RECEIVED

1:57 pm, Mar 21, 2008

Alameda County Environmental Health



Ĵ

March 20, 2008

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

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

Dear Mr. Plunkett:

SOMA's "First 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



First Quarter 2008 Groundwater Monitoring Report

Texaco Gasoline Service Station 15101 Freedom Avenue San Leandro, California

March 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 First Quarter 2008 groundwater monitoring event.

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



TABLE OF CONTENTS

CERTIFICATION	i
TABLE OF CONTENTS	. ii
LIST OF FIGURES	iii
LIST OF TABLES	iii
LIST OF APPENDICES	iii
 INTRODUCTION 1.1 Field Activities 1.2 Laboratory Analysis 	.1
 RESULTS Field Measurements for the First WBZ Wells Laboratory Analysis for the First WBZ Wells Field Measurements for the Second WBZ Wells Laboratory Analysis for the Second WBZ Wells 	.2 .2 .4
3. CONCLUSIONS AND RECOMMENDATIONS	.5
4. REPORT LIMITATIONS	.6

LIST OF FIGURES

- Figure 1: Site vicinity map
- Figure 2: Site map showing locations of groundwater monitoring wells and soil borings
- Figure 3: Groundwater elevation contour map in feet, in First WBZ. January 21, 2008
- Figure 4: Contour map of TPH-g concentrations in groundwater, in First WBZ. January 21 and 22, 2008
- Figure 5: Contour map of Benzene concentrations in groundwater, in First WBZ. January 21 and 22, 2008
- Figure 6: Contour map of MtBE concentrations in groundwater (EPA Method 8260B), First WBZ. January 21 and 22, 2008
- Figure 7: Contour map of TBA concentrations in groundwater, in First WBZ. January 21 and 22, 2008
- Figure 8: Contour map of TAME concentrations in groundwater, in First WBZ January 21 and 22, 2008
- Figure 9: Groundwater elevation contour map in feet, in Second WBZ. January 21, 2008
- Figure 10: Map showing concentrations of TPH-g, Benzene, MtBE, TBA, TAME, in Second WBZ. January 21 and 22, 2008

LIST OF TABLES

- Table 1:
 Historical Groundwater Elevation Data and Analytical Results
- Table 2:
 Historical Gasoline Oxygenates Results

LIST OF APPENDICES

- Appendix A: Standard Operating Procedures for Conducting Groundwater Monitoring Activities
- Appendix B: Table of Elevations and Coordinates on Monitoring Wells and Field Measurements of Physical and Chemical Parameters of Groundwater Samples
- Appendix C: Laboratory Report and Chain of Custody Form for the First Quarter 2008 Monitoring Event

First Quarter 2008 Groundwater Monitoring Report

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, Figure 1). The Site is located in an area of primarily residential properties and adjacent commercial areas.

This report summarizes results of the First Quarter 2008 groundwater monitoring event conducted at the Site on January 21 and 22, 2008, and includes physical and chemical properties measured in the field for each groundwater sample. Properties measured include pH, temperature, and electrical conductivity (EC). Dissolved oxygen (DO) and oxidation reduction potential (ORP) measurements were taken for onsite wells. This report also includes laboratory analysis results for groundwater samples.

1.1 Field Activities

On January 21 and 22, 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 January 21, 2008, five on-site monitoring wells (MW-1 to MW-5), and four offsite wells (MW-6 to MW-9) were measured for depth to groundwater. On January 21 and 22, 2008, additional field measurements and grab groundwater samples were collected from all monitoring 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 January 21 and 22, 2008 groundwater monitoring event.

2.1 Field Measurements for the First WBZ Wells

Table 1 presents calculated groundwater elevations and depths to groundwater for each monitoring well. Depths to groundwater ranged from 10.37 feet in well MW-9 to 22.59 feet in MW-1. Corresponding groundwater elevations ranged from 29.89 feet in MW-9 to 31.97 feet in MW-4.

Figure 3 displays the contour map of groundwater elevations. Groundwater flows south to southwesterly across the Site, at a gradient of 0.0048 feet/feet. The groundwater flow direction has remained consistent with the previous monitoring event (Fourth Quarter 2007); 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 First WBZ ranged from 0.10 mg/L in well MW-2 to 0.29 mg/L in MW-4. 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 the First WBZ Wells

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 132 μ g/L in MW-2 to 22,100 μ g/L in MW-3. The TPH-g concentration in MW-3 was several orders of magnitude higher than in the other site wells.

Figure 4 displays the contour map of TPH-g concentrations in the groundwater. As illustrated, the most TPH-g–impacted region is in the vicinity of the dispenser islands and former USTs.

The following BTEX concentrations were observed during this monitoring event.

- Toluene was below the laboratory-reporting limit in all the wells except MW-3 and MW-5.
- In MW-2, all BTEX analytes were below the laboratory-reporting limit except ethylbenzene, which was detected at 12.2 μg/L.
- In MW-8 and MW-9, all BTEX analytes were below the laboratoryreporting limit.

First Quarter 2008 Groundwater Monitoring Report

• The highest BTEX concentrations were detected at MW-3, at 1,280 μ g/L, 453 μ g/L, 1,330 μ g/L, and 3,520 μ g/L, respectively.

Figure 5 displays the contour map of benzene concentrations in the groundwater. The most benzene-impacted region 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 wells MW-6 and MW-7 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. The highest MtBE concentration was detected at MW-4 at 1,800 μ g/L. Figure 6 displays the contour map of MtBE concentrations in the groundwater. The most MtBE-impacted region was in the vicinity of the dispenser islands and former USTs.

Table 1 shows the detailed historical concentration trends for all site wells. Since the previous monitoring event (Fourth Quarter 2007), TPH-g, benzene, and MtBE analytes have decreased in the more impacted MW-3.

Table 2 shows analysis results for gasoline oxygenates 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), 1,2-dichloroethane (1,2-DCA), 1,2-dibromoethane (EDB), and ethanol constituents were either below the laboratoryreporting limit or at low levels in all groundwater samples collected during this monitoring event. Analysis results for 1,2-DCA, ethanol, and EDB constituents are shown in Table 2. Appendix C includes laboratory analytical results.
- Ethyl tertiary-butyl ether (ETBE) was detected at 64.7 µg/L and 4.56 µg/L in wells MW-4 and MW-5, respectively, and was below the laboratoryreporting limit in the remaining tested wells.
- 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-7, 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.

First Quarter 2008 Groundwater Monitoring Report

 Tertiary-amyl methyl ether (TAME) was below the laboratory-reporting limit in all groundwater samples except for those collected at wells MW-1, MW-3, MW-5 and MW-7, where TAME was detected at 2.16 µg/L, 170 µg/L, 62.1 µg/L and 6.01 µg/L, respectively.

Figure 8 displays the contour map of TAME concentrations in the groundwater. Similar to the MtBE plume, the gasoline oxygenate region is still present in the vicinity of the pump islands and UST cavity, especially at well MW-3.

2.3 Field Measurements for the Second WBZ Wells

Table 1 presents calculated groundwater elevations and depths to groundwater for each monitoring well. Depths to groundwater ranged from 21.11 feet in well MW-4D to 22.85 feet in MW-1D. Corresponding groundwater elevations ranged from 31.57 feet in MW-1D to 32.01 feet in MW-4D.

Figure 9 displays the contour map of groundwater elevations in the Second WBZ. Groundwater flows north to northwesterly, at a gradient of 0.0028 feet/feet.

Upon equalization with the surrounding aquifer at each well location, when the purge cycle was terminated, DO concentrations in the Second WBZ ranged from 0.17 mg/L in well MW-1D to 0.29 mg/L in MW-3D. 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 the Second WBZ Wells

TPH-g concentrations were below the laboratory-reporting limit in MW-1D and MW-3D and were detected in MW-4D at 91.5 μ g/L.

The following BTEX concentrations were observed during this monitoring event.

- Toluene was below the laboratory-reporting limit in MW-4D.
- In MW-4D, benzene, ethylbenzene and total xylenes were detected at 18.7 $\mu g/L,$ 7.08 $\mu g/L,$ and 11.42 $\mu g/L,$ respectively.
- In MW-1D and MW-3D, all BTEX analytes were below the laboratoryreporting limit.

MtBE was below laboratory-reporting limits in MW-1D. In wells MW-3D and MW-4D, MtBE was detected at 88.3 μ g/L and 219 μ g/L, respectively.

First Quarter 2008 Groundwater Monitoring Report

Table 1 shows analysis results for TPH-g, BTEX, and MtBE and Table 2 shows analytical results for gasoline oxygenates.

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

- All DIPE, 1,2-DCA, EDB, and ethanol constituents were below laboratoryreporting 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.
- ETBE was detected at 3.1 μg/L and 4.9 μg/L in wells MW-3D and MW-4D, respectively, and below the laboratory-reporting limit in MW-1D.
- TBA was the major gasoline oxygenate observed during this monitoring event, detected at 12.9 μg/L, 15.6 μg/L, and 124 μg/L in wells MW-1D, MW-3D, and MW-4D, respectively.
- TAME was detected at 15.3 µg/L and 3.32 µg/L in MW-3D and MW-4D, respectively, and below laboratory-reporting limits in MW-1D.

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

Appendix C includes the laboratory report and chain-of-custody form for this monitoring event; refer to Tables 1 and 2 for further detailed historical concentration trends.

3. CONCLUSIONS AND RECOMMENDATIONS

Results of the First 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 north to 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.

First Quarter 2008 Groundwater Monitoring Report

- 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 3,290 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 well MW-4D.

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

- Continue quarterly monitoring program to better understand seasonal variations in groundwater quality conditions.
- SOMA recently prepared a corrective action plan (CAP) and site conceptual model which introduced he most feasible, effective and yet less costly alternative for removing petroleum hydrocarbon from the subsurface. SOMA is waiting for approval of the CAP by the ACEHS.
- Based on continued low to non-detectable levels of all tested constituents in off-site wells MW-7 to MW-9, SOMA recommends modifying the existing quarterly sampling schedule to annual sampling for these off-site wells.

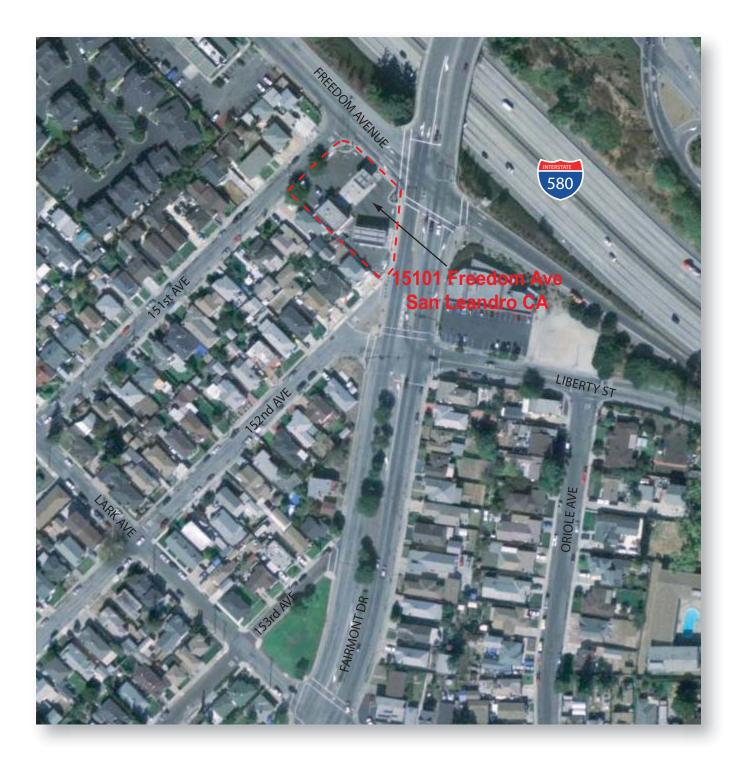
4. REPORT LIMITATIONS

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.

