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THIRD QUARTER 2005 GROUNDWATER MONITORING REPORT TEXACO GASOLINE SERVICE STATION 15101 FREEDOM AVENUE SAN LEANDRO, CALIFORNIA

September 28, 2005

Project 2551

Prepared for

Mr. Mohammad Pazdel 1770 Pistacia Court Fairfield, California

Prepared by

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



September 28, 2005

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

Alameda County OCT 0 3 2005

Environmental Health

Subject: Texaco Gasoline Service Station (Formerly Freedom ARCO Station)

Site Address: 15101 Freedom Avenue, San Leandro, California

STID 4473/RO0000473

Dear Mr. Gholami:

Enclosed for your review is a copy of SOMA's "Third Quarter 2005 Groundwater Monitoring Report" for the subject property.

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

Enclosure

cc: Mr. Mohammad Pazdel w/enclosure

Certification

This report has been prepared by SOMA Environmental Engineering, Inc. on behalf of Mr. Mohammad Pazdel, the property owner of 15101 Freedom Avenue, San Leandro, California, to comply with the Alameda County Health Care Services' requirements for the Third Quarter 2005 groundwater monitoring event.

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



Alameda County

Environmental Health

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August 2005.

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August 2005.

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1.0 INTRODUCTION

This report has been prepared by SOMA Environmental Engineering, Inc., (SOMA) on behalf of Mr. Mohammad Pazdel, the property owner of 15101 Freedom Avenue, San Leandro, California ("the Site"). The Site is located between 151st Street and Fairmont Boulevard, which is just west of Interstate 580. Formerly, the property was known as Freedom ARCO Station, however, the Site is currently operating as a service station under the brand name of Texaco. Since the 1960's, the Site has been used as a gasoline service station. Figure 1 illustrates the vicinity of the Site.

This report summarizes the results of the Third Quarter 2005 groundwater monitoring event conducted at the Site on August 26, 2005. This report includes the results of the on-site measurements of the physical and chemical properties of the groundwater, which includes pH, temperature, and electrical conductivity (EC). During this monitoring event five on-site monitoring wells (MW-1 to MW-5) and four off-site wells (MW-6 to MW-9) were sampled and analyzed for the following chemicals, as requested by the Alameda County Health Care Services (ACHCS):

- Total petroleum hydrocarbons as gasoline (TPH-g),
- Benzene, toluene, ethylbenzene, and total xylenes (collectively referred to as BTEX),
- Methyl tertiary Butyl Ether (MtBE),
- Gasoline oxygenates, which included tertiary Butyl Alcohol (TBA), Isopropyl Ether (DIPE), Ethyl tertiary Butyl Ether (ETBE), Methyl tertiary Amyl Ether (TAME), Ethanol; and
- Lead scavengers, which included 1,2-Dichloroethane (1,2-DCA) and 1,2-Dibromoethane (EDB).

These activities were performed in accordance with the general guidelines of the California Regional Water Quality Control Board (CRWQCB). Appendix A details the procedures used by SOMA during the Third Quarter 2005 monitoring event.

1.1 Previous Activities

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

In July 2001, additional soil and groundwater investigations were conducted to further examine potential petroleum hydrocarbon contamination discovered during the removal and upgrade of the USTs. During this investigation five soil borings (SB-1 through SB-5) were drilled. The maximum concentrations of TPH-g

and BTEX in the soil samples collected between 19 and 25.5 feet below ground surface (bgs) were 470, 2.6, 16, 12, and 73 mg/Kg, respectively. MtBE was below the laboratory reporting limit of 0.005 mg/Kg in all soil samples. The maximum concentrations of TPH-g and BTEX in the groundwater samples collected from the soil borings were 83, 19, 1.8, 1.5, and 73 mg/L, respectively. The maximum reported MtBE concentration was 87 mg/L in soil boring SB-2. The soil boring locations are shown in Figure 2.

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

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

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

2.0 RESULTS

The following sections provide the results of the field measurements and laboratory analyses for the August 26, 2005 groundwater monitoring event.

2.1 Field Measurements

Table 1 presents the calculated groundwater elevations, as well as the depths to groundwater for each monitoring well. Depths to groundwater ranged from 10.59 feet in monitoring well MW-9 to 23.00 feet in monitoring well MW-1. The corresponding groundwater elevations ranged from 29.61 feet in well MW-8 to 31.46 feet in well MW-1.

The deviations in the groundwater elevations throughout the Site can be attributed to the local recharge rate in each well, as well as seasonal conditions. During drier time periods the watertable descends causing a decrease in the groundwater elevations. Since the previous monitoring event (Second Quarter 2005), the groundwater elevations have decreased throughout the Site, with the exception of well MW-9.

Figure 3 displays the contour map of groundwater elevations, in feet, as measured during the Third Quarter 2005 monitoring event. The groundwater flow

direction is south across the Site, at a gradient of 0.004 feet/feet. The groundwater flow direction has remained fairly consistent with the previous monitoring event; however, the groundwater gradient has decreased.

The field measurements taken during the Third Quarter 2005 monitoring event are shown in Appendix B.

2.2 Laboratory Analysis

Table 1 also presents the TPH-g, BTEX, and MtBE analytical results, as well as the historical groundwater analytical results. In general, the analytical results indicate that the groundwater samples collected from monitoring well MW-3 were the most impacted. High concentrations of TPH-g and BTEX in monitoring well MW-3 can be attributed to leaks from the former USTs prior to their upgrade in 1999.

As shown in Table 1, TPH-g concentrations were below the laboratory reporting limit in both off-site wells MW-8 and MW-9. Detectable TPH-g concentrations ranged from 1,500 ug/L in well MW-2 to 43,500 ug/L in well MW-3. The TPH-g concentration level in well MW-3 was several orders of magnitude higher than the remaining site wells. Figure 4 displays the contour map of TPH-g concentrations in the groundwater, as analyzed during the Third Quarter 2005 monitoring event. As illustrated in Figure 4, the most impacted TPH-g region was in the vicinity of the dispenser islands and former USTs, around well MW-3.

As shown in Table 1, in wells MW-1, MW-2, MW-5, and MW-6, toluene was below the laboratory reporting limit. In well MW-7, both benzene and toluene were below the laboratory reporting limit. In wells MW-8 and MW-9, all BTEX analytes were below the laboratory reporting limit. The most impacted BTEX sample was collected from well MW-3. BTEX concentrations in well MW-3 were detected at 3,630 ug/L, 1,080 ug/L, 2,500 ug/L, and 6,830 ug/L, respectively.

Figure 5 displays the contour map of benzene concentrations in the groundwater, as analyzed during the Third Quarter 2005 monitoring event. As illustrated in Figure 5, the most impacted benzene region was in the vicinity of the dispenser islands and former USTs, around well MW-3. The benzene concentration detected in well MW-3 was several orders of magnitude higher than the remaining site wells.

