	"	"	"	"	
Surrogate: Perdeuterotoluene		105 %	70-	130	"	"	"	"	
MW-4 (8040016-06) Water Sampled: 15-A	Apr-08 15:08 Rece	ived: 17-Apr-(08 18:42						
Gasoline (C6-C12)	4240	550	ug/l	11	BD81401	17-Apr-08	18-Apr-08	EPA 8260B	
Benzene	90.4	5.50	"	"	"	"	"	"	
						"	"	"	
Ethylbenzene	107	5.50	"	"	"				
•	107 380	5.50 22.0	"	"	"	"	"	"	
m&p-Xylene							"	"	
m&p-Xylene o-xylene	380	22.0	"	"	"	"			
m&p-Xylene o-xylene Toluene	380 ND	22.0 5.50	"	"	"	"	"	"	
m&p-Xylene o-xylene Toluene MTBE	380 ND ND	22.0 5.50 22.0	" "	" "	" "	" "	"	"	
m&p-Xylene o-xylene Toluene MTBE DIPE	380 ND ND 674	22.0 5.50 22.0 5.50	" "	" " "	" " "	" " "	" "	" " "	
m&p-Xylene o-xylene Toluene MTBE DIPE ETBE	380 ND ND 674 ND	22.0 5.50 22.0 5.50 5.50	" "	" " "	" " "	" " "	" "	" " "	
m&p-Xylene o-xylene Toluene MTBE DIPE ETBE TAME	380 ND ND 674 ND 11.7	22.0 5.50 22.0 5.50 5.50 5.50	" " " "	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	" " "	
Ethylbenzene m&p-Xylene o-xylene Toluene MTBE DIPE ETBE TAME TAME TBA 1,2-dichloroethane	380 ND ND 674 ND 11.7	22.0 5.50 22.0 5.50 5.50 5.50 22.0	" " " " "	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	11 11 11	

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Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analysta	D agult	Reporting	Unita	Dilution	Datah	Dronorod	A malvoza J	Mathad	N1-4-
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-4 (8040016-06) Water Sampled: 15-A	Apr-08 15:08 Rece	ived: 17-Apr-(08 18:42						
Ethanol	ND	11000	ug/l	11	BD81401	17-Apr-08	18-Apr-08	EPA 8260B	
Surrogate: 4-Bromofluorobenzene		120 %	70-	130	"	"	"	"	
Surrogate: Dibromofluoromethane		108 %	70-	130	"	"	"	"	
Surrogate: Perdeuterotoluene		109 %	70-	130	"	"	"	"	
MW-4D (8040016-07) Water Sampled: 15	5-Apr-08 14:40 Rec	ceived: 17-Apr	-08 18:42						
Gasoline (C6-C12)	ND	50.0	ug/l	1	BD81401	17-Apr-08	18-Apr-08	EPA 8260B	
Benzene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	2.00	"	"	"	"	"	"	
o-xylene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
MTBE	27.0	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	25.7	2.00	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	70-	130	"	"	"	"	
Surrogate: Dibromofluoromethane		112 %	70-	130	"	"	"	"	
Surrogate: Perdeuterotoluene		109 %	70-	130	"	"	"	"	
MW-5 (8040016-08) Water Sampled: 15-A	Apr-08 14:05 Rece	ived: 17-Apr-(08 18:42						
Gasoline (C6-C12)	8890	100	ug/l	2	BD81401	17-Apr-08	18-Apr-08	EPA 8260B	
Benzene	335	1.00	"	"	"	"	"	"	
Ethylbenzene	477	1.00	"	"	"	"	"	"	
m&p-Xylene	377	4.00	"	"	"	"	"	"	
o-xylene	20.5	1.00	"	"	"	"	"	"	
Toluene	15.1	4.00	"	"	"	"	"	"	
MTBE	136	1.00	"	"	"	"	"	"	
DIPE	ND	1.00	"	"	"	"	"	"	
ETBE	ND	1.00	"	"	"	"	"	"	
TAME	29.6	4.00	"	"	"	"	"	"	
TBA	566	4.00	"	"	"	"	"	"	
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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
MW-5 (8040016-08) Water Sampled: 15-	Apr-08 14:05 Rece	ived: 17-Apr-	08 18:42						
1,2-Dibromoethane (EDB)	5.66	1.00	ug/l	2	BD81401	17-Apr-08	18-Apr-08	EPA 8260B	
Ethanol	ND	2000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		131 %	70-	130	"	"	"	"	S-GO
Surrogate: Dibromofluoromethane		105 %	70-	130	"	"	"	"	
Surrogate: Perdeuterotoluene		117 %	70-	130	"	"	"	"	
MW-6 (8040016-09) Water Sampled: 15-	Apr-08 11:39 Rece	ived: 17-Apr-0	08 18:42						
Gasoline (C6-C12)	2070	50.0	ug/l	1	BD81401	17-Apr-08	18-Apr-08	EPA 8260B	
Benzene	10.8	0.500	"	"	"	"	"	"	
Ethylbenzene	51.1	0.500	"	"	"	"	"	"	
m&p-Xylene	67.0	2.00	"	"	"	"	"	"	
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	2.00	"	"	"	"	"	"	
1,2-dichloroethane	6.78	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	1.49	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		127 %	70-	130	"	"	"	"	
Surrogate: Dibromofluoromethane		107 %	70-	130	"	"	"	"	
Surrogate: Perdeuterotoluene		118 %	70-	130	"	"	"	"	