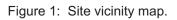
Figures

First Quarter 2008 Groundwater Monitoring Report

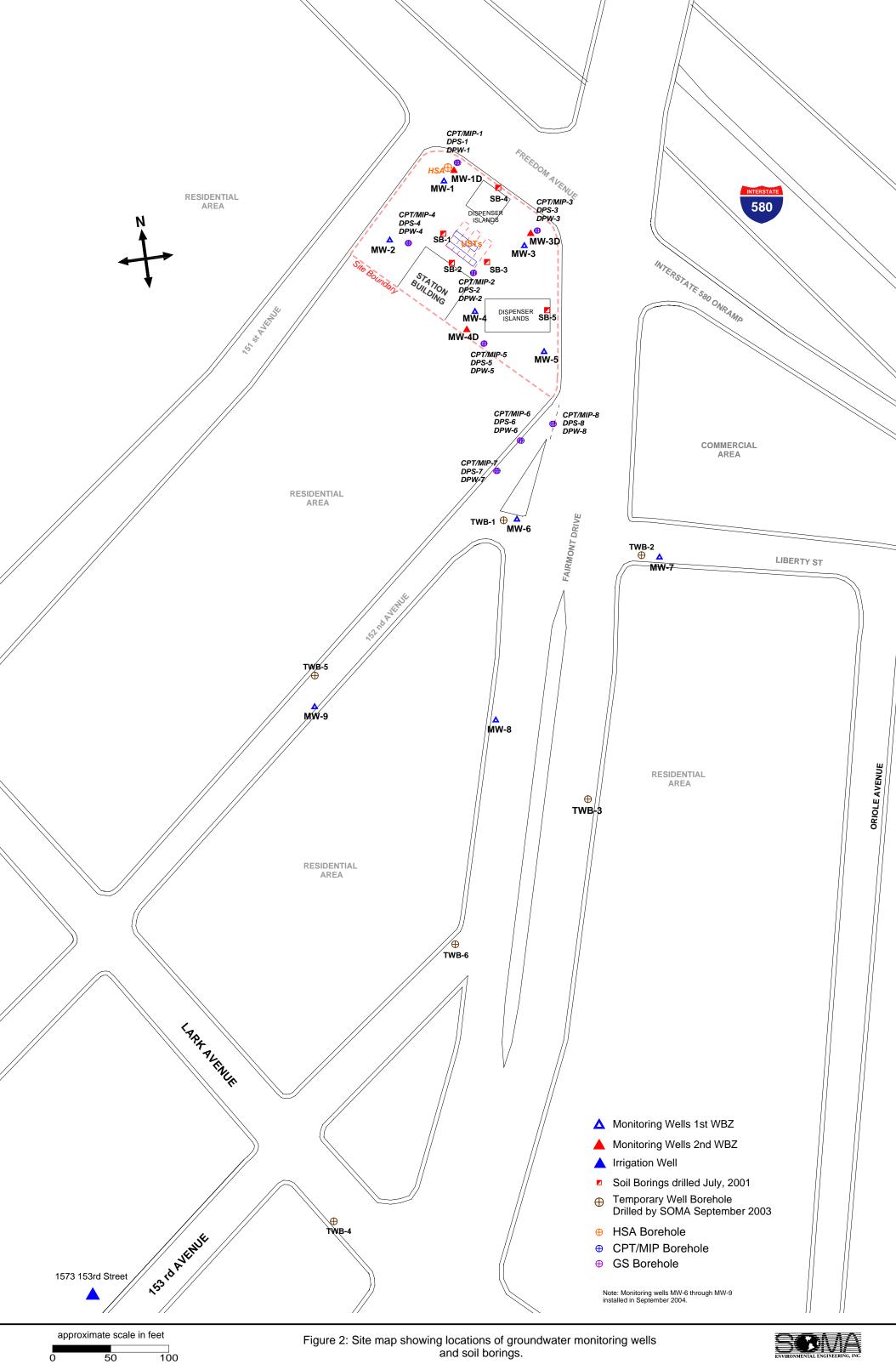




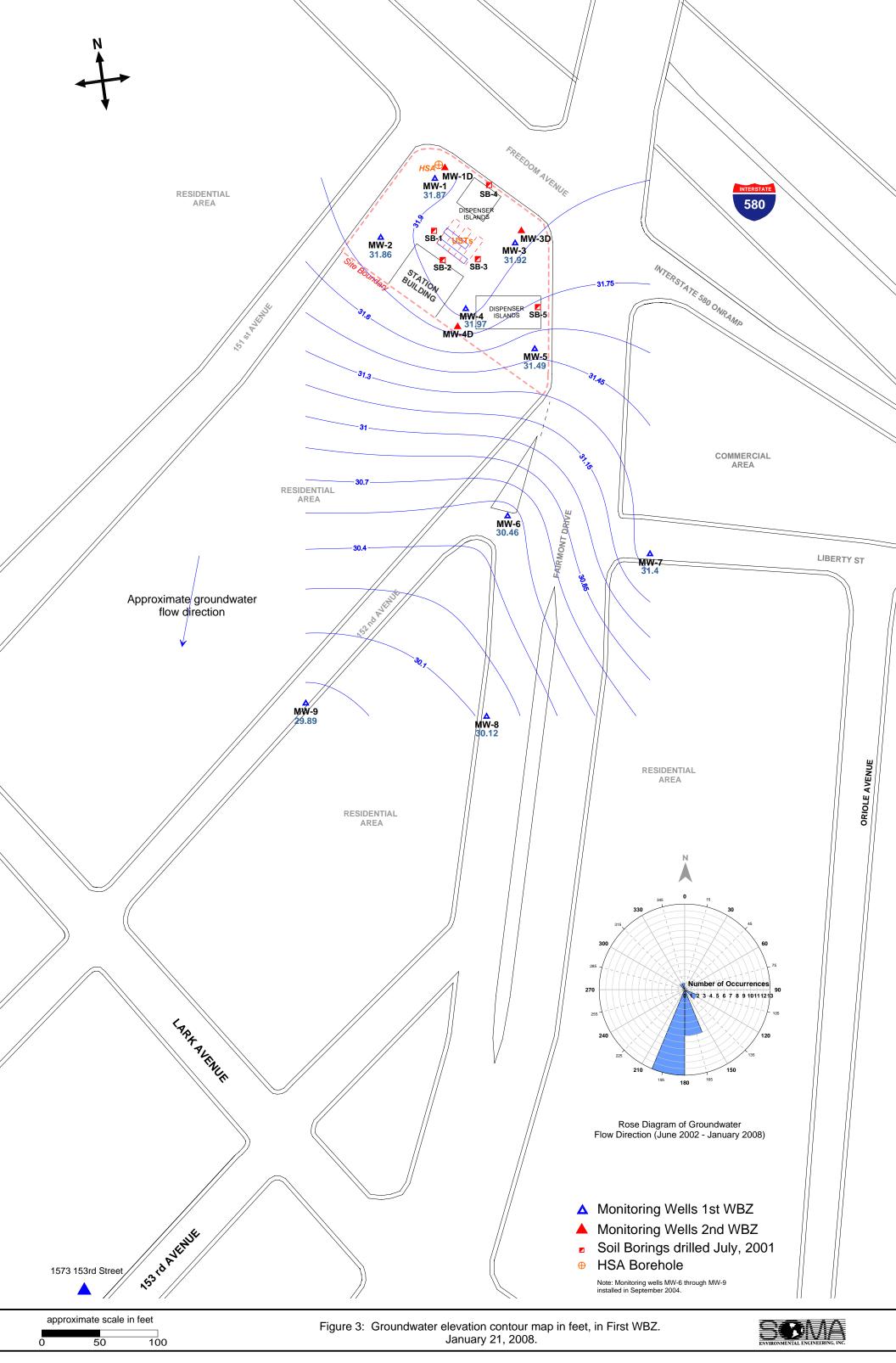
	approximate scale	in feet
0	150	300

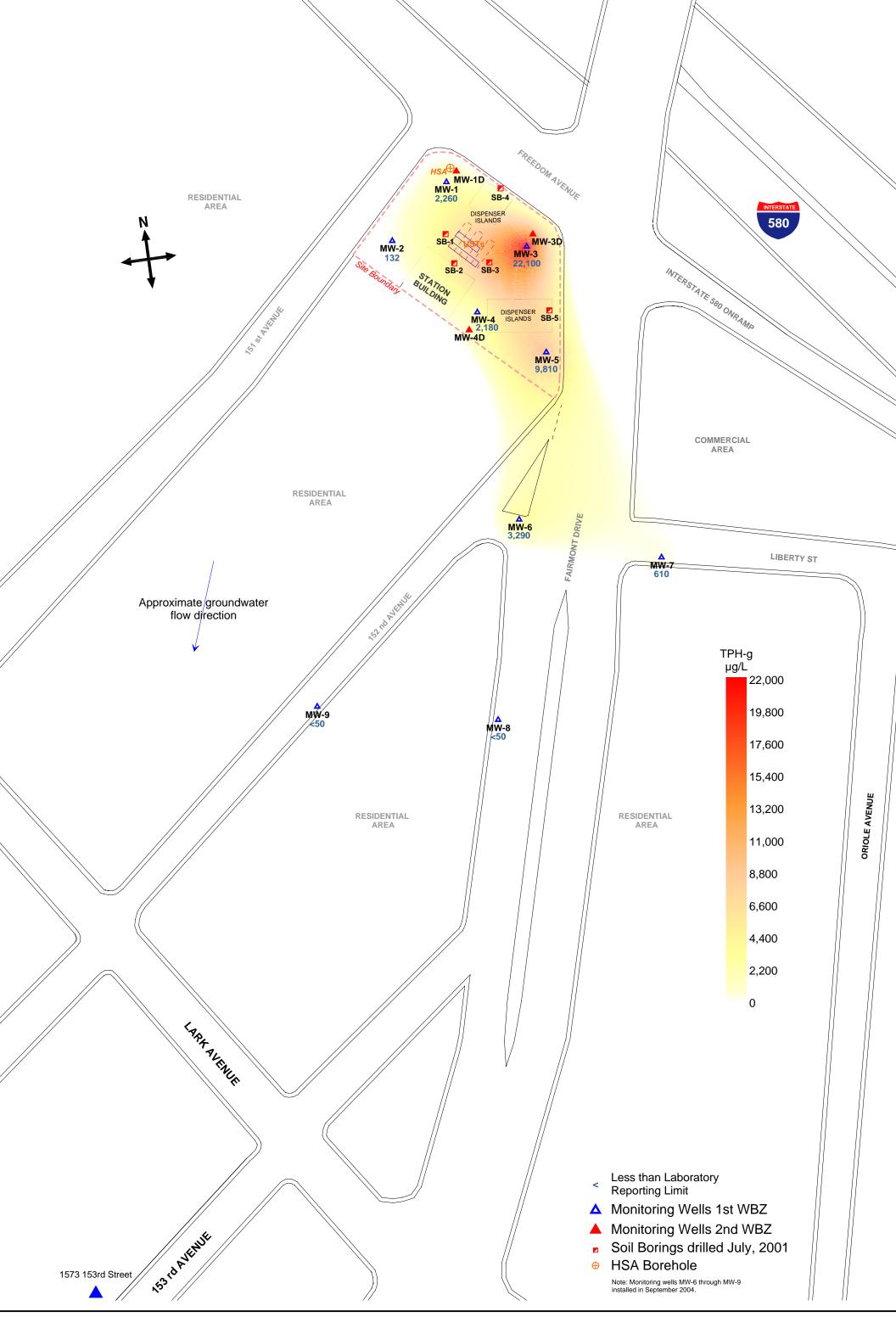






and soil borings.