Table 1 presents the results of the MtBE analysis using EPA Method 8260B. MtBE was below the laboratory reporting limit in the samples collected from wells MW-8 and MW-9. Detectable MtBE concentrations ranged from 0.86 ug/L in well MW-2 to 1,440 ug/L in well MW-3. However, a high MtBE concentration of 1,380 ug/L was also detected in well MW-4. Figure 6 displays the contour map of MtBE concentrations in the groundwater, as analyzed during the Third Quarter 2005 monitoring event. As illustrated in Figure 6, the most impacted MtBE

region was in the vicinity of the dispenser islands and former USTs, around well MW-3. MtBE was either at low levels or below the laboratory reporting limit in all off-site wells, as well as MW-1 and MW-2.

Table 2 shows the analytical results for gasoline oxygenates, as well as the historical groundwater gasoline oxygenate analytical results. All DIPE, ETBE, EDB, and Ethanol constituents were below the laboratory reporting limit in all of the groundwater samples collected during this monitoring event. 1,2-DCA was below the laboratory reporting limit throughout the Site, with the exception of wells MW-1 and MW-9. 1,2-DCA was detected in well MW-1 at 4.48 ug/L and MW-9 at 3.59 ug/L. The analytical results for 1,2-DCA, ethanol, and EDB constituents are shown in the laboratory report in Appendix C.

As shown in Table 2, TBA was below the laboratory reporting limit in wells MW-2, and MW-6 to MW-9. Detectable TBA concentrations ranged from 68.9 ug/L in well MW-1 to 902 ug/L in well MW-4. Figure 7 displays the contour map of TBA concentrations in the groundwater, as analyzed during the Third Quarter 2005 monitoring event. As illustrated in Figure 7, the most impacted TBA region was in the vicinity of the dispenser islands, around well MW-4. This can be attributed to the high mobility rate of TBA and the southerly groundwater flow direction from the former USTs. A high TBA concentration was also detected in well MW-3. However, TBA has not migrated to any off-site wells.

As shown in Table 2, TAME was below the laboratory reporting limit in wells MW-1, MW-2, and MW-6 to MW-9. Detectable TAME concentrations ranged from 37.4 ug/L in well MW-4 to 277 ug/L in well MW-3. Figure 8 displays the contour map of TAME concentrations in the groundwater, as analyzed during the Third Quarter 2005 monitoring event. As illustrated in Figure 8, the most impacted TAME region was in the vicinity of the dispenser islands and former UST cavity, around well MW-3. TAME was also detected in well MW-5. This can be attributed to the high mobility rate of TAME and the southerly groundwater flow direction from the former USTs. However, TAME has not migrated to any off-site wells.

Appendix C includes the laboratory report and COC form for the Third Quarter 2005 monitoring event.

2.3 Historical Analytical Trends

Since the previous monitoring event, the following concentration trends were observed.

For the on-site wells:

• In well MW-3, all BTEX, MtBE, and TAME constituents decreased. TPH-g significantly decreased, and TBA increased.

 In well MW-4, all TPH-g, MtBE, TBA, TAME, and BTEX constituents (with the exception of toluene) increased.

For the off-site wells:

- In well MW-6, TPH-g, benzene, ethylbenzene, and total xylenes all increased, and toluene and MtBE both decreased.
- In well MW-7, TPH-g, benzene, total xylenes, MtBE, and TAME all decreased, and ethylbenzene was the only BTEX analyte to increase. Toluene remained below the laboratory reporting limit.
- In wells MW-8 and MW-9, all referenced constituents have historically remained below the laboratory reporting limit, with the exception of benzene in well MW-8, which decreased.

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

3.0 CONCLUSION AND RECOMMENDATIONS

The results of the Third Quarter 2005 groundwater monitoring event can be summarized as follows:

- The groundwater flow direction has remained in a southerly direction throughout the Site. However, the groundwater gradient decreased since the Second Quarter 2005.
- The hydrocarbon source area still remains in the vicinity of the former USTs cavity, near well MW-3, where a previous release of petroleum hydrocarbons occurred.
- The majority of the MtBE plume has remained in the vicinity of the UST cavity and dispenser islands, around wells MW-3 and MW-4. This is consistent with the hydrocarbon source area being in the vicinity of the USTs, as well as the southerly site groundwater flow direction, which may have impacted well MW-4.
- The southerly migration of impacted groundwater from the source area of the UST cavity is also evident by the TBA concentration level in well MW 4.
- In general, based on the quarterly groundwater monitoring events, the offsite migration of the more soluble compounds, which include MtBE, TBA, and TAME, has been limited.

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

- To effectively remediate the source area, especially in the vicinity of the UST cavity, SOMA recommends initiating interim groundwater remediation on-site. SOMA recommends conducting a slug test using the on-site wells in order to evaluate the hydraulic conductivity of the water-bearing zone. The data will be used to design a groundwater extraction system for immediate removal and containing the groundwater contaminants.
- SOMA also recommends continuing the quarterly monitoring programs to better understand the seasonal variations in the groundwater quality conditions and evaluate the effectiveness of the proposed interim groundwater remediation system.
- To reduce the high TPH-g level in well MW-3, as an interim groundwater remediation activity, SOMA recommends injecting Fenton's reagent into this well.
- To evaluate whether the petroleum hydrocarbons found in the groundwater are biodegrading, SOMA recommends conducting a natural attenuation study during quarterly monitoring events. The study would include, but is not limited to, testing for DO, ORP, ferrous iron, nitrate, and sulfate compounds.

4.0 REPORT LIMITATIONS

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

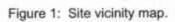
SOMA warrants that the services provided were done in accordance with the generally accepted practices in the environmental engineering and consulting field at the time of this sampling.