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Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	No
MW-7 (8040016-10) Water Sampled: 15-	Apr-08 13:20 Recei	ved: 17-Apr-(08 18:42						
Gasoline (C6-C12)	1460	50.0	ug/l	1	BD81401	17-Apr-08	18-Apr-08	EPA 8260B	
Benzene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	15.9	0.500	"	"	"	"	"	"	
m&p-Xylene	19.7	2.00	"	"	"	"	"	"	
o-xylene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
MTBE	17.3	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
ГАМЕ	ND	2.00	"	"	"	"	"	"	
ГВА	8.80	2.00	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	1.26	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
		12606	70	130	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		126 %	/0	150					
ě ,		126 % 104 %	70 70		"	"	"	"	
Surrogate: Dibromofluoromethane Surrogate: Perdeuterotoluene	Apr-08 12:03 Recei	104 % 120 %	70 70	130	"	"	"	"	
Surrogate: Dibromofluoromethane Surrogate: Perdeuterotoluene MW-8 (8040016-11) Water Sampled: 15-	Apr-08 12:03 Recei ND	104 % 120 %	70 70	130					
Surrogate: Dibromofluoromethane Surrogate: Perdeuterotoluene MW-8 (8040016-11) Water Sampled: 15- Gasoline (C6-C12)		104 % 120 % ved: 17-Apr-(70-, 70-, 08 18:42	130 130	"	"	"	"	
Surrogate: Dibromofluoromethane Surrogate: Perdeuterotoluene MW-8 (8040016-11) Water Sampled: 15- Gasoline (C6-C12) Benzene	ND	104 % 120 % ved: 17-Apr-(70- 70- 98 18:42 ug/l	130	BD81401	17-Apr-08	18-Apr-08	" ЕРА 8260В	
Surrogate: Dibromofluoromethane Surrogate: Perdeuterotoluene MW-8 (8040016-11) Water Sampled: 15- Gasoline (C6-C12) Benzene Ethylbenzene	ND ND	104 % 120 % ved: 17-Apr-0 50.0 0.500	70- 70- 98 18:42 ug/l	130	BD81401	17-Apr-08	18-Apr-08	EPA 8260B	
Surrogate: Dibromofluoromethane Surrogate: Perdeuterotoluene MW-8 (8040016-11) Water Sampled: 15- Gasoline (C6-C12) Benzene Ethylbenzene n&p-Xylene	ND ND ND	104 % 120 % ved: 17-Apr-0 50.0 0.500 0.500 2.00	70- 70- 98 18:42 ug/l	130	BD81401	17-Apr-08	" 18-Apr-08 "	EPA 8260B	
Surrogate: Dibromofluoromethane Surrogate: Perdeuterotoluene MW-8 (8040016-11) Water Sampled: 15- Gasoline (C6-C12) Benzene Ethylbenzene m&p-Xylene o-xylene	ND ND ND	104 % 120 % ved: 17-Apr-(50.0 0.500 0.500	70- 70- 08 18:42 ug/l	130	BD81401	17-Apr-08	" 18-Apr-08 " " " "	EPA 8260B	
Surrogate: Dibromofluoromethane Surrogate: Perdeuterotoluene MW-8 (8040016-11) Water Sampled: 15- Gasoline (C6-C12) Benzene Ethylbenzene m&p-Xylene o-xylene Foluene	ND ND ND ND	104 % 120 % ved: 17-Apr-0 50.0 0.500 0.500 2.00 0.500	70 70 08 18:42 ug/l	130	BD81401	" " " " " "	" 18-Apr-08 " " " " " " "	EPA 8260B	
Surrogate: Dibromofluoromethane Surrogate: Perdeuterotoluene MW-8 (8040016-11) Water Sampled: 15- Gasoline (C6-C12) Benzene Ethylbenzene m&p-Xylene o-xylene Foluene MTBE	ND ND ND ND ND	104 % 120 % ved: 17-Apr-(50.0 0.500 0.500 2.00 0.500 2.00	70-, 70-, 08 18:42 ug/l	130	BD81401	""""""""""""""""""""""""""""""""""""""	" " " " " " " " " " " " " " " " " " "	EPA 8260B	
Surrogate: Dibromofluoromethane Surrogate: Perdeuterotoluene MW-8 (8040016-11) Water Sampled: 15- Gasoline (C6-C12) Benzene Ethylbenzene m&p-Xylene D-xylene Toluene MTBE DIPE	ND ND ND ND ND ND	104 % 120 % ved: 17-Apr-(50.0 0.500 0.500 2.00 0.500 2.00 0.500	70-, 70-, 08 18:42 ug/l	130	BD81401	" " " " "	" " " " " " " " " " " " " " " " " " "	" " " " " "	