approximate scale in feet

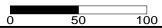
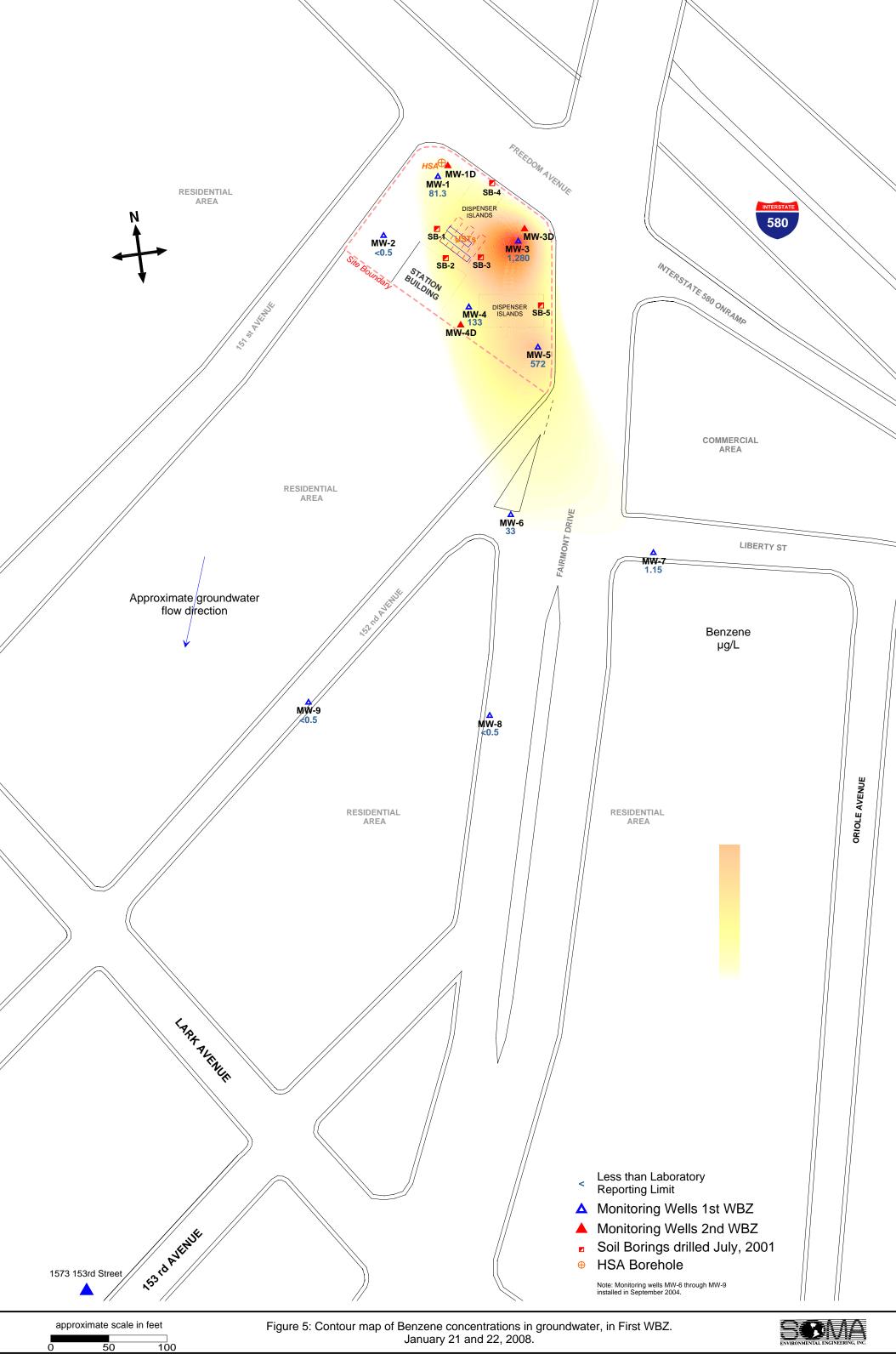
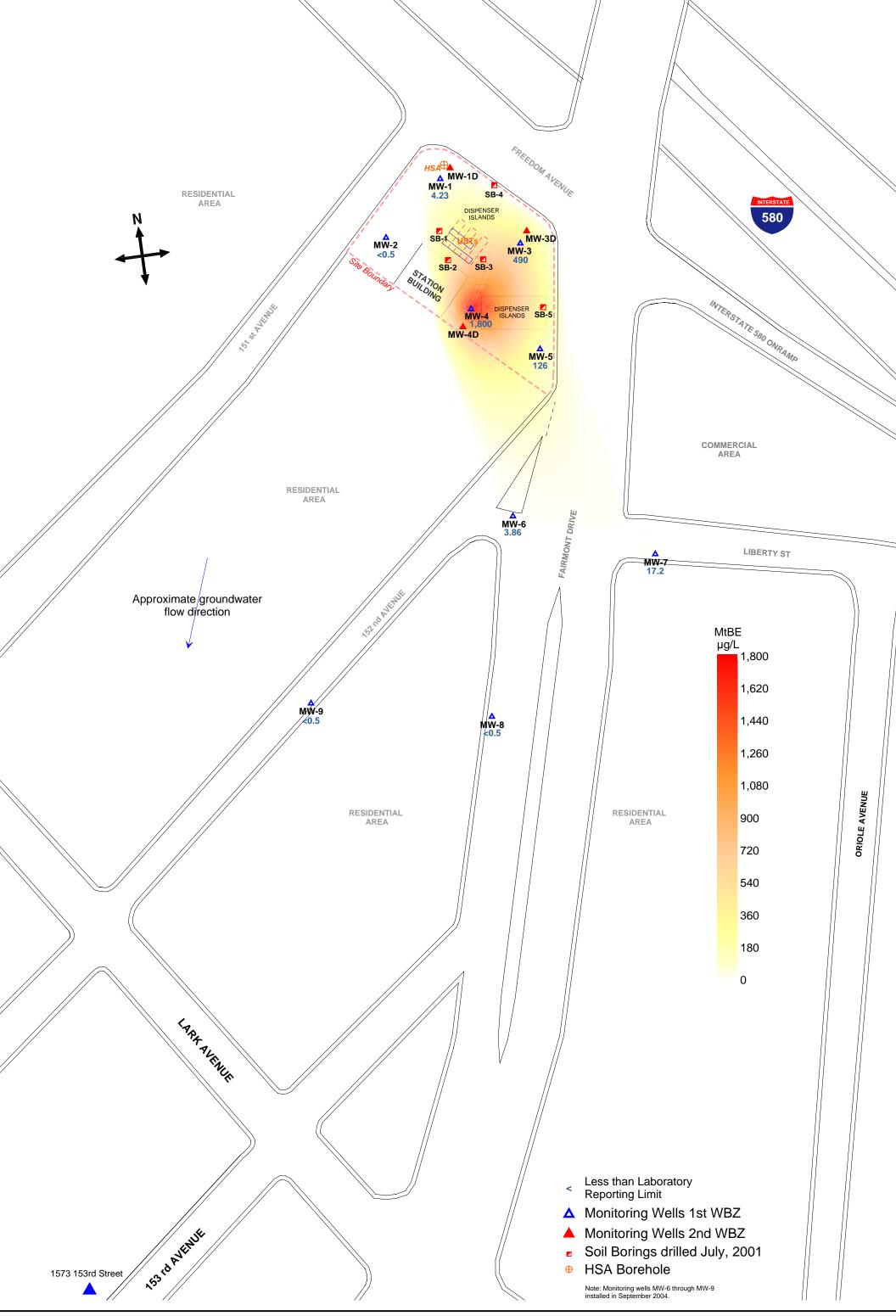


Figure 4: Contour map of TPH-g concentrations in groundwater, in First WBZ. January 21 and 22, 2008.

||







approximate scale in feet

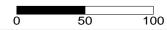
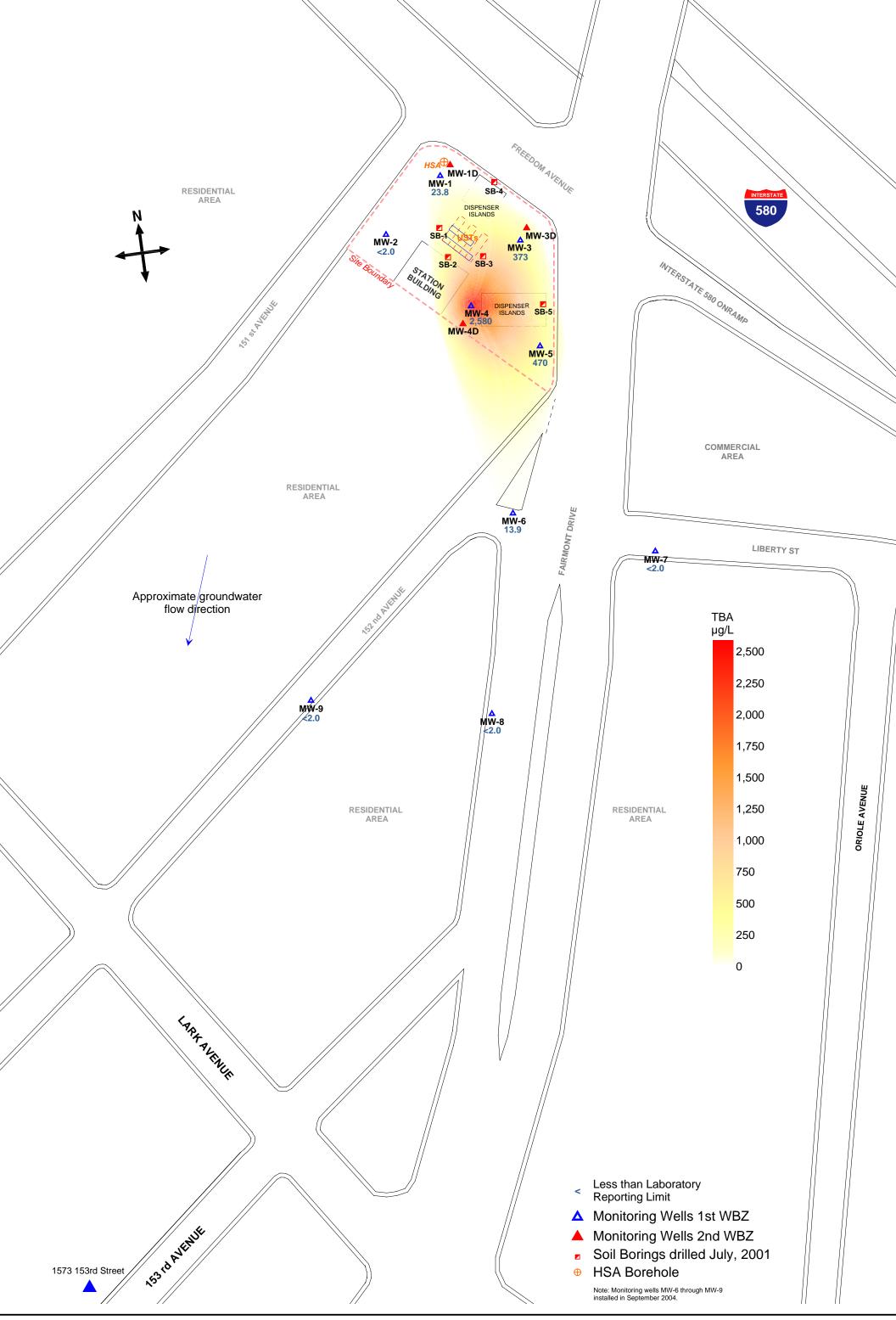


Figure 6: Contour map of MtBE concentrations in groundwater (EPA Method 8260B), First WBZ. January 21 and 22, 2008.



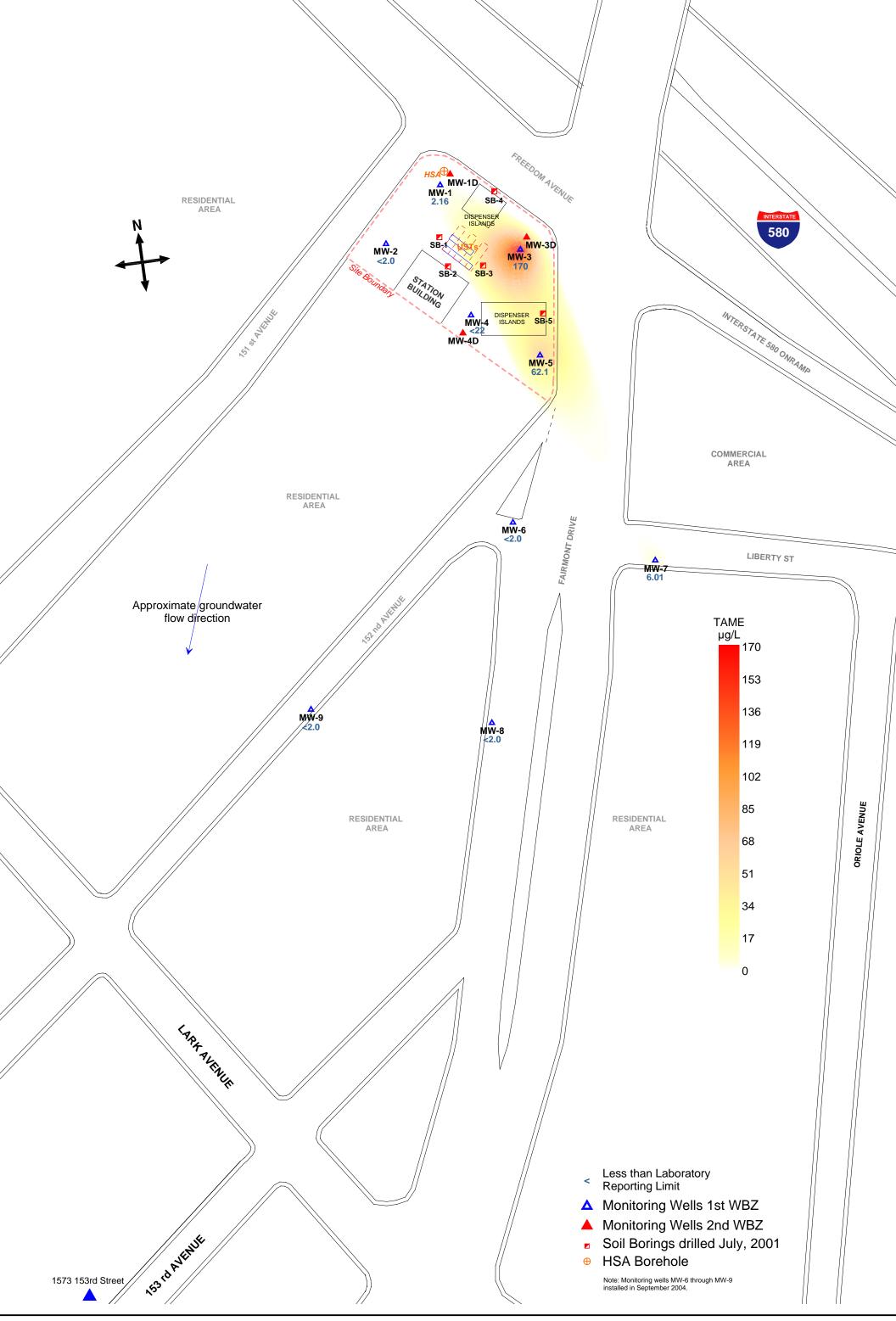


	approximate	scale in fee	ət
	F		100
0	5	0	100

Figure 7: Contour map of TBA concentrations in groundwater, in First WBZ. January 21 and 22, 2008.