Figures

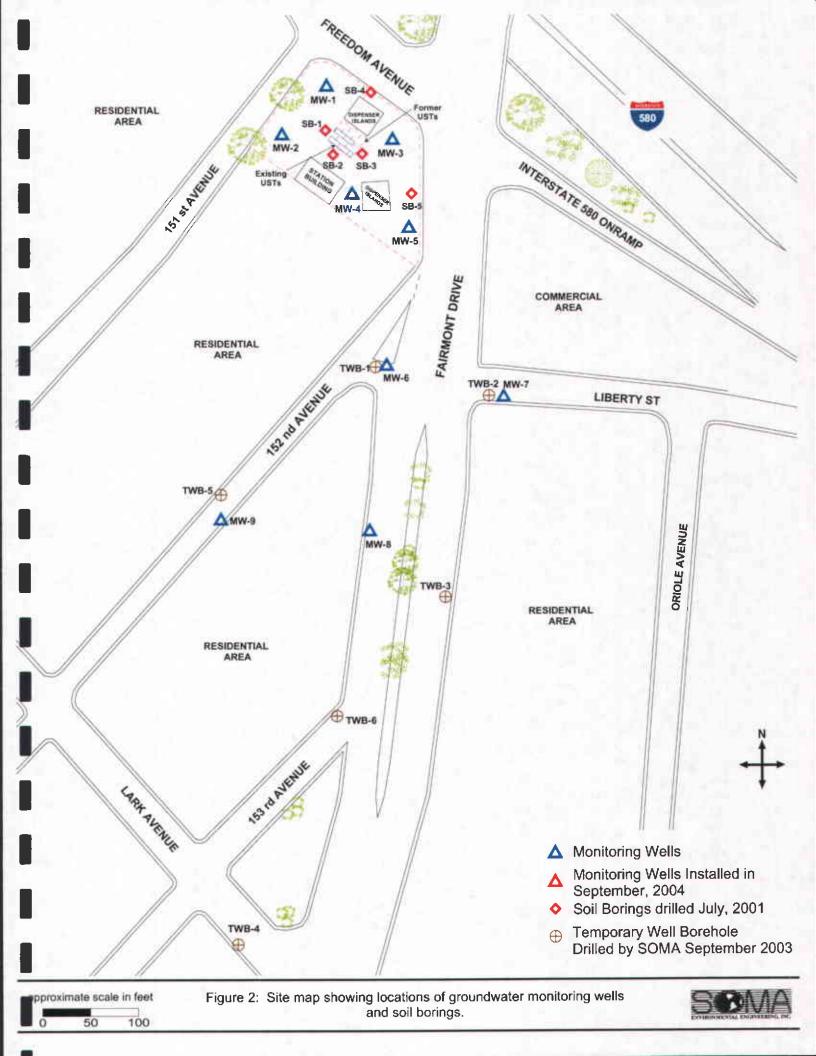


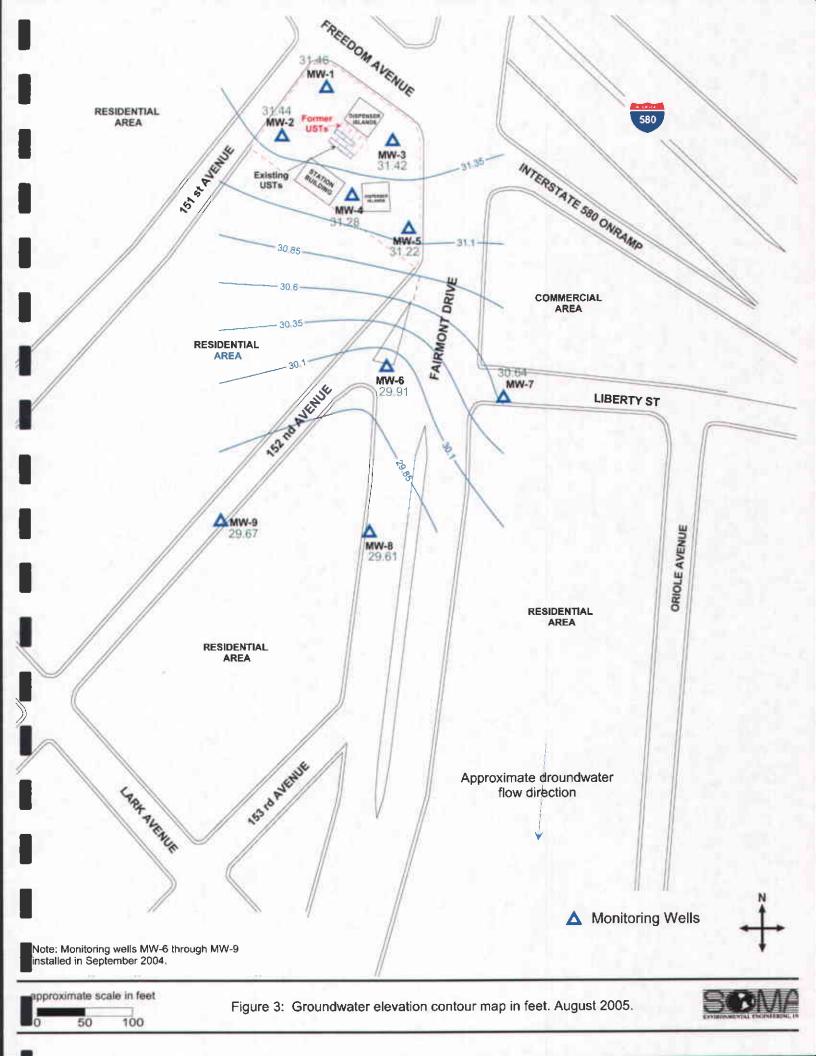


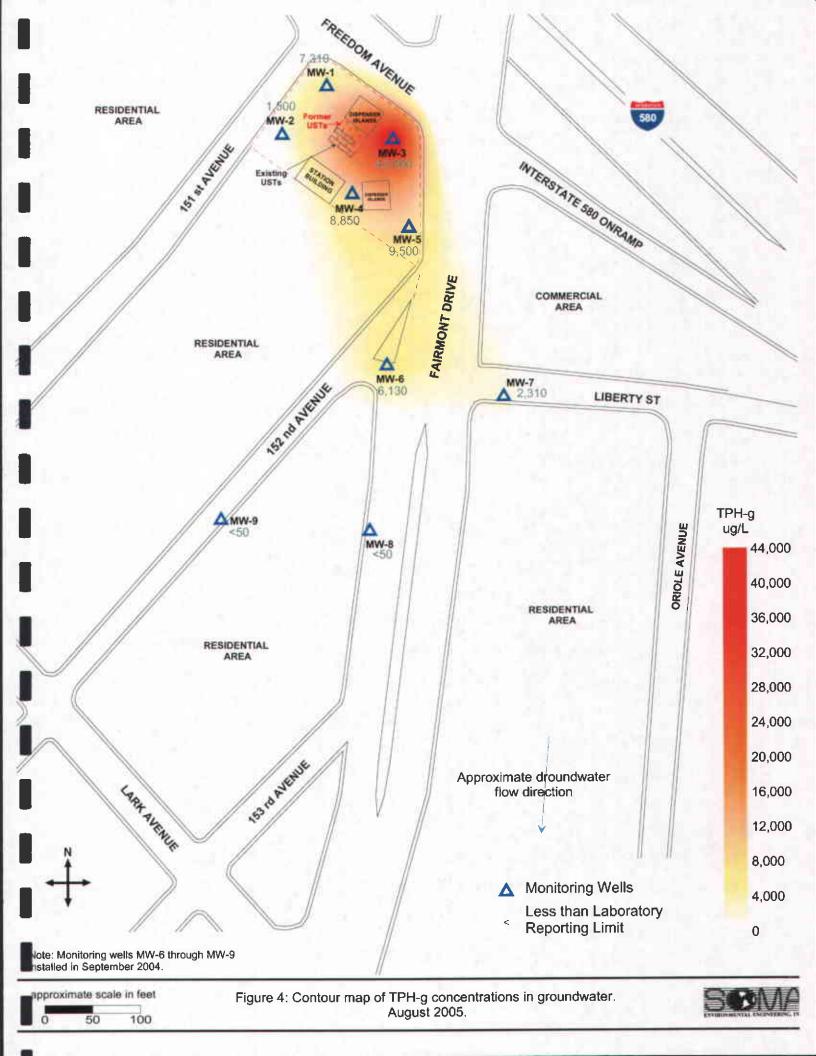
approximate scale in feet

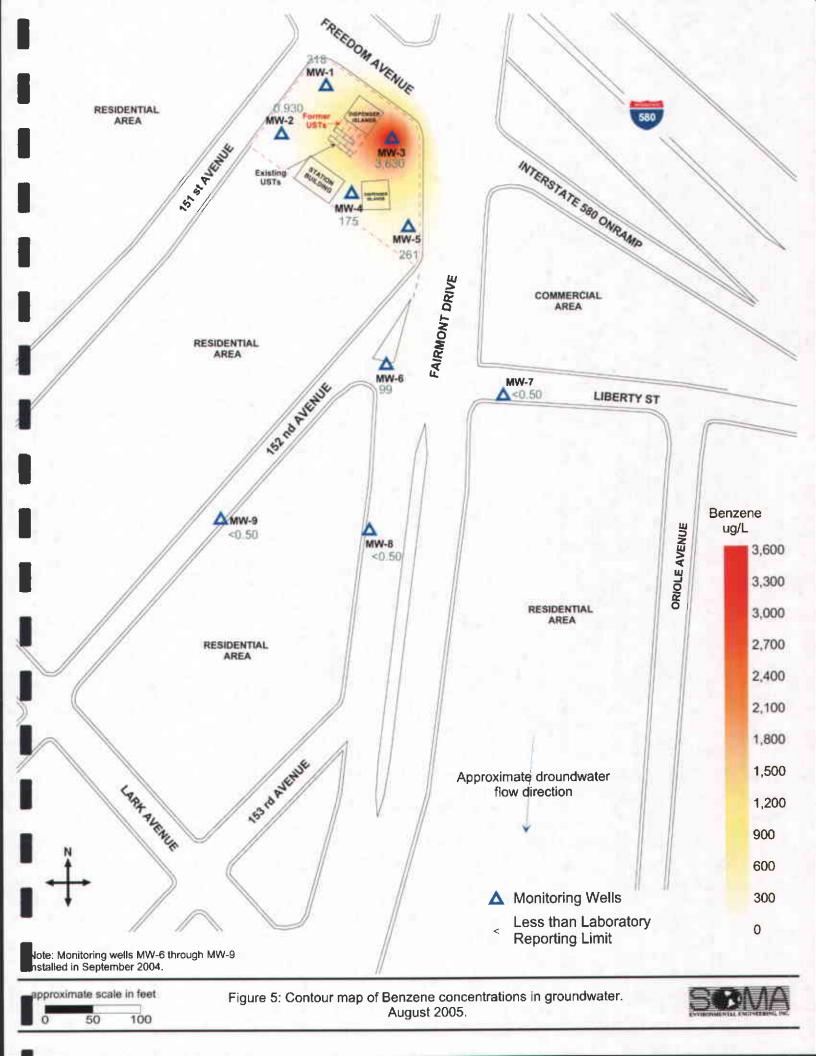


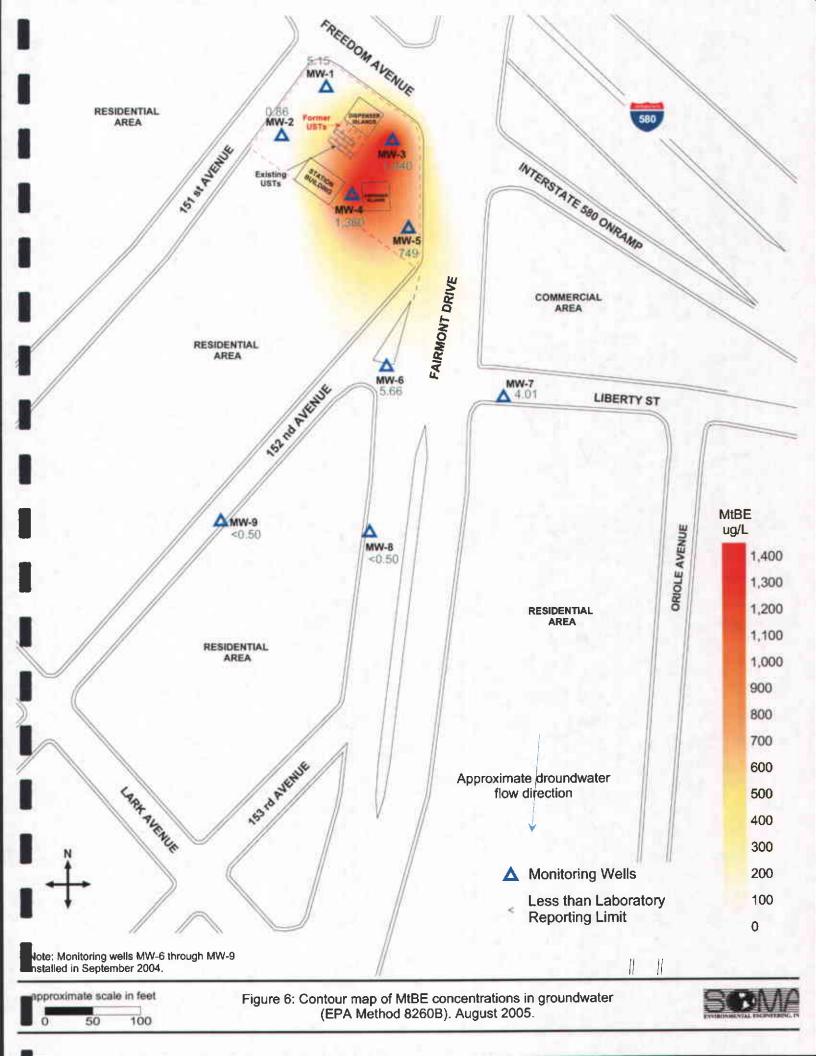


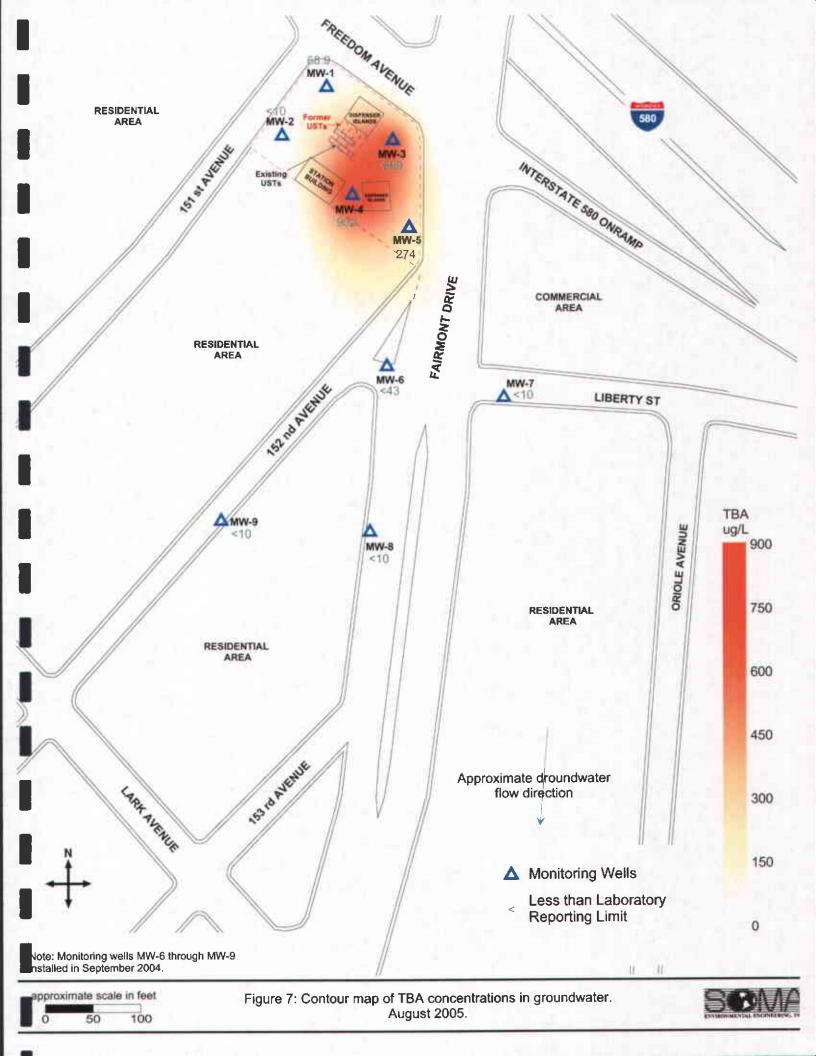


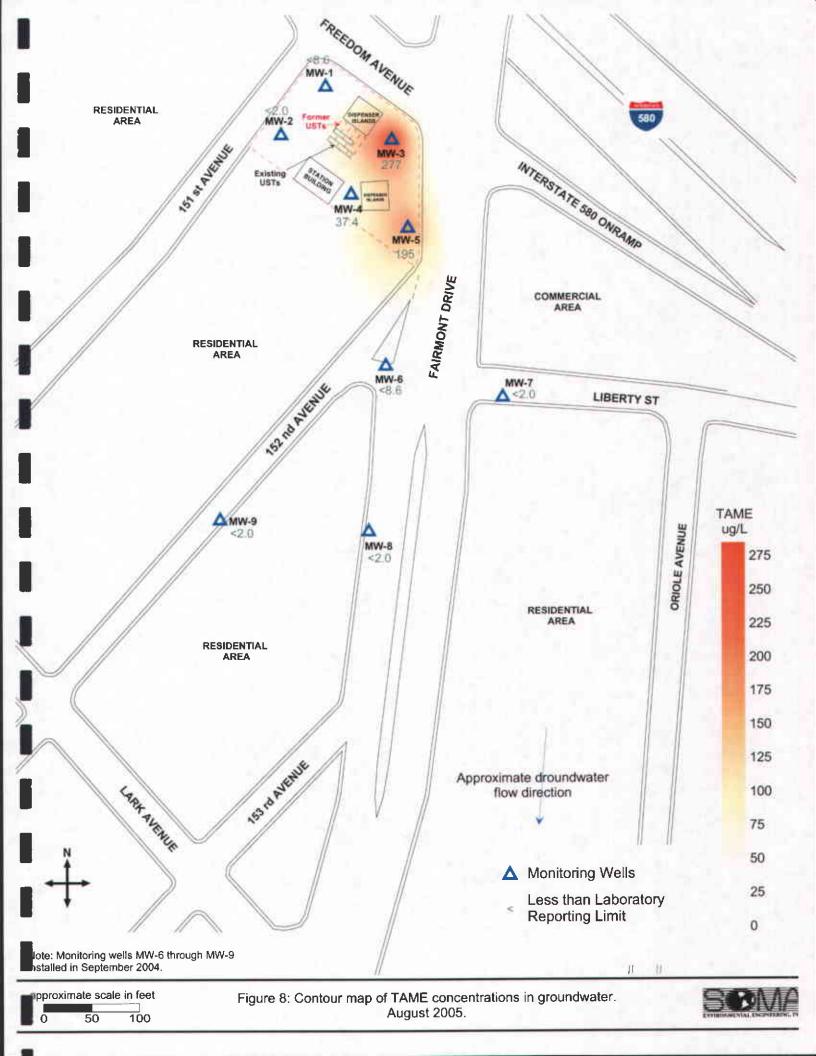












Tables

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 8260Β ² (μg/L)
MW-1	May-02	51.71	22.85	28.86	5,700	360	4.5	340	450	2
	Aug-02	51.71	23.31	28.40	9,100	590	2.6	830	362	<1.3