Surrogate: Dibromofluoromethane Surrogate: Perdeuterotoluene MW-8 (8040016-11) Water Sampled: 15- Gasoline (C6-C12) Benzene Ethylbenzene m&p-Xylene O-xylene Toluene MTBE DIPE ETBE	ND	104 % 120 % ved: 17-Apr-0 50.0 0.500 0.500 2.00 0.500 2.00 0.500 0.500	70-, 70-, 08 18:42 ug/l	130	BD81401 " " " " " "	""""""""""""""""""""""""""""""""""""""	" " " " " " " " " " " " " " " " " " "	" " " " " "	
Surrogate: Dibromofluoromethane Surrogate: Perdeuterotoluene MW-8 (8040016-11) Water Sampled: 15- Gasoline (C6-C12) Benzene Ethylbenzene m&p-Xylene p-xylene foluene MTBE DIPE ETBE FAME	ND N	104 % 120 % ved: 17-Apr-0 50.0 0.500 2.00 0.500 2.00 0.500 0.500 0.500 0.500	70-, 70-, 08 18:42 ug/l	130	BD81401	""""""""""""""""""""""""""""""""""""""	" " " " " " " " " " " " " " " " " " "	" " " " " " "	
Surrogate: Dibromofluoromethane Surrogate: Perdeuterotoluene MW-8 (8040016-11) Water Sampled: 15- Gasoline (C6-C12) Benzene Ethylbenzene m&p-Xylene p-xylene foluene MTBE DIPE ETBE FAME FBA	ND N	104 % 120 % ved: 17-Apr-0 50.0 0.500 2.00 0.500 2.00 0.500 0.500 0.500 0.500	70-, 70-, 08 18:42 ug/l	130	BD81401	""""""""""""""""""""""""""""""""""""""	" " " " " " " " " " " " " " " " " " "	" " " " " " " "	
Surrogate: Dibromofluoromethane Surrogate: Perdeuterotoluene MW-8 (8040016-11) Water Sampled: 15- Gasoline (C6-C12) Benzene Ethylbenzene m&p-Xylene p-xylene Toluene MTBE DIPE ETBE TAME TBA 1,2-dichloroethane	ND N	104 % 120 % ved: 17-Apr-0 50.0 0.500 0.500 2.00 0.500 2.00 0.500 0.500 0.500 2.00 2.	70 70 08 18:42 ug/l " " " " " " " "	130	BD81401	""""""""""""""""""""""""""""""""""""""	" " " " " " " " " " " " " " " " " " "	" " " " " " " " "	
Surrogate: Dibromofluoromethane Surrogate: Perdeuterotoluene MW-8 (8040016-11) Water Sampled: 15- Gasoline (C6-C12) Benzene Ethylbenzene m&p-Xylene o-xylene Toluene MTBE DIPE ETBE TAME TBA 1,2-dichloroethane 1,2-Dibromoethane (EDB)	ND N	104 % 120 % ved: 17-Apr-0 50.0 0.500 0.500 2.00 0.500 2.00 0.500 0.500 0.500 2.00 0.500 0.500 0.500	70 70 08 18:42 ug/l " " " " " " " " "	130	BD81401	""""""""""""""""""""""""""""""""""""""	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " "	
Surrogate: Dibromofluoromethane Surrogate: Perdeuterotoluene MW-8 (8040016-11) Water Sampled: 15- Gasoline (C6-C12) Benzene Ethylbenzene m&p-Xylene o-xylene Toluene MTBE DIPE ETBE TAME TAME TBA 1,2-dichloroethane 1,2-Dibromoethane (EDB)	ND N	104 % 120 % ved: 17-Apr-0 50.0 0.500 0.500 2.00 0.500 0.500 0.500 2.00 0.500 2.00 0.500 0.500 0.500 0.500	70 70 08 18:42 ug/l " " " " " " " " "	130	BD81401	""""""""""""""""""""""""""""""""""""""	" " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " "	
Surrogate: 4-Bromofluorobenzene Surrogate: Dibromofluoromethane Surrogate: Perdeuterotoluene MW-8 (8040016-11) Water Sampled: 15- Gasoline (C6-C12) Benzene Ethylbenzene m&p-Xylene o-xylene Toluene MTBE DIPE ETBE TAME TBA 1,2-dichloroethane 1,2-Dibromoethane (EDB) Ethanol Surrogate: 4-Bromofluorobenzene Surrogate: Dibromofluoromethane	ND N	104 % 120 % ved: 17-Apr-(50.0 0.500 0.500 2.00 0.500 0.500 0.500 2.00 0.500 0.500 0.500 0.500 1000	70-, 70-, 08 18:42 ug/l	130	BD81401	"" "" "" "" "" "" "" "" "" "" "" "" ""	" " " " " " " " " " " " " " " " " " "	" EPA 8260B " " " " " " " " " " " " " " "	