//





approximate scale in feet			
0	5	0 .	100

Figure 8: Contour map of TAME concentrations in groundwater, in First WBZ. January 21 and 22, 2008.

//

//

//



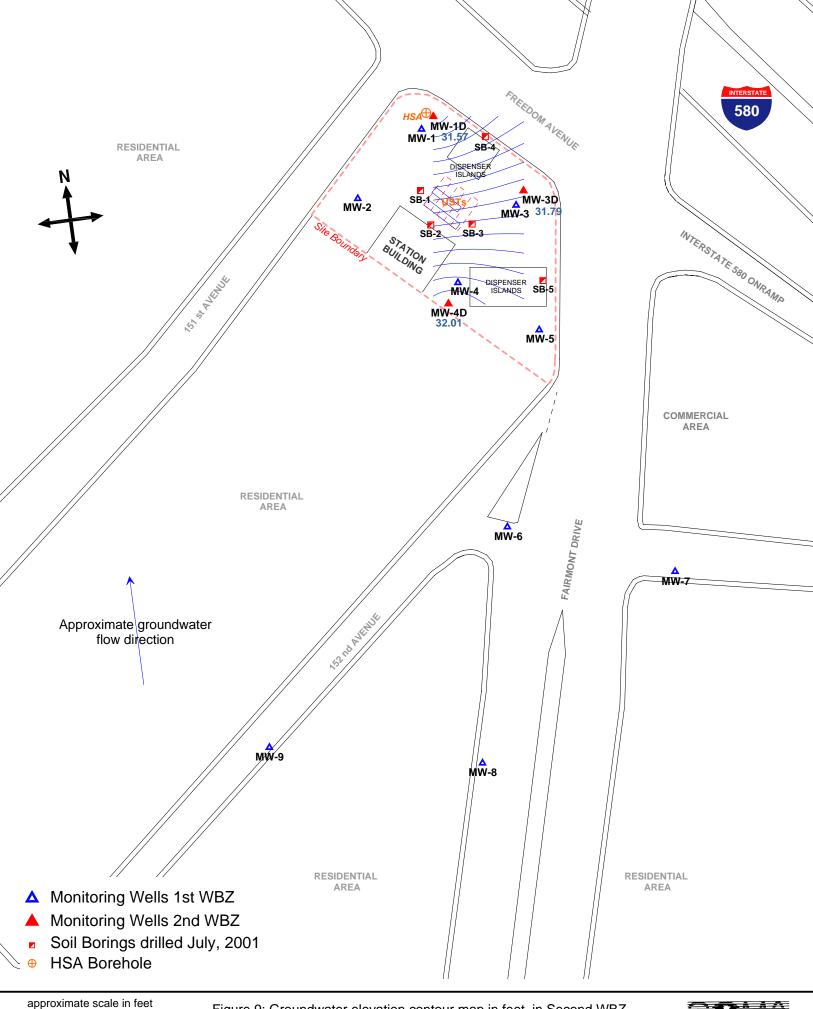
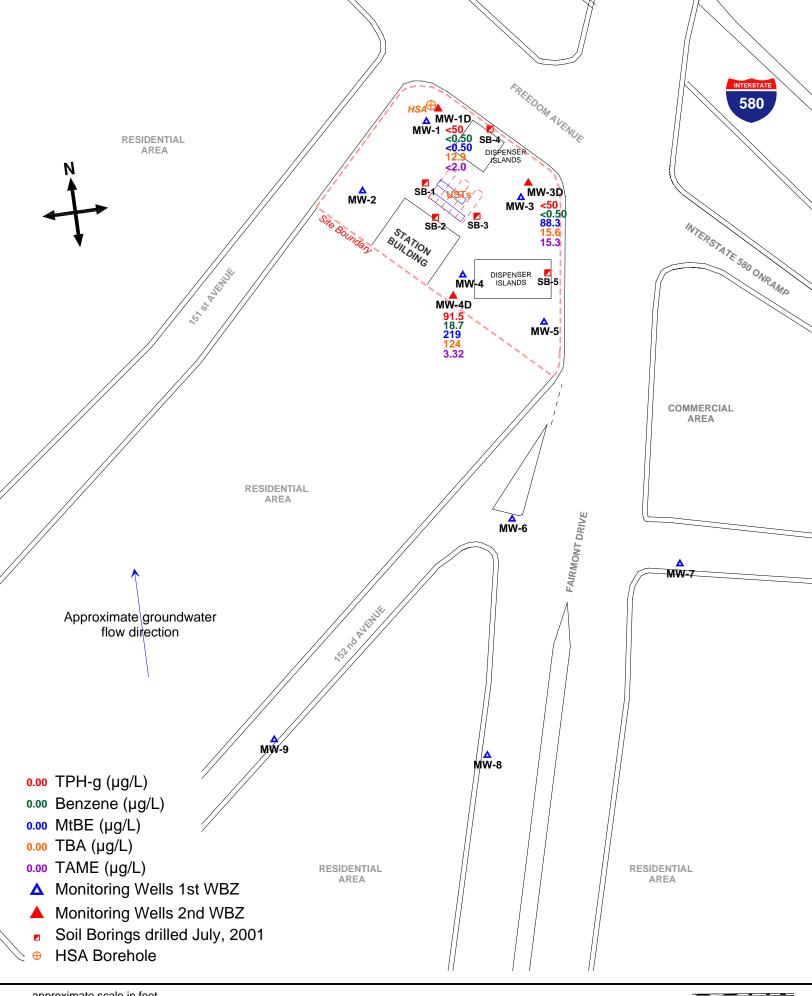


Figure 9: Groundwater elevation contour map in feet, in Second WBZ. January 21, 2008.

0

50





approximate scale in feet 0 50 100

Figure 10: Map showing concentrations of TPH-g, Benzene, MtBE, TBA, TAME, in Second WBZ. January 21 and 22, 2008.



Tables

First Quarter 2008 Groundwater Monitoring Report

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 WBZ										
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

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-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
					-		-	-		
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
						-				
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
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

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
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
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
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
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

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)
				2nd WB	Z					
MW-1D	1/3/2008 1/22/2008	54.42 54.42	22.85	- 31.57	<50 <50	<0.50 <0.50	<2.0 < 2.0	<0.50 <0.50	<2.0 <2.0	<0.50 <0.50
MW-3D	1/3/2008 1/22/2008	54.10 54.10	22.31	- 31.79	<50 <50	<0.50 <0.50	<2.0 < 2.0	<0.50 <0.50	<2.0 < 2.0	87.6 88.3
		53.12		[
MW-4D	1/4/2008 1/22/2008	53.12 53.12	21.11	- 32.01	<50 91.5	<0.50 18.7	<2.0 < 2.0	<0.50 7.08	<2.0 11.42	<0.50 219
					—					
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	-	-	-	<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

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 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 2Historical Gasoline Oxygenates Results15101 Freedom Avenue, San Leandro, CA

Monitoring Well	Date	ТВА (µg/L)	DIPE (μg/L)	ETBE (µg/L)	TAME (μg/L)
		1st	WBZ		
MW-1	8/8/2002	78	<1.3	<1.3	<1.3
	11/1/2002	42	< 1.0	< 1.0	< 1.0
	2/21/2003	47	<0.5	<0.5	<0.5
	5/28/2003	25	<0.5	<0.5	<0.5
	8/12/2003	<10	<0.5	<0.5	<0.5
	10/9/2003	70	<1.0	<1.0	<1.0
	1/15/2004	55	<0.5	<0.5	<0.5
	5/25/2004	62	<0.7	<0.7	<0.7
	9/21/2004	<10	<0.5	<0.5	<0.5
	12/14/2004	<21.5	<4.3	<4.3	<17.2
	3/11/2005	81	<0.5	<0.5	<2.0
	6/15/2005	<10	<0.5	<0.5	<2.0
	8/26/2005	68.9	<2.15	<2.15	<8.6
	11/11/2005	46	<2.15	<2.15	<8.6
	2/9/2006	11.3	<0.5	<0.5	<2.0
	5/9/2006	<10	<0.5	<0.5	<2.0
	8/10/2006	<43	<2.15	<2.15	<8.60
	10/26/2006	39.4	<1.0	<1.0	<4.0
	1/25/2007	41.4	<0.5	<0.5	<2.0
	4/26/2007	39.6	<0.5	<0.5	<2.0
	7/25/2007	46.5	<1.0	<1.0	<4.0
	10/23/2007	53.7	<0.5	<0.5	<2.0
	1/22/2008	23.8	<0.5	<0.5	2.16
MW-2	8/8/2002	21	<0.5	<0.5	<0.5
	11/1/2002	15	<0.5	<0.5	<0.5
	2/21/2003	12	<0.5	<0.5	<0.5
	5/28/2003	31	<0.5	<0.5	<0.5
	8/12/2003	69	<0.8	<0.8	<0.8
	10/9/2003	12	<0.5	<0.5	<0.5
	1/15/2004	<10	<0.5	<0.5	<0.5
	5/25/2004	14	<0.5	<0.5	<0.5
	9/21/2004	<10	<0.5	<0.5	<0.5
	12/14/2004	<2.5	<0.5	<0.5	<2.0

Table 2Historical Gasoline Oxygenates Results15101 Freedom Avenue, San Leandro, CA

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

Table 2Historical Gasoline Oxygenates Results15101 Freedom Avenue, San Leandro, CA

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

Table 2Historical Gasoline Oxygenates Results15101 Freedom Avenue, San Leandro, CA

Monitoring	Date	ТВА	DIPE	ETBE	TAME
Well	Date	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-5 cont.	1/25/2007	878	<5.50	<5.50	552
	4/26/2007	708	<2.15	<2.15	310
	7/25/2007	1,020	<2.15	<2.15	356
	10/23/2007	1,510	<2.15	<2.15	181
	1/22/2008	470	<0.5	4.56	62.1
MW-6	9/21/2004	<10	<0.5	<0.5	<0.5
	12/14/2004	<5.5	<5.5	<5.5	<22
	3/11/2005	2.54	<0.5	<0.5	<2.0
	6/15/2005	<20	<1.0	<1.0	<4.0
	8/26/2005	<43	<2.15	<2.15	<8.6
	11/11/2005	<43	<2.15	<2.15	<8.6
	2/9/2006	<43	<2.15	<2.15	<8.6
	5/9/2006	<10	<0.5	<0.5	<2.0
	8/10/2006	<10	<0.5	<0.5	<2.0
	10/26/2006	<10	<0.5	<0.5	<2.0
	1/25/2007	<2.0	<0.5	<0.5	<2.0
	4/26/2007	7.21	<0.5	<0.5	<2.0
	7/25/2007	5.66	<0.5	<0.5	<2.0
	10/23/2007	6.68	<0.5	<0.5	<2.0
	1/21/2008	13.9	<0.5	<0.5	<2.0
	0 /0 / /0 0 0 /	1.0			
MW-7	9/21/2004	<10	<0.5	<0.5	1.5
	12/14/2004	<2.5	<0.5	<0.5	<2.0
	3/11/2005	<12.5	<2.5	<2.5	<10
	6/15/2005	<10	<0.5	<0.5	2.23
	8/26/2005	<10	<0.5	<0.5	<2.0
	11/11/2005	<10	<0.5	<0.5	<2.0
	2/9/2006	NA	NA	NA	NA
	5/9/2006	<10	<0.5	<0.5	<2.0
	8/10/2006	<10	<0.5	<0.5	<2.0
	10/26/2006	<10	<0.5	<0.5	<2.0
	1/25/2007	<2.0	<0.5	<0.5	<2.0
	4/26/2007	<2.0	<0.5	<0.5	<2.0
	7/25/2007	<2.0	<0.5	<0.5	<2.0
	10/23/2007	6.49	<0.5	<0.5	2.58
	1/21/2008	<2.0	<0.5	<0.5	6.01
M04/ 0	0/04/20204	4.0	0.5	0.5	0.5
MW-8	9/21/2004	<10	<0.5	<0.5	<0.5
	12/14/2004	<2.5	<0.5	<0.5	<2.0
	3/11/2005	NA	NA	NA	NA
	6/15/2005	<10	<0.5	<0.5	<2.0
	8/26/2005	<10	<0.5	<0.5	<2.0
	11/11/2005	<10	<0.5	<0.5	<2.0