	Nov-02	51.71	23.58	28.13	7,900	570	3.1	680	392	< 1.0
	Feb-03	51.71	22.62	29.09	2,900	160	1.6 C	170	211	<0.5
	May-03	51.71	22.43	29.28	1,700	55	<0.5	90	115	2.00
	Aug-03	51.71	21.30	30.41	2,600	2.5	<0.5	190	130	<0.5
	Oct-03	51.71	23.49	28.22	9,200	560.0	2.7 C	670	648	<1.0
	Jan-04	51.71	22.43	29.28	5,500	190	<1.0	220	124.4	<0.5
	May-04	51.71	22.94	28.77	8,000	400	1.50	420	393	3.40
;	Sep-04	54.46	23.49	30.97	9,300	580	9.30	690	683	4.60
	Dec-04	54.46	23.01	31.45	7,360	337	<4.3	731	633	<4.3
	Mar-05	54.46	21.48	32.98	2,510	45.2	<0.5	23.2	39.63	2.80
	Jun-05	54.46	22.42	32.04	1,690	36.3	<2.0	59.5	28.73	2.01
	Aug-05	54.46	23.00	31.46	7,310	318	<8.60	475	316	5.15
MW-2	May-02	49.66	22.83	26.83 *	3,100	67	8	250	215	56
	Aug-02	49.66	21.41	28.25	2,700	4.6	<0.5	310	140	<0.5
	Nov-02	49.66	21.79	27.87	3,400	4.6	< 0.5	310	160	< 0.5
	Feb-03	49.66	20.51	29.15	890	1.7 C	0.80 C	68	38.92 C	<0.5
	May-03	49.66	20.33	29.33	2,700	5.2 C	<0.5	120	140	1.2
	Aug-03	49.66	23.18	26.48*	8,500	640	<2.5	560	659	<0.8
	Oct-03	49.66	21.71	27.95	3100 H	4.3 C	<0.5	210	160	<0.5