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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
MW-9 (8040016-12) Water San	mpled: 15-Apr-08 11:10 Recei	ved: 17-Apr-0	8 18:42						
Gasoline (C6-C12)	ND	50.0	ug/l	1	BD81401	17-Apr-08	18-Apr-08	EPA 8260B	
Benzene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	2.00	"	"	"	"	"	"	
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	2.00	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	?	111 %	70-1	30	"	"	"	"	
Surrogate: Dibromofluoromethan	е	113 %	70-1	30	"	"	"	"	
Surrogate: Perdeuterotoluene		111 %	70-1	30	"	"	"	"	



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Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BD81401 - EPA 5030 Water MS

Blank (BD81401-BLK1)				Prepared & Ana	alyzed: 14-Apr-08		
Surrogate: 4-Bromofluorobenzene	47.2		ug/l	50.0	94.4	70-130	
Surrogate: Dibromofluoromethane	58.4		"	50.0	117	70-130	
Surrogate: Perdeuterotoluene	51.6		"	50.0	103	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	2.00	"				
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	2.00	"				
o-xylene	ND	0.500	"				
Toluene	ND	2.00	"				
LCS (BD81401-BS1)				Prepared & Ana	alyzed: 14-Apr-08		
Surrogate: 4-Bromofluorobenzene	50.1		ug/l	50.0	100	70-130	
Surrogate: Dibromofluoromethane	47.5		"	50.0	95.0	70-130	
Surrogate: Perdeuterotoluene	49.4		"	50.0	98.8	70-130	
MTBE	89.0	0.500	"	100	89.0	70-130	
ETBE	117	0.500	"	100	117	70-130	
TAME	122	2.00	"	100	122	70-130	
Gasoline (C6-C12)	2410	50.0	"	2000	120	70-130	
TBA	566	2.00	"	500	113	70-130	
Benzene	88.4	0.500	"	100	88.4	70-130	
Toluene	90.2	2.00	"	100	90.2	70-130	