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

Monitoring	Date	ТВА	DIPE	ETBE	TAME
Well		(μg/L)	(μg/L)	(μg/L)	(μg/L)
MW-8 cont	2/9/2006	<10	<0.5	<0.5	<2.0
	5/9/2006	<10	<0.5	<0.5	<2.0
	8/10/2006	<10	<0.5	<0.5	<2.0
	10/26/2006	<10	<0.5	<0.5	<2.0
	1/25/2007	<2.0	<0.5	<0.5	<2.0
	4/26/2007	<2.0	<0.5	<0.5	<2.0
	7/25/2007	<2.0	<0.5	<0.5	<2.0
	10/23/2007	<2.0	<0.5	<0.5	<2.0
	1/21/2008	<2.0	<0.5	<0.5	<2.0
MW-9	9/21/2004	<10	<0.5	<0.5	<0.5
	12/14/2004	<2.5	<0.5	<0.5	<2.0
	3/11/2005	<2.5	<0.5	<0.5	<2.0
	6/15/2005	<10	<0.5	<0.5	<2.0
	8/26/2005	<10	<0.5	<0.5	<2.0
	11/11/2005	<10	<0.5	<0.5	<2.0
	2/9/2006	<10	<0.5	<0.5	<2.0
	5/9/2006	<10	<0.5	<0.5	<2.0
	8/10/2006	<10	<0.5	<0.5	<2.0
	10/26/2006	<10	<0.5	<0.5	<2.0
	1/25/2007	<2.0	<0.5	<0.5	<2.0
	4/26/2007	<2.0	<0.5	<0.5	<2.0
	7/25/2007	<2.0	<0.5	<0.5	<2.0
	10/23/2007	<2.0	<0.5	<0.5	<2.0
	1/21/2008	<2.0	<0.5	<0.5	<2.0
		2nd	WBZ		
MW-1D	1/3/2008	111	<0.5	<0.5	<2.0
	1/22/2008	12.9	<0.5	<0.5	<2.0
MW-3D	1/3/2008	37.3	<0.5	3.12	15.3
WIVE-SD	1/22/2008	15.6	<0.5 <0.5	3.12 3.1	15.3 15.3
	1/22/2000	15.0	10.0	5.1	15.5
MW-4D	1/4/2008	25	<0.5	<0.5	<2.0
	1/22/2008	124	<0.5	4.9	3.32
EB-PMP	1/21/2008	<2.0	<0.5	<0.5	<2.0
EB-PRB	1/21/2008	<2.0	<0.5	<0.5	<2.0
EB-PMP2	1/22/2008	<2.0	<0.5	<0.5	<2.0
EB-PRB2	1/22/2008	<2.0	<0.5	<0.5	<2.0
					
ESL	-	NE	NE	NE	NE
Notes:					

Notes:

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

Not detected above the laboratory reporting limit.
 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-inchdiameter 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.

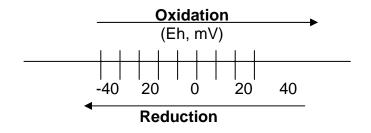
There is a strong correlation between the turbidity level and the biological oxygen demand of natural water bodies. The main purpose for checking the turbidity level is to provide a general overview of the extent of the suspended solids in the groundwater.

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 O_2 in the groundwater is consumed; however, the oxidizing agents (i.e., the constituents that undergo reduction) now become NO⁻₃, MnO₂, Fe (OH)₃, SO₄²⁻

First Quarter 2008 Groundwater Monitoring Report

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 (NO₃⁻), and sulfate (SO₄⁻²) concentrations.

 Fe^{+2} , NO_3^{-1} , and 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

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

TABLE OF ELEVATIONS & COORDINATESINSTON MONITORING WELLSSOMA 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	NOTCH
	37.708104856	122.123200912	54.94	PUNCH
	37º 42' 29.1" N	122º 07' 23" W	54.74	PAV
MW-2	2084322.96	6092064.06	52.31	NOTCH
10100-2	37.707969266	122.123418684	53.76	PUNCH
	37º 42' 28.6" N	122º 07' 24" W	00.70	
MW-3	2084297.80	6092176.56	53.96	NOTCH
	37.707905553	122.123028312	54.20	PUNCH
	37° 42' 28.4" N	122º 07' 22" W		
MW-3D	2084303.98	6092183.53	54.10	NOTCH
	37.707922851	122.123004590	54.56	PUNCH
	37° 42' 28.5" N	122º 07' 22" W	54.47	PAV
MW-4	2084250.28	6092124.85	53.36	NOTCH
	37.707772581	122.123204220	53.53	PUNCH
	37º 42' 27.9" N	122° 07' 23" W		
MW-4D	2084222.77	6092116.37	53.12	NOTCH
8	37.707696648	122.123231858	53.37	PUNCH
	37º 42' 27.7" N	122º 07' 23" W	53.39	PAV
MW-5	2084205.81	6092176.95	50.18	NOTCH
	37.707652959	122.123021447	51.02	PUNCH
	37° 42' 27.5" N	122º 07' 22" W		

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.



08.08

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



AMMENDED REPORT

15101 FREEDOM AVE SAN LEANDRO, CA.

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

	NAD 83	NAD 83	NAVD 88		NORTH	WEST
ΡT	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
	2084670.41	6092307.68	69.79	FD BM FAIR580		
	2084251.32	6092125.25	53.70	MW-4 PAV	Ammended 2\21\08	From here down
	2084250.55	6092124.46	53.74	MW-4 PUNCH		
	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 70	2084323.44	6092063.77	52.92	MW-2 PUNCH	07040100 00000	
	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"
I		 				
I						
 						
 						
		}			+	
I						
I						
I						



ENVIRONMENTAL ENGINEERING, INC

Well No.:	mw-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:	January & 22, 2008
Depth to Groundwater:	22.59 feet	Sampler:	Lizzie Hightower
Groundwater Elevation:	31.87 feet		Enc Gassner-Wollwage
Water Column Height:	<u>7.91</u> feet		
Purged Volume:	12 gallons		
	м.		/
Purging Method:	Bailer 🗆	Pump 🗹	
Compling Mathed	Bailer D	Pump 🗆	
Sampling Method:	Baller D'	Pump 🗆	
Color:	Yes 🗆 No 🕁	Describe:	
Sheen:	Yes 🗆 No 👌	Describe:	
Odor:	Yes 🗹 No 🗆	Describe:	Very Slight Petro

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP
	(gallons)	mg/L		°C	(µS/cm)	NTU	
1/01	Start	rd y	pura	it of U	vell		
1103	3	0.13	6.67	21932	1248	8.63	-2035
1106	7.5	0.13	6.65	21.22	1275	8,99	-212.0
1109	12	0.14	6.66	21.14	1277	10.4	-209,5
1115	Same	led					
	l l						

A



C	Well No.: Casing Diameter: Depth of Well:	m 30	$\frac{W-2}{1}$	inche feet	S	Project No. Address:	2551 15101 Freedom Avenue San Leandro, CA	L	
	Fop of Casing Elevation:	5	2.41	feet		Date:	January 🔨 22, 2008		
	Depth to Groundwater:	20	.45	feet		Sampler:	Lizzie Hightower		
	Groundwater Elevation:	31	.96	feet			Eric-Gassner-Wollwage-		
١	Water Column Height:	9	.70	_feet					
I	Purged Volume:		21	gallor	าร				
			2		1		1		
I	Purging Method:	Baile	r 🗆	1		Pump			
ę	Sampling Method:	Baile	r òr	/		Pump			
			1				,	1.1	1.1
	Color:	Yes	Ŧ	No		Describe:	Cloudy-ve	ny sligt	ty
	Sheen:	Yes		No	ы	Describe:			
(Odor:	Yes	M	No		Describe:	Musty		
							0		

Field Measurements:

Q

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP
	(gallons)	mg/L		°C	(μS/cm)	NTU	
1008	Start	ed p	whi	The INP	ll		
1010	3	0.17	6.01	21.23	461	25.6	-1845
1015	10.5	0.16	6.68	21.16	30B	14.8	-231.6
1018	15	6.15	6.84	21.08	911	15.8	-235,2
1020	18	0.16	6-82	21.06	950	11.4	-235.3
1022	21	0.10	6.84	21.02	1013	12.1	-235.2
1025	Same	160					
	1						

1



Well No.:	MLJ-3	Project No.: 2551
Casing Diameter:	inches	Address: 15101 Freedom Avenue
Depth of Well:	79.90 feet	San Leandro, CA
Top of Casing Elevation:	53.91 feet	Date: January 2 & 22, 2008
Depth to Groundwater:	22.04 feet	Sampler: Lizzie Hightower
Groundwater Elevation:	31.87 feet	Eric Gassner-Wollwage
Water Column Height:	7.86 feet	
Purged Volume:	<u>13</u> gallons	
Purging Method:	Bailer 🗆 🖊	Pump de
Sampling Method:	Bailer 🛃	Pump 🗆
Color:	Yes 🗆 No 占	Describe:
Sheen:	Yes 🗆 No 🗹	Describe:
Odor:	Yes 🖌 No 🗆	Describe: <u>Petro Odor</u>

Field Measurements: /5-4

12 20 33

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP
	(gallons)	mg/L		°C	(µS/cm)	NTU	
1337	Start	ed a	our 6	ing	Well		
1339	n,	0.24	6.70	21.97	1343	17.3	-199.3
1343	9	0.25	6.66	21.31	1357	11.7	-188.0
1347	N	0.26	6.65	21.32	1375	10-1	-185.1
1350	Sam	pled					
]	

Ĵ



Well No.:	MW-4	Project No.: 2551
Casing Diameter:	ビー inches	Address: 15101 Freedom Avenue
Depth of Well:	30.20 feet	San Leandro, CA
Top of Casing Elevation:	53.31 feet	Date: January 27 22, 2008
Depth to Groundwater:	21-39 feet	Sampler: Lizzie Hightower
Groundwater Elevation:	<u>31.92</u> feet	Eric Gassner-Wollwage
Water Column Height:	<u>8.81</u> feet	
Purged Volume:	<u>15</u> gallons	
	2	
Purging Method:	Bailer 🗆	Pump 🗹
Sampling Method:	Bailer 🕁	Pump 🗆
	/	*
Color:	Yes 🗆 No 🕁	Describe:
Sheen:	Yes 🗆 No 🖄	Describe:
Odor:	Yes 🗹 No 🗆	Describe: Very Slight Petro

Field Measurements:

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP
	(gallons)	mg/L		°C	(µS/cm)	NTU	
1415	start	ed	D4	-J.J	nell		
1417	3	0.27	6.72	20.19	1658	10-8	-166.7
1421	9	0.28	6.68	20.19	1663	11.8	-154.
1423	12	0-29	6.63	20.18	1675	8.49	-145.8
1425	15	0.29	6.61	20,18	1673	8.61	-143.1
1428	Samp						

j



ENVIRONMENTAL ENGINEERING, INC

Well No.:	Mbd-5	Project No.:	2551
Casing Diameter:	inches	Address:	15101 Freedom Avenue
Depth of Well:	29.80 feet		San Leandro, CA
Top of Casing Elevation:	50,53 feet	Date:	January ≥⊭& 22, 2008
Depth to Groundwater:	18.69 feet	Sampler:	Lizzie Hightower
Groundwater Elevation:	31.84 feet		Eric Gassner-Wollwage
Water Column Height:	feet		
Purged Volume:	12 gallons		
-10			1
Purging Method:	Bailer 🗆	Pump to	
Fulging Method.		i amp u	
Sampling Method:	Bailer 🖄	Pump 🗆	
Color:	Yes 🗖 No 🕁	Describe:	
		**	
Sheen:	Yes 🗆 No 🔂	Describe:	
• 10 • 10 × 00 × 00	N N	Describes	SI'LL Pato
Odor:	Yes 🗹 No 🗆	Describe:	JIGNE ICIN

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP
	(gallons)	mg/L		°C	(μS/cm)	NTU	
1520	starte	d .	purz	in we	el		
1522	3	0.26	6.70	22.53	1353	16.1	-102.9
1524	6	0.25	6.74	21.40	1367	16.4	-1213
1528	12	0.26	6.69	21.36	1358	19.9	-126.9
1531	Samp	ed.					
	2						

A



ENVIRONMENTAL ENGINEERING, INC

Well No.:	MW-6	Project No.: 2551
Casing Diameter:	inches	Address: 15101 Freedom Avenue
Depth of Well:	<u>27.30</u> feet	San Leandro, CA
Top of Casing Elevation:	45.82 feet	Date: January 21 & §2, 2008
Depth to Groundwater:	15.36 feet	Sampler: Lizzie Hightower
Groundwater Elevation:	30.46 feet	
Water Column Height:	11.94 feet	
Purged Volume:	gallons	
	2	
Purging Method:	Bailer 🗆 //	Pump
Sampling Method:	Bailer	Pump 🗆
	/	
Color:	Yes 🗆 No 🔂	Describe:
Sheen:	Yes 🗆 No 🕤	Describe:
Odor:	Yes the No the	Describe: <u>Slight Petro</u>

Time	Vol (gallons)	PH	Temp (° C)	E.C. (μs/cm)
1443	Starte	l. ov	2213	5 well
1447	ما	6.85	21.67	1113
1453	18	6.81	21.11 21.70	1110
1502	Sampl	ed		



ENVIRONMENTAL ENGINEERING, INC

Well No.:	MW-7	Project No.: 2551
Casing Diameter:	2 inches	Address: 15101 Freedom Avenue
Depth of Well:	21,00 feet	San Leandro, CA
Top of Casing Elevation:	44.74 feet	Date: January 21 & 22 2008
Depth to Groundwater:	<u>13.34</u> feet	Sampler: Lizzie Hightower
Groundwater Elevation:	31.40 feet	
Water Column Height:	#.66 feet	
Purged Volume:	gallons	
	3	· /
Purging Method:	Bailer 🗆	Pump 山
Sampling Method:	Bailer 🛱	Pump 🗆
	/	
Color:	Yes 🗹 No 🗆	Describe: Cloudy
Sheen:	Yes 🗆 No 🖢	Describe:
Odor:	Yes 🕁 No 🗆	Describe: Petro odor-shight

.