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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 8260Β ² (μg/L)
MW-2 cont.	Jan-04	49.66	20.31	29.35	660 H	1.5 C	<0.5	8.9	25	<0.5
	May-04	49.66	21.09	28.57	4,500	5.1 C	<0.5	190	230	0.70
	Sep-04	52.41	21.71	30.70	370	0.76 C	<0.5	25	16	0.50
	Dec-04	52.41	21.20	31.21	880	1.0	<0.5	66	52	<0.5
	Mar-05	52.41	19.15	33.26	564	<0.5	<0.5	21	11.9	<0.5
	Jun-05	52.41	20.30	32.11	2,040	1.2	<2.0	78.2	22	<0.5
	Aug-05	52.41	20.97	31.44	1,500	0.930	<2.00	87.6	21	0.86
							<i>j</i>	A CONTRACTOR	<i>3</i> 8 × 484. 	
MW-3	May-02	51,16	22.28	28.88	44,000	6,000	900	1,500	6,200	2,400
	Aug-02	51.16	22.88	28.28	40,000	5,800	1,100	1,600	6,500	1,300
	Nov-02	51.16	23.19	27.97	47,000	5,300	1,200	2,200	8,600	1,000
	Feb-03	51.16	22.02	29.14	39,000	5,500	1,500	2,000	8,600	1,300
	May-03	51.16	21.89	29.27	52,000	7,300	3,000	2,800	12,700	2,100
	Aug-03	51.16	22.66	28.50	31,000	6,100	860	1,500	6,900	1,200
	Oct-03	51.16	23.06	28.10	41,000	6,100	1,100	2,200	10,200	960
	Jan-04	51.16	21.85	29.31	51,000	4,100	1,100	2,000	8,400	590
	May-04	51.16	22.55	28.61	65,000	4,300	1,300	2,500	10,500	720
	Sep-04	53.91	23.08	30.83	42,000	4,900	890	2,200	8,700	480
	Dec-04	53.91	22.52	31.39	35,151	4,066	972	2,942	13,032	491
	Mar-05	53.91	20.90	33.01	42,600	3,040	1,100	1,530	6,670	968
	Jun-05	53.91	21.85	32.06	84,100	5,110	2,160	3,030	8,800	2,670
	Aug-05	53.91	22.49	31.42	43,500	3,630	1,080	2,500	6,830	1,440

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MW-4	May-02	50.54	21.78	28.76	880	25	1.0C	110	52	12,000
	Aug-02	50.54	22.50	28.04	3,800	70	<5.0	300	115	4,800
	Nov-02	50.54	22.81	27.73	5,100	150	10	460	258	2,400
	Feb-03	50.54	21.48	29.06	3,200	98	66	220	360	6,600
	May-03	50.54	21.24	29.30	6,200	140	46	200	790	2,300
	Aug-03	50.54	22.32	28.22	7,500	180	57	220	1450	1,900
	Oct-03	50.54	22.74	27.80	5,800	250	32	300	970	7,800
	Jan-04	50.54	21.19	29.35	5,900	270	17 C	150	640	7,300
	May-04	50.54	22.03	28.51	9,100	210	51	200	1190	1800
	Sep-04	53.31	22.76	30.55	5,200	290	12	370	600	7300
	Dec-04	53.31	21.99	31.32	8,937	538	114	416	2379	5021
	Mar-05	53.31	20.01	33.30	12,300	225	39.6	80.1	1465	3870
	Jun-05	53.31	21.25	32.06	7,690	114	32.6	77.1	555	1150
	Aug-05	53.31	22.03	31.28	8,850	175	24.6	150	851	1380
				75.00 C			1.24			
MW-5	May-02	47.79	19.02	28.77	25,000	1,000	1200	1,100	3,060	1,800
	Aug-02	47.79	19.80	27.99	18,000	1,000	660	950	1,720	1,500
	Nov-02	47.79	20.14	27.65	16,000	1,300	380	930	1,550	1,200
т.	Feb-03	47.79	18.70	29.09	12,000	390	71	770	1,100	860
	May-03	47.79	18.52	29.27	9,100	210	31	560	790	600
	Aug-03	47.79	19.54	28.25	12,000	660	75	660	1,110	1,000
	Oct-03	47.79	20.06	27.73	15,000	1,000	130	1,000	1,430	1,700
	Jan-04	47.79	18.42	29.37	9,900	450 C	16	500	431	1,100

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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.	May-04	47.79	19.30	28.49	9,200	380	24	490	536	720
	Sep-04	50.53	20.15	30.38	10,000	980	71	560	770	1200
	Dec-04	50.53	19.30	31.23	10,502	587	64	1040	1133	1015
	Mar-05	50.53	17.20	33.33	8,390	407	<5.5	83	42.5	1530
	Jun-05	50.53	18.54	31.99	9,350	147	18.3	435	146.2	573
	Aug-05	50.53	19.31	31.22	9,500	261	<22	726	321.3	749
MW-6	Sep-04	45.82	17.64	28.18	34,000	150	130	2200	8100	0.6
	Dec-04	45.82	15.75	30.07	5,161	137	7	436	1136	<5.5
	Mar-05	45.82	13.80	32.02	6,040	125	3.22	260	722.1	4.94
	Jun-05	45.82	14.78	31.04	5,590	44.3	6.60	272	382	5.85
	Aug-05	45.82	15.91	29.91	6,130	99	<8.6	378	492.9	5.66
يغو		EVEN STATE OF THE		CONTRACTOR		In file.	atin na		A Line with 1	
MW-7	Sep-04	44.74	15.21	29.53	2,900	<0.5	<0.5	52	61	8.1
	Dec-04	44.74	13.90	30.84	<50	1.6	<0.5	29	58	6.0
	Mar-05	44.74	11.46	33.28	2,230	<2.5	<2.5	39.4	51.4	12.4
	Jun-05	44.74	12.97	31.77	2,940	0.85	<2.0	50.6	31.9	13.7
	Aug-05	44.74	14.10	30.64	2,310	<0.50	<2.0	55.7	29.6	4.01
		To part of			The second second					
MW-8	Sep-04	41.14	12.98	28.16	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	Dec-04	41.14	11.22	29.92	<50	<0.5	<0.5	<0.5	<1.0	<0.5
	Mar-05	41.14	NM	NM	NA	NA	NA	NA	NA	NA
	Jun-05	41.14	10.46	30.68	<200	0.53	<2.0	<0.5	<1.0	<0.5
	Aug-05	41.14	11.53	29.61	<50	< 0.50	<2.0	<0.50	<1.0	< 0.50

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 8260Β ² (μg/L)
				24年 東東南京 PA	1		10.11			
MW-9	Sep-04	40.26	12.18	28.08	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	Dec-04	40.26	10. 9 1	29.35	<50	<0.5	<0.5	<0.5	<1.0	<0.5
	Mar-05	40.26	10.52	29.74	<200	<0.5	<0.5	<0.5	<1.0	<0.5
	Jun-05	40.26	14.73	25.53	<200	<0.5	<2.0	<0.5	<1.0	<0.5
]	Aug-05	40.26	10.59	29.67	<50	<0.50	<2.0	<0.50	<1.0	<0.50

Notes:

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

- 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 80218, and confirmed by EPA Method 8260B.
- <: Not detected above the laboratory reporting limit.
- 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.
- NM: Not Measured. Well MW-8 was inaccessible during the First Quarter 2005, car was parked over well.