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$Volatile\ Organic\ Compounds\ by\ EPA\ Method\ 8260B\ -\ Quality\ Control$

Pacific Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BD81401 - EPA 5030 Water MS

LCS Dup (BD81401-BSD1)				Prepared & Anal	lyzed: 14-Apr-08			
Surrogate: 4-Bromofluorobenzene	50.6		ug/l	50.0	101	70-130		
Surrogate: Dibromofluoromethane	49.2		"	50.0	98.4	70-130		
Surrogate: Perdeuterotoluene	47.6		"	50.0	95.2	70-130		
MTBE	91.8	0.500	"	100	91.8	70-130	3.10	20
ETBE	115	0.500	"	100	115	70-130	1.72	20
TAME	102	2.00	"	100	102	70-130	17.9	20
TBA	487	2.00	"	500	97.4	70-130	15.0	20
Gasoline (C6-C12)	1990	50.0	"	2000	99.5	70-130	19.1	20
Benzene	79.4	0.500	"	100	79.4	70-130	10.7	20
Toluene	84.0	2.00	"	100	84.0	70-130	7.12	20



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Notes and Definitions

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

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

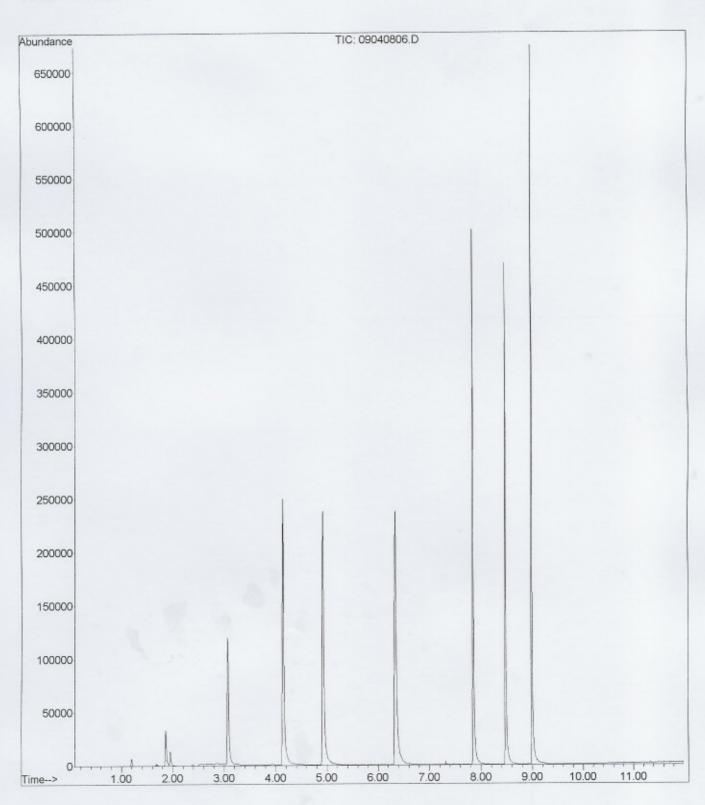
File :C:\MSDChem\1\DATA\2008-Apr-09-1731.b\09040806.D

Operator

Acquired : 9 Apr 2008 7:59 pm using AcqMethod OXY32408.M

Instrument : PAL GCMS Sample Name: BD81401-BLK1

Misc Info : Vial Number: 6



:C:\MSDChem\1\DATA\2008-Apr-09-1731.b\09040803.D File

Operator : Acquired : 9 Apr 2008 6:40 pm using AcqMethod OXY32408.M

Instrument : PAL GCMS Sample Name: BD81401-BS1@voc

Misc Info : Vial Number: 3



File :C:\MSDChem\1\DATA\2008-Apr-09-1731.b\09040804.D

Operator :

Acquired: 9 Apr 2008 7:06 pm using AcqMethod OXY32408.M

Instrument : PAL GCMS

Sample Name: BD81401-BS1@gas

Misc Info : Vial Number: 4