Time	Vol (gallons)	pН	Temp (° C)	E.C. (μs/cm)
1(00)	Starta	l pu	ratives	well
11003	Dt-1	6.89	49.43	1330
1603	2	6.84	19.51	1336
1604	3	6.79	19.52	1342
1605	4	6.75	19.53	1344
1608	Sampi	ed		
	0			



Well No.:	MW-8	Project No.: 2551
Casing Diameter:	2 inches	Address: 15101 Freedom Avenue
Depth of Well:	27 T5 feet	San Leandro, CA
Top of Casing Elevation:	41.14 feet	Date: January 21 & 22, 2008
Depth to Groundwater:	11, 0 2_feet	Sampler: Lizzie Hightower
Groundwater Elevation:	30.\2feet	
Water Column Height:	<u>[7,73</u> feet	
Purged Volume:		
	7	
Purging Method:	Bailer 🗆	Pump 🕁
Sampling Method:	Bailer à	Pump 🗆
0	No. A	Describer Chan dut
Color:	Yes 🕁 No 🗖	Describe: <u>Mindly</u>
Sheen:	Yes 🗆 No 🕁	Describe:
	-	
Odor:	Yes 🗆 No 🗗	Describe:

Field Measurements:

Time	Vol	pН	Temp	E.C.
	(gallons)		(° C)	(μs/cm)
15:20	Start	ed 1	sugi	gwell
152 8	3	7.08	19.92	J1459
15 30	4	7.03	19.87	1452
15 34	3	7.00	19.96	1464
1537	Samo	20%		•
	1			



Well No.:	mw-9	_	Project No.:	2551
Casing Diameter:	2	inches	Address:	15101 Freedom Avenue
Depth of Well:	32.55	feet		San Leandro, CA
Top of Casing Elevation:	40.26	feet	Date:	January 21 🗞 🕰 2008
Depth to Groundwater:	10.37	feet	Sampler:	Lizzie Hightower
Groundwater Elevation:	28.89	_feet		
Water Column Height:	22.18	feet		
Purged Volume:	10	gallons		
	7			1
Purging Method:	Bailer 🛛	7	Pump 🖄	/
Sampling Method:	Bailer 👌	/	Pump 🗆	
Color:	Yes 🛛	No 🗹	Describe:	s <u></u>
Sheen:	Yes 🗆	No 🗄	Describe:	
Odor:	Yes 🗆	No 🖾	Describe:	

1

Field Measurements:

Time	Vol (gallons)	рН	Temp (° C)	E.C. (μs/cm)
1354	Starte	d pr	rijin	well
1356	2	7.32	19.38	1202
1358	4	7.25	19.31	1206
19:00	6	7.23	19.34	1209
MOM	10	7.18	191.32	1225
1407	Samp	red		
	×			



ENVIRÓNMENTAL ENGINEERING, INC

Well No.:	MW-ID	Project No.: 2551
Casing Diameter:	ے۔ inches	Address: 15101 Freedom Avenue
Depth of Well:	59.81 feet	San Leandro, CA
Top of Casing Elevation:	feet	Date: January 21 22, 2008
Depth to Groundwater:	22.85 feet	Sampler: Lizzie Hightower
Groundwater Elevation:	feet	Eric Gassner-Wollwage
Water Column Height:	<u>36.96</u> feet	
Purged Volume:		
		1
Purging Method:	Bailer 🗆	Pump 🕁
Sampling Method:	Bailer 🖻	Pump 🗆
	/	
Color:	Yes 🗆 No 🖌	Describe:
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	
1217	Star	Frd	pur	zing v	hell		
1219	is .	0.20	7.47	20.50	1492	51.6	-56.9
1223	9	0.14	7,52	20.12	1575	123	-635
1225	12	0.18	7.48	20.52	1577	250	-63.2
1227	15	0.17	7,52	20.47	1564	300	-117.2
1230	Samp	160					
	3						

d.



Well No.:	MW-3D	Project No.: 2551
Casing Diameter:	<u>inches</u>	Address: 15101 Freedom Avenue
Depth of Well:	58.59 feet	San Leandro, CA
Top of Casing Elevation:	feet	Date: January 24 22, 2008
Depth to Groundwater:	22.31 feet	Sampler: Lizzie Hightower
Groundwater Elevation:	feet	Eric Gassner-Wollwage
Water Column Height:	34.28 feet	
Purged Volume:	<u>15</u> gallons	
	-	1
Purging Method:	Bailer 🗆	Pump o
Sampling Method:	Bailer 🗄	Pump 🗆
Color:	Yes 🗖 No 🕅	Describe:
Sheen:	Yes 🗆 No 🖬	Describe:
Odor:	Yes 🗆 No 👳	Describe:

Field Measurements:

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP
	(gallons)	mg/L		°C	(µS/cm)	NTU	
1309	Start	ed	pura	iver m	ell		
134	3	0.21	7.35	20.15	(30)	157	-99.8
1315	0	0.21	7.30	20.16	1287	230	-93.7
1319	15	0.29	7.27	20.26	1271	78	- 82.1
1322	San	ples	议				
		1					

Ĵ



ENVIRONMENTAL ENGINEERING, INC

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:	feet	Date: January 21 22, 2008
Depth to Groundwater:	21.11 feet	Sampler: Lizzie Hightower
Groundwater Elevation:	feet	Eric Gassner-Wollwage
Water Column Height:	37.68 feet	
Purged Volume:	12 gallons	
Purging Method:	Bailer 🗆	Pump 🗹
Sampling Method:	Bailer 🗹	Pump 🗆
Color:	Yes 🛃 No 🗆	Describe: <u>Cloudy</u>
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	
1444	Starter	PP	ka-fi	p let	1		
1451	3	0.25	7.50	19.46	1435	334	-95.5
1555	9	0.24	7.31	19,44	1362	1999	-81.1
1457	12	0.25	7.26	19.44	1344	299	-74.1
1500	sam	pled	<u>R</u>				
		T.					

ş

Appendix C

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

CHAIN OF CUSTODY FORM

Page 1 of 2

PAL Pacific Analytical Laboratory 851 West Midway Ave., Suite 201B

Alameda, CA 94501 510-864-0364 Telephone

510-864-0365 Fax

Analyses/Method Lizzie Hightower Project No: 2551 Sampler: TPH-g, BTEX, MtBE Project Name: 15101 Freedom Ave. Report To: Joyce Bobek Gasoline Oxygenates & Lead Scavengers San Leandro, CA Company: SOMA Environmental Engineering, Inc. Turnaround Time: Standard Tel: 925-734-6400 925-734-6401 Fax: # of Sampling Date/Time Containers Preservatives Matrix Water Waste H₂So4 Lab Sample ID Date Time HNO3 Soil HCL ICE Field Notes No. Х MW-1 12208 1115 Х 3 VOAS Х Grab Sample Х Х 122 08 1230 Х 3 VOAS Х Х Grab Sample MW-1D Х Х 1122 08 1025 Х Х X Х 3 VOAS Х Grab Sample MW-2 12208 1350 Х 3 VOAS Х Х Х Х MW-3 Grab Sample 1 22 08 1322 MW-3D Х 3 VOAS х Х Grab Sample Х Х Х Х Х MW-4 1122/08 1428 Х 3 VOAS Grab Sample Х 12208 1500 Х X Х 3 VOAS Х Grab Sample Х MW-4D Х 3 VOAS Х Х Grab Sample X Х MW-5 12108 1502 3 VOAS Х Х Х MW-6 Х Grab Sample Х MW-7 1/21/08 1608 Х 3 VOAS Х Х Grab Sample Х Х Relinguished by: Sampler Remarks: Date/Time: Received by: Date/Time: 1/23/08 E. Highto 1.23.08 MAARE EDF REQUIRED 1610 Ethanol Hold EB-PMP Hold EB-PRB

PAL

Login# Solool 5

CHAIN OF CUSTODY FORM

Page _2 of _2_

4

PAL Pacific Analytical Laboratory 851 West Midway Ave., Suite 201B Alameda, CA 94501

510-864-0364 Telephone

510-864-0365 Fax

Login# 8010015 PAL

Proje	ct No: 2551				Sar	nple	ər:	Lizzie High	towe	r						Ana	alyses/	Meth	od	
Proje	ct Name: 15101 San Le														MtBE	nates ers				
					Co	mpa	any:	SOMA En	viror	nmei	ntal	Engi	neering, Inc.		X	oge				
Turn	around Time: S	tand	ard		Tel Faz			-734-6400 -734-6401							g, BTEX,	Gasoline Oxygenates & Lead Scavengers				
		1	Sampling	Date/Time	M	[atri:	x	# of Containers	1	Prese	rvati	ives			TPH-g, I	Gasoli & Lead				
Lab No.	Sample ID		Date	Time	Soil	Water	Waste		HCL	H ₂ So4	HNO ₃	ICE	F	ield Notes						
	MW-8	1	21/08	1537		Х		3 VOAS	X			X	Gr	ab Sample	X	X		1		+
	MW-9		12108			Х		3 VOAS	X			X	Gr	ab Sample	X	X				+
	EB-PMP		21/08	1320		Х		3 VOAS	X			X	Equi	pment Blank - Hold	X	X				
	EB-PRB		1/21/08	1323		Х		3 VOAS	X			X	Equi	pment Blank - Hold	X	X				
	EB-PMP2		12208	1555		Х		3 VOAS	X			X	Equi	pment Blank	X	Х				
	EB-PRB2		1 22 08	1558		X		3 VOAS	X			X	Equi	pment Blank	X	X				
		_																		_
Sam	pler Remarks:							Relinquis	hed	by:			e/Time:	Received by:			Date	/Tim	e:	
	REQUIRED		0					E. thigh	to		-	12	23/08	MANAIL	_	-	1.2	23	:16	
the	id EB-	PR	17 B																	
									1	~										



30 January 2008

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

RE: 15101 Freedom Ave., San Leandro

Work Order Number: 8010015

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,

Mapd Ach

Maiid Akhavan Laboratorv Director



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

Reported: 30-Jan-08 20:00

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	8010015-01	Water	22-Jan-08 11:15	23-Jan-08 16:16
MW-1D	8010015-02	Water	22-Jan-08 12:30	23-Jan-08 16:16
MW-2	8010015-03	Water	22-Jan-08 10:25	23-Jan-08 16:16
MW-3	8010015-04	Water	22-Jan-08 13:50	23-Jan-08 16:16
MW-3D	8010015-05	Water	22-Jan-08 13:22	23-Jan-08 16:16
MW-4	8010015-06	Water	22-Jan-08 14:28	23-Jan-08 16:16
MW-4D	8010015-07	Water	22-Jan-08 15:00	23-Jan-08 16:16
MW-5	8010015-08	Water	22-Jan-08 15:31	23-Jan-08 16:16
MW-6	8010015-09	Water	21-Jan-08 15:02	23-Jan-08 16:16
MW-7	8010015-10	Water	21-Jan-08 16:08	23-Jan-08 16:16
MW-8	8010015-11	Water	21-Jan-08 15:37	23-Jan-08 16:16
MW-9	8010015-12	Water	21-Jan-08 14:07	23-Jan-08 16:16
EB-PMP	8010015-13	Water	21-Jan-08 13:20	23-Jan-08 16:16
EB-PRB	8010015-14	Water	21-Jan-08 13:23	23-Jan-08 16:16
EB-PMP2	8010015-15	Water	22-Jan-08 15:55	23-Jan-08 16:16
EB-PRB2	8010015-16	Water	22-Jan-08 15:58	23-Jan-08 16:16