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

^{*:} 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.

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

Monitoring Well	Date	TBA	DIPE	ETBE (val)	TAME (µg/L)
		(μg/L)	(μg/L)	(μg/L)	
MW-1	Aug-02	78	<1.3	<1.3	<1.3
	Nov-02	42	< 1.0	< 1.0	< 1.0
	Feb-03	47	<0.5	<0.5	<0.5
	May-03	25	<0.5	<0.5	<0.5
	Aug-03	<10	<0.5	<0.5	<0.5
	Oct-03	70	<1.0	<1.0	<1.0
	Jan-04	55	<0.5	<0.5	<0.5
	May-04	62	<0.7	<0.7	<0.7
	Sep-04	<10	<0.5	<0.5	<0.5
	Dec-04	<21.5	<4.3	<4.3	<17.2
	Mar-05	81	<0.5	<0.5	<2.0
	Jun-05	<10	<0.5	<0.5	<2.0
	Aug-05	68.9	<2.15	<2.15	<8.6
"表别才有多 在 "。		经保险的 网络拉拉			
MW-2	Aug-02	21	<0.5	<0.5	<0.5
	Nov-02	15	<0.5	<0.5	<0.5
	Feb-03	12	<0.5	<0.5	<0.5
	May-03	31	<0.5	<0.5	<0.5
	May-03 Aug-03	31 69	<0.5 <0.8	<0.5 <0.8	<0.5 <0.8
	Aug-03	69	<0.8	<0.8	<0.8
	Aug-03 Oct-03 Jan-04	69 12 <10	<0.8 <0.5	<0.8 <0.5	<0.8 <0.5
	Aug-03 Oct-03 Jan-04 May-04	69 12	<0.8 <0.5 <0.5	<0.8 <0.5 <0.5	<0.8 <0.5 <0.5
	Aug-03 Oct-03 Jan-04	69 12 <10 14	<0.8 <0.5 <0.5 <0.5	<0.8 <0.5 <0.5 <0.5	<0.8 <0.5 <0.5 <0.5
	Aug-03 Oct-03 Jan-04 May-04 Sep-04 Dec-04	69 12 <10 14 <10 <2.5	<0.8 <0.5 <0.5 <0.5 <0.5	<0.8 <0.5 <0.5 <0.5 <0.5	<0.8 <0.5 <0.5 <0.5 <0.5
	Aug-03 Oct-03 Jan-04 May-04 Sep-04 Dec-04 Mar-05	69 12 <10 14 <10	<0.8 <0.5 <0.5 <0.5 <0.5 <0.5	<0.8 <0.5 <0.5 <0.5 <0.5 <0.5	<0.8 <0.5 <0.5 <0.5 <0.5 <2.0
	Aug-03 Oct-03 Jan-04 May-04 Sep-04 Dec-04	69 12 <10 14 <10 <2.5 <2.5	<0.8 <0.5 <0.5 <0.5 <0.5 <0.5	<0.8 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.8 <0.5 <0.5 <0.5 <0.5 <2.0 <2.0

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

Monitoring		TBA	DIPE	ETBE	TAME
Well	Date	(μg/L)	(μg/L)	(μg/L)	(μg/L)
MW-3	Aug-02	<330	<8.3	<8.3	330
	Nov-02	85	< 1.3	<1.3	220
	Feb-03	140	<5.0	<5.0	320
	May-03	520	<10	<10	530
	Aug-03	180	<4.2	<4.2	270
	Oct-03	<170	<8.3	<8.3	200
	Jan-04	<100	<5.0	<5.0	150
	May-04	<100	<5.0	<5.0	270
	Sep-04	<140	<7.1	<7.1	110
	Dec-04	<100	<20	<20	154
	Mar-05	<215	<43	<43	256
	Jun-05	<215	<10.8	<10.8	374
	Aug-05	699	<21.5	<21.5	277
The Sales of the S					
MW-4	Aug-02	1500	<17	<17	18
	Nov-02	580	< 5.0	6	13
	Feb-03	1600	<20	22	<20
	May-03	690	<8.3	<8.3	17
	Aug-03	550	<7.1	7.3	18
	Oct-03	1400	<31	50	<31
	Jan-04	1,300	<20	25	21
	May-04	560	<8.3	<8 .3	24
	Sep-04	1,300	<50	<50	<50
	Dec-04	826	<10.75	21	49
	Mar-05	1,110	<10.8	12.1	<43
	Jun-05	<110	<5.5	<5.5	22.9
	Aug-05	902	<5.50	<5.50	37.4
				12 Sec. 4-99 Self-references of 2 days an Euro	
MW-5	Aug-02	<250	<6.3	<6.3	510
	Nov-02	66	< 2.0	< 2.0	560
	Feb-03	<63	<3.1	<3.1	280
•	May-03	<33	<1.7	<1.7	110
	Aug-03	130	<3.6	<3.6	270
	Oct-03	<100	<5.0	<5.0	740
	Jan-04	<63	<3.1	<3.1	300
	May-04	<100	<5.0	<5.0	210
	Sep-04	<130	<6.3	<6.3	550
	Dec-04	40	<5.5	<5.5	444
	Mar-05	88.8	<5.5	<5.5	448
	Jun-05	<43	<2.15	<2.15	88.1 195
	Aug-05	274	<5.50	<5.50	ไลอ

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)
A PART OF THE PART					
MW-6	Sep-04	<10	<0.5	<0.5	<0.5
	Dec-04	<5.5	<5.5	<5.5	<22
	Mar-05	2.54	<0.5	<0.5	<2.0
	Jun-05	<20	<1.0	<1.0	<4.0
	Aug-05	<43	<2.15	<2.15	<8.6
		Tark Latin Jamas Line		The second secon	
MW-7	Sep-04	<10	<0.5	<0.5	1.5
İ	Dec-04	<2.5	<0.5	<0.5	<2.0
Ī	Mar-05	<12.5	<2.5	<2.5	<10
	Jun-05	<10	<0.5	<0.5	2.23
	Aug-05	<10	<0.5	<0.5	<2.0
				[18] 18] [18] [18] [18] [18] [18] [18] [
8-WM	Sep-04	<10	<0.5	<0.5	<0.5
	Dec-04	<2.5	<0.5	<0.5	<2.0
	Mar-05	NA	NA	NA	NA
	Jun-05	<10	<0.5	<0.5	<2.0
	Aug-05	<10	<0.5	<0.5	<2.0
TO PROGRESSION IN					
MW-9	Sep-04	<10	<0.5	<0.5	<0.5
	Dec-04	<2.5	<0.5	<0.5	<2.0
	Mar-05	<2.5	<0.5	<0.5	<2.0
	Jun-05	<10	<0.5	<0.5	<2.0
	Aug-05	<10	<0.5	<0.5	<2.0

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 First Quarter 2005,

car was parked over well.