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

Reported: 30-Jan-08 20:00

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (8010015-01) Water Sampled: 22-	-Jan-08 11:15 Rece	ived: 23-Jan-08	8 16:16						
Gasoline (C6-C12)	2260	50.0	ug/l	1	BA82301	23-Jan-08	23-Jan-08	EPA 8260B	
Benzene	81.3	0.500	"	"	"	"		"	
Ethylbenzene	17.5	0.500	"	"	"	"			
m&p-Xylene	ND	2.00	"	"	"	"		"	
o-xylene	ND	0.500	"	"	"	"		"	
Toluene	ND	2.00	"	"	"	"			
MTBE	4.23	0.500	"	"	"	"			
DIPE	ND	0.500	"	"	"	"		"	
ETBE	ND	0.500	"	"	"	"		"	
ТАМЕ	2.16	2.00	"	"	"	"		"	
ТВА	23.8	2.00	"	"	"	"		"	
1,2-dichloroethane	ND	0.500	"	"	"	"		"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"		"	
Ethanol	ND	1000	"	"	"	"	"		
Surrogate: 4-Bromofluorobenzene		123 %	70-	-130	"	"	"	"	
Surrogate: Dibromofluoromethane		112 %	70-	-130	"	"	"	"	
Surrogate: Perdeuterotoluene		112 %	70-	-130	"	"	"	"	
MW-1D (8010015-02) Water Sampled: 2	2-Jan-08 12:30 Red	eived: 23-Jan-	08 16:16						
Gasoline (C6-C12)	ND	50.0	ug/l	1	BA82301	23-Jan-08	23-Jan-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	"	"		"		"	
ТВА	12.9	2.00	"	"		"		"	
	ND	0.500	"				"		
1.2-dichloroethane	. –								
1,2-dichloroethane 1,2-Dibromoethane (EDB)	ND	0.500	"						
1,2-dichloroethane 1,2-Dibromoethane (EDB) Ethanol	ND ND	0.500 1000	"			"		"	

Pacific Analytical Laboratory



Project Number: 2551 Project Manager: Mansour Sepehr

Reported: 30-Jan-08 20:00

Volatile Organic Compounds by EPA Method 8260B

Project: 15101 Freedom Ave., San Leandro

Pacific Analytical Laboratory

			-		-				
Australia	Dervit	Reporting	11	Dilution	Datab	Duranad	A	Mathad	Netes
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1D (8010015-02) Water Sampled: 22	2-Jan-08 12:30 Rece	eived: 23-Jan-	08 16:16						
Surrogate: Dibromofluoromethane		117 %	70-1	30	BA82301	23-Jan-08	23-Jan-08	EPA 8260B	
Surrogate: Perdeuterotoluene		107 %	70-1	30	"	"	"	"	
MW-2 (8010015-03) Water Sampled: 22-	Jan-08 10:25 Receiv	ved: 23-Jan-08	8 16:16						
Gasoline (C6-C12)	132	50.0	ug/l	1	BA82301	23-Jan-08	23-Jan-08	EPA 8260B	
Benzene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	12.2	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	2970	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	70-1	30	"	"	"	"	
Surrogate: Dibromofluoromethane		118 %	70-1	30	"	"	"	"	
Surrogate: Perdeuterotoluene		109 %	70-1	30	"	"	"	"	

MW-3 (8010015-04) Water Sampled: 22-Jan-08 13:50 Received: 23-Jan-08 16:16

Gasoline (C6-C12)	22100	1080	ug/l	21.5	BA82301	23-Jan-08	23-Jan-08	EPA 8260B
Benzene	1280	10.8	"	"	"	"	"	"
Ethylbenzene	1330	10.8	"	"	"	"	"	"
m&p-Xylene	2130	43.0	"	"	"	"	"	"
o-xylene	1390	10.8	"	"	"	"	"	"
Toluene	453	43.0	"	"	"	"	"	"
MTBE	490	10.8	"	"	"	"	"	"
DIPE	ND	10.8	"	"	"	"	"	"
ETBE	ND	10.8	"	"	"	"	"	"
TAME	170	43.0	"	"	"	"	"	"
ТВА	373	43.0	"	"	"	"	"	"
1,2-dichloroethane	ND	10.8	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	10.8	"	"	"	"	"	"
Ethanol	ND	21500	"	"	"	"	"	"

Pacific Analytical Laboratory



Project Number: 2551 Project Manager: Mansour Sepehr

Project: 15101 Freedom Ave., San Leandro

Reported: 30-Jan-08 20:00

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (8010015-04) Water Sampled: 22-Jan-08	13:50 Receiv	ved: 23-Jan-08	8 16:16						
Surrogate: 4-Bromofluorobenzene		117 %	70-	130	BA82301	23-Jan-08	23-Jan-08	EPA 8260B	
Surrogate: Dibromofluoromethane		118 %	70-	130	"	"	"	"	
Surrogate: Perdeuterotoluene		109 %	70-	130	"	"	"	"	

MW-3D (8010015-05) Water Sampled: 22-Jan-08 13:22 Received: 23-Jan-08 16:16

Gasoline (C6-C12)	ND	50.0	ug/l	1	BA82301	23-Jan-08	23-Jan-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	88.3	0.500	"	"	"	"	"		
DIPE	ND	0.500	"	"	"	"	"		
ETBE	3.10	0.500	"	"	"	"	"	"	
ТАМЕ	15.3	2.00	"	"	"	"	"	"	
TBA	15.6	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		119 %	70-	130	"	"	"	"	
Surrogate: Perdeuterotoluene		108 %	70-	-130	"	"	"	"	

MW-4 (8010015-06RE1) Water Sampled: 22-Jan-08 14:28 Received: 23-Jan-08 16:16

Gasoline (C6-C12)	2180	550	ug/l	11	BA82301	23-Jan-08	24-Jan-08	EPA 8260B
Benzene	133	5.50	"	"	"	"	"	"
Ethylbenzene	43.1	5.50	"	"	"	"	"	"
m&p-Xylene	32.2	22.0	"	"	"	"	"	"
o-xylene	ND	5.50	"	"	"	"	"	"
Toluene	ND	22.0	"	"	"	"		"
MTBE	1800	5.50	"	"	"	"		"
DIPE	ND	5.50	"	"	"	"	"	"
ETBE	64.7	5.50	"	"	"	"		"
TAME	ND	22.0	"	"	"	"		"
TBA	2580	22.0	"	"	"	"	"	"
1,2-dichloroethane	ND	5.50	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	5.50	"	"	"	"	"	"

Pacific Analytical Laboratory



Project Number: 2551 Project Manager: Mansour Sepehr

Project: 15101 Freedom Ave., San Leandro

Reported: 30-Jan-08 20:00

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-4 (8010015-06RE1) Water	Sampled: 22-Jan-08 14:28	Received: 23-Ja	an-08 16:1	6					
Ethanol	ND	11000	ug/l	11	BA82301	23-Jan-08	24-Jan-08	EPA 8260B	
Surrogate: 4-Bromofluorobenzene		96.4 %	70-1	130	"	"	"	"	
Surrogate: Dibromofluoromethane		124 %	70-1	130	"	"	"	"	
Surrogate: Perdeuterotoluene		107 %	70-1	130	"	"	"	"	

MW-4D (8010015-07) Water Sampled: 22-Jan-08 15:00 Received: 23-Jan-08 16:16

Gasoline (C6-C12)	91.5	50.0	ug/l	1	BA82301	23-Jan-08	23-Jan-08	EPA 8260B
Benzene	18.7	0.500	"	"	"	"	"	"
Ethylbenzene	7.08	0.500	"	"	"	"	"	"
m&p-Xylene	9.08	2.00	"	"	"	"	"	"
o-xylene	2.34	0.500	"	"	"	"	"	"
Toluene	ND	2.00	"	"	"	"	"	"
MTBE	219	0.500	"	"	"	"	"	"
DIPE	ND	0.500	"	"	"	"	"	"
ETBE	4.90	0.500	"	"	"	"	"	"
ТАМЕ	3.32	2.00	"	"	"	"	"	"
TBA	124	2.00	"	"	"	"		"
1,2-dichloroethane	ND	0.500	"	"	"	"		"
1,2-Dibromoethane (EDB)	ND	0.500	"		"	"	"	"
Ethanol	ND	1000	"	"	"	"	"	"
Surrogate: 4-Bromofluorobenzene		113 %	70	130	"	"	"	"
Surrogate: Dibromofluoromethane		118 %	70	130	"	"	"	"
Surrogate: Perdeuterotoluene		107 %	70	130	"	"	"	"

MW-5 (8010015-08RE1) Water Sampled: 22-Jan-08 15:31 Received: 23-Jan-08 16:16

Gasoline (C6-C12)	9810	50.0	ug/l	1	BA82301	23-Jan-08	24-Jan-08	EPA 8260B	
Benzene	572	0.500	"	"	"	"		"	
Ethylbenzene	574	0.500	"	"	"	"		"	
m&p-Xylene	161	2.00	"	"	"	"		"	
o-xylene	23.1	0.500	"	"	"	"		"	
Toluene	22.0	2.00	"	"	"	"		"	
MTBE	126	0.500	"	"	"	"		"	
DIPE	ND	0.500	"	"	"	"		"	
ETBE	4.56	0.500	"	"	"	"		"	
ТАМЕ	62.1	2.00	"	"	"	"		"	
ТВА	470	2.00	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	

Pacific Analytical Laboratory



Pleasanton CA, 94588

Project Number: 2551 Project Manager: Mansour Sepehr

Project: 15101 Freedom Ave., San Leandro

Reported: 30-Jan-08 20:00

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5 (8010015-08RE1) Water	Sampled: 22-Jan-08 15:31	Received: 23-J	an-08 16:10	6					
1,2-Dibromoethane (EDB)	ND	0.500	ug/l	1	BA82301	23-Jan-08	24-Jan-08	EPA 8260B	
Ethanol	ND	1000	"		"	"	"		
Surrogate: 4-Bromofluorobenzene		118 %	70-1	30	"	"	"	"	
Surrogate: Dibromofluoromethane	2	110 %	70-1	30	"	"	"	"	
Surrogate: Perdeuterotoluene		113 %	70-1	30	"	"	"	"	

MW-6 (8010015-09) Water Sampled: 21-Jan-08 15:02 Received: 23-Jan-08 16:16

Gasoline (C6-C12)	3290	50.0	ug/l	1	BA82301	23-Jan-08	23-Jan-08	EPA 8260B
Benzene	33.0	0.500	"	"	"	"	"	"
Ethylbenzene	149	0.500	"	"	"	"	"	"
m&p-Xylene	130	2.00	"	"	"	"	"	"
o-xylene	1.31	0.500	"	"	"	"	"	"
Toluene	ND	2.00	"	"	"	"	"	"
MTBE	3.86	0.500	"	"	"	"	"	"
DIPE	ND	0.500	"	"	"	"	"	"
ETBE	ND	0.500	"	"	"	"	"	"
TAME	ND	2.00	"	"	"	"	"	"
TBA	13.9	2.00	"	"	"	"	"	"
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"
Ethanol	ND	1000	"	"	"	"	"	"
Surrogate: 4-Bromofluorobenzene		122 %	70-	130	"	"	"	"
Surrogate: Dibromofluoromethane		111 %	70-	130	"	"	"	"
Surrogate: Perdeuterotoluene		111 %	70-	130	"	"	"	"



Project Number: 2551 Project Manager: Mansour Sepehr **Reported:** 30-Jan-08 20:00

Volatile Organic Compounds by EPA Method 8260B

Project: 15101 Freedom Ave., San Leandro

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-7 (8010015-10) Water	Sampled: 21-Jan-08 16:08 Red	ceived: 23-Jan-0	8 16:16						
Gasoline (C6-C12)	610	50.0	ug/l	1	BA82301	23-Jan-08	23-Jan-08	EPA 8260B	
Benzene	1.15	0.500	"	"	"	"	"	"	
Ethylbenzene	8.40	0.500	"	"	"	"	"	"	
m&p-Xylene	4.34	2.00	"	"	"	"	"	"	
o-xylene	ND	0.500	"	"	"	"		"	
Toluene	ND	2.00	"		"	"		"	
MTBE	17.2	0.500	"		"	"		"	
DIPE	ND	0.500	"		"	"		"	
ETBE	ND	0.500	"		"	"		"	
TAME	6.01	2.00	"		"	"		"	
TBA	ND	2.00	"		"	"	"		
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenz	zene	112 %	7	70-130	"	"	"	"	
Surrogate: Dibromofluorometh	hane	113 %	7	70-130	"	"	"	"	
Surrogate: Perdeuterotoluene		108 %	7	70-130	"	"	"	"	

MW-8 (8010015-11) Water Sampled: 21-Jan-08 15:37 Received: 23-Jan-08 16:16

ND	50.0	ug/l	1	BA82301	23-Jan-08	24-Jan-08	EPA 8260B	
ND	0.500	"	"	"	"		"	
ND	0.500	"	"	"	"	"	"	
ND	2.00	"	"	"	"		"	
ND	0.500	"	"	"	"		"	
ND	2.00	"	"	"	"		"	
ND	0.500	"	"	"	"	"	"	
ND	0.500	"	"	"	"	"	"	
ND	0.500	"	"	"	"		"	
ND	2.00	"	"	"	"		"	
ND	2.00	"	"	"	"		"	
ND	0.500	"	"	"	"		"	
ND	0.500	"	"	"	"		"	
ND	1000	"	"	"	"	"	"	
	107 %	70	-130	"	"	"	"	
	118 %	70	-130	"	"	"	"	
	106 %	70	-130	"	"	"	"	
	ND ND ND ND ND ND ND ND ND ND	ND 0.500 ND 0.500 ND 2.00 ND 0.500 ND 2.00 ND 0.500 ND 0.500 ND 0.500 ND 0.500 ND 2.00 ND 2.00 ND 2.00 ND 0.500 ND 0.500 ND 0.500 ND 1000 107 % 118 %	ND 0.500 " ND 0.500 " ND 2.00 " ND 0.500 " ND 2.00 " ND 2.00 " ND 2.00 " ND 0.500 " ND 0.500 " ND 0.500 " ND 0.500 " ND 1000 " 107 % 70 118 % 70 70	ND 0.500 " ND 0.500 " " ND 2.00 " " ND 2.00 " " ND 0.500 " " ND 2.00 " " ND 2.00 " " ND 2.00 " " ND 0.500 " " ND 0.500 " " ND 0.500 " " ND 1000 " " 107 % 70-130 118 % 70-130	ND 0.500 " " " ND 0.500 " " " " ND 2.00 " " " " ND 0.500 " " " " ND 2.00 " " " " ND 2.00 " " " " ND 2.00 " " " " ND 0.500 " " " " ND 0.500 " " " " ND 1000 " " " " 107 % 70-130 " " " "	ND 0.500 " " " " ND 0.500 " " " " " ND 2.00 " " " " " ND 0.500 " " " " " ND 2.00 " " " " " ND 2.00 " " " " " ND 0.500 " " " " " ND 0.500 " " " " " ND 1000 " " " " 118 % 7	ND 0.500 " <td>ND 0.500 "</td>	ND 0.500 "

Pacific Analytical Laboratory



Pleasanton CA, 94588

Project Number: 2551 Project Manager: Mansour Sepehr

Project: 15101 Freedom Ave., San Leandro

Reported: 30-Jan-08 20:00

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

					•				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-9 (8010015-12) Water	Sampled: 21-Jan-08 14:07 Re	ceived: 23-Jan-0	8 16:16						
Gasoline (C6-C12)	ND	50.0	ug/l	1	BA82301	23-Jan-08	24-Jan-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	1.18	0.500	"		"	"		"	
1,2-Dibromoethane (EDB)	ND	0.500	"		"	"		"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluoroben	zene	106 %	7	0-130	"	"	"	"	
Surrogate: Dibromofluoromet	thane	120 %	7	70-130	"	"	"	"	
Surrogate: Perdeuterotoluene		107 %	7	0-130	"	"	"	"	

EB-PMP (8010015-13) Water Sampled: 21-Jan-08 13:20 Received: 23-Jan-08 16:16

Gasoline (C6-C12)	ND	50.0	ug/l	1	BA82301	23-Jan-08	24-Jan-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		108 %	70-	130	"	"	"	"	
Surrogate: Dibromofluoromethane		120 %	70-	130	"	"	"	"	
Surrogate: Perdeuterotoluene		107 %	70-	130	"	"	"	"	

Pacific Analytical Laboratory



Pleasanton CA, 94588

Project Number: 2551 Project Manager: Mansour Sepehr

Project: 15101 Freedom Ave., San Leandro

Reported: 30-Jan-08 20:00

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Resul	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note			
EB-PRB (8010015-14) Water	Sampled: 21-Jan-08 13:23	Received: 23-Jan	-08 16:16									
Gasoline (C6-C12)	ND	50.0	ug/l	1	BA82301	23-Jan-08	24-Jan-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-Bromofluorobenze	ene	107 %	70	-130	"	"	"	"				
Surrogate: Dibromofluoromethe	ane	120 %	70	-130	"	"	"	"				
Surrogate: Perdeuterotoluene		108 %	70	-130	"	"	"	"				

EB-PMP2 (8010015-15) Water Sampled: 22-Jan-08 15:55 Received: 23-Jan-08 16:16

Gasoline (C6-C12)	ND	50.0	ug/l	1	BA82301	23-Jan-08	24-Jan-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		107 %	70-1	30	"	"	"	"	
Surrogate: Dibromofluoromethane		120 %	70-1	30	"	"	"	"	
Surrogate: Perdeuterotoluene		106 %	70-1	30	"	"	"	"	

Pacific Analytical Laboratory



Pleasanton CA, 94588

Project Number: 2551 Project Manager: Mansour Sepehr

Project: 15101 Freedom Ave., San Leandro

Reported: 30-Jan-08 20:00

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
EB-PRB2 (8010015-16) Water	Sampled: 22-Jan-08 15:58	Received: 23-Ja	n-08 16:	16					
Gasoline (C6-C12)	ND	50.0	ug/l	1	BA82301	23-Jan-08	24-Jan-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-Bromofluorobenzer	ne	105 %	7	0-130	"	"	"	"	
Surrogate: Dibromofluorometha	ne	121 %	7	0-130	"	"	"	"	
Surrogate: Perdeuterotoluene		107 %	7	0-130	"	"	"	"	



SOMA Environmental Engineering Inc.	Project:	15101 Freedom Ave., San Leandro	
6620 Owens Drive, Suite A	Project Number:	2551	Reported:
Pleasanton CA, 94588	Project Manager:	Mansour Sepehr	30-Jan-08 20:00

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Anaryte	Result	Liiiit	Units	Level	Kesuit	70KEU	Linnts	KPD	Liinit	Notes
Batch BA82301 - EPA 5030 Water MS										
Blank (BA82301-BLK1)				Prepared &	Analyzed:	23-Jan-08				
Surrogate: 4-Bromofluorobenzene	52.9		ug/l	50.0		106	70-130			
Surrogate: Dibromofluoromethane	58.9		"	50.0		118	70-130			
Surrogate: Perdeuterotoluene	53.6		"	50.0		107	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 (BA82301-BS1)				Prepared &	Analyzed:	23-Jan-08				
Surrogate: 4-Bromofluorobenzene	52.5		ug/l	50.0		105	70-130			
Surrogate: Dibromofluoromethane	50.8		"	50.0		102	70-130			
Surrogate: Perdeuterotoluene	50.5		"	50.0		101	70-130			
MTBE	99.5	0.500	"	100		99.5	70-130			
ETBE	119	0.500	"	100		119	70-130			
TAME	122	2.00	"	100		122	70-130			
Gasoline (C6-C12)	1640	50.0	"	2000		82.0	70-130			
TBA	338	2.00	"	500		67.6	65-130			
Benzene	82.7	0.500	"	100		82.7	70-130			
Toluene	81.8	2.00	"	100		81.8	70-130			



SOMA Environmental Engineering Inc.Project:15101 Freedom Ave., San Leandro6620 Owens Drive, Suite AProject Number:2551Reported:Pleasanton CA, 94588Project Manager:Mansour Sepehr30-Jan-08 20:00

Volatile Organic Compounds by EPA Method 8260B - Quality Control

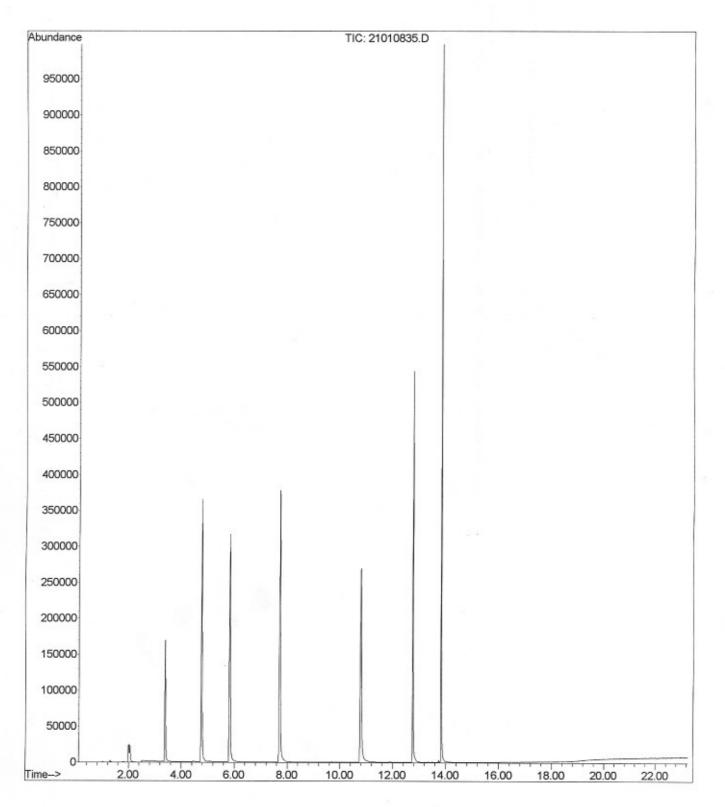
Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BA82301 - EPA 5030 Water MS										
LCS Dup (BA82301-BSD1)				Prepared &	Analyzed:	23-Jan-08				
Surrogate: 4-Bromofluorobenzene	53.8		ug/l	50.0		108	70-130			
Surrogate: Dibromofluoromethane	50.6		"	50.0		101	70-130			
Surrogate: Perdeuterotoluene	52.5		"	50.0		105	70-130			
MTBE	94.0	0.500	"	100		94.0	70-130	5.68	20	
ETBE	119	0.500	"	100		119	70-130	0.00	20	
TAME	122	2.00	"	100		122	70-130	0.00	20	
Gasoline (C6-C12)	2050	50.0	"	2000		102	70-130	22.2	20	QR-02
TBA	347	2.00	"	500		69.4	65-130	2.63	20	
Benzene	87.1	0.500	"	100		87.1	70-130	5.18	20	
Toluene	84.7	2.00		100		84.7	70-130	3.48	20	

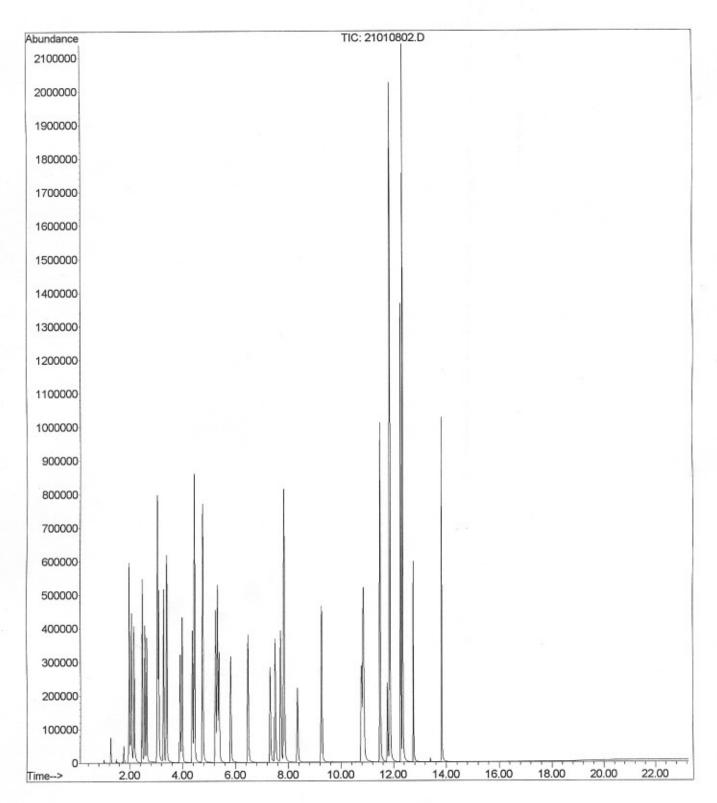


6620 Ower	vironmental Engineering Inc. 1s Drive, Suite A CA, 94588	Project: 15101 Freedom Ave., San Leandro Project Number: 2551 Project Manager: Mansour Sepehr	Reported: 30-Jan-08 20:00
		Notes and Definitions	
QR-02	The RPD result exceeded the QC control limits; how were accepted based on percent recoveries and comp	wever, both percent recoveries were acceptable. Sample results for the Qupleteness of QC data.	C batch
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-Jan-21-1809.b\21010835.D
Operator :
Acquired : 23 Jan 2008 5:11 pm using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BA82301-BLK1
Misc Info :
Vial Number: 34



File :C:\MSDChem\1\DATA\2008-Jan-21-1809.b\21010802.D Operator : Acquired : 21 Jan 2008 6:54 pm using AcqMethod OXY21506.M Instrument : PAL GCMS Sample Name: BA82301-BS1@voc Misc Info : Vial Number: 2



File :C:\MSDChem\1\DATA\2008-Jan-21-1809.b\21010803.D Operator : Acquired : 21 Jan 2008 7:24 pm using AcqMethod OXY21506.M Instrument : PAL GCMS Sample Name: BA82301-BS1@gas Misc Info : Vial Number: 3