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

Appendix A

SOMA's Groundwater Monitoring Procedures

FIELD ACTIVITIES

On August 26, 2005, SOMA's field crew conducted a groundwater monitoring event in accordance with the procedures and guidelines of the CRWQCB. During this groundwater monitoring event, five on-site wells (MW-1 to MW-5) and four off-site wells (MW-6 to MW-9) were monitored. Figure 2 shows the locations of the monitoring wells.

The depth to groundwater in each on-site monitoring well was measured from the top of the casing to the nearest 0.01 foot using an electric sounder. The Site was re-surveyed by Harrington Surveys Inc., of Walnut Creek, on October 11, 2004. The survey datum was based on California Coordinate System, Zone 3, NAVD 83. The elevation data was based on a datum of 58.50 feet NAVD88. Top of casing elevation data and the depth to groundwater in each monitoring well was used to calculate the groundwater elevation.

The survey data is included in Appendix B.

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

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

The purging continued until these parameters stabilized or three casing volumes were purged. For sampling purposes, after purging, a disposable polyethylene bailer was used to collect sufficient samples from each monitoring well for laboratory analyses.

The groundwater samples collected from each monitoring well were transferred to four 40-mL VOA vials, which had been prepared with a hydrochloric acid preservative. The vials were sealed to prevent the development of air bubbles within the headspace area. After the groundwater samples were collected, they were placed in an ice chest and maintained at 4 °C. A chain of custody (COC) form was completed for all of the samples and was submitted along with the samples to the laboratory. Upon completion of this monitoring event, SOMA's field crew delivered the groundwater samples to Pacific Analytical Laboratory in Alameda, California.

LABORATORY ANALYSIS

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

Appendix B

Table of Elevations & Coordinates on Monitoring Wells
Measured by Harrington Surveys, Inc.,

and

Field Measurements of Physical and Chemical Parameters of Groundwater Samples

Harrington Surveys Inc.

Land Surveying & Mapping

2278 Larkey Lane, Walnut Creek, Ca. 94596 Phone (925)935-7228 Fax (925)935-5118

Cel (925)788-7359 E-Mail (ben5132@pacbell.net)

Soma Environmental Engineering 2680 Bishop Dr. # 203 San Ramon, Ca. 94583 Oct. 14, 2004

Attn: Elena Manzo Job#2445

Ref: 15101 Freedom Ave, San Leandro, Ca.

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 SÜRVEY 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

	NAD 83	NAD 83	NAVD 88		NORTH	WEST
T	NORTH (sft)	EAST(sft)	ELEV.	DESCRIPTION	LATITUDE (DMS)	LONGITUDE (DMS)
	2087731.02	6094039.23	442.77	FD CHABOT B	37°43'02.71762"	122°07'00.46339"
3	2088584.99	6093351.39	492,08	FD CHABOT A	37°43'11.04190"	122°07'09,20691"
1	2084348.54	6092159.32	55.44	FD. X-8		
2	2084073,17	6092141.24	46.15	MW-6 PAV		
3	2084072.72	6092140.95	46.15	MW-6 PUNCH		
4	2084072.47	6092140.95	45.82	MW-6 NOTCH	37°42'26.22635"	122°07'23.29643
5	2083909.71	6091947.10	40.61	MW-9 PAV		
6	2083909.10	6091946.97	40.61	MW-9 PUNCH		
7	2083908.71	6091947.00	40.26	MW-9 NOTCH	37°42'24.57425"	122°07'25.67431"
8	2083861.20	6092118.11	41.38	MW-8 PAV		
9	2083860.43	6092118.36	41.44	MW-8 PUNCH		
50	2083860.03	6092118.52	41.14	MW-8 NOTCH	37°42'24.12245"	122°07'23,52966"
1	2084008.21	6092290.11	44.94	MW-7 PAV		
52	2084007.88	6092290.27	44.95	MW-7 PVNCH		
33	2084007.68	6092290.40	44.74	MW-7 NOTCH	37°42'25.61150"	122°07"21 42290"
54	2084206.49	6092175.95	51.03	MW-5 PAV		
35	2084206.17	6092176.55	50.96	MW-5 PUNCH		
36	2084206.01	6092176.79	50.53	MW-5 NOTCH	37°42'27.55260	122°07'22.87930
37	2084670.41	6092307.68	69.79	FD BM FAIR580		Property of the Control of the Contr
38	2084443.65	6092198,88	53.70	MW-4 PAV		
66	2084444.39	6092199.72	53.74	MW-4 PUNCH		
70	2084444.59	6092199.51	53,31	MW-4 NOTCH	37°42'29.91496"	122°07'22.64809"
71	2084399.10	6092145.43	54.37	MW-3 PAV		
72	2084399.78	6092145.28	54.33	MW-3 PUNCH		
73	2084400.15	6092145.27	53,91	MW-3 NOTCH	37°42'29.46636"	122°07'23.31339"
74	2084329.47	6092199.72	54.82	MW-1 PAV		
75	2084330.44	6092199.45	54.79	MW-1 PUNCH		
76	2084330.75	6092199.20	54.46	MW-1 NOTCH	37°42'28.78955"	122°07'22.62738"
77	2084367,59	6092256.38	52.88	MW-2 PAV		
78	2084368,15	6092256.14	52.92	MW-2 PUNCH		
79	2084368.53	6092256.06	52.41	MW-2 NOTCH	37°42'29.17277"	122°07'21.92804"
80	2084930.49	6091759.33	58.50	FD BM K1256	37°42'34.64279"	122°07'28.23011"
	Ke i					
					1 100 date	48
70.7					1/8/81"	
W. 7					11/9//	16 N
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~~~					15/ JA152	M
					T XX	7//
				1 1890		<i>4</i>
********	1					
			7 (m. 1971)	Walional Walion		



Well No.: Casing Diameter: Depth of Well: Top of Casing Elevation: Depth to Groundwater: Groundwater Elevation: Water Column Height: Purged Volume:	MW inches 30.10 feet 54.46 feet 7.10 feet 7.10 feet 12 gallons	Project No.: 2551 Address: 15101 Freedom Ave. San Leandro, CA Date: August 26, 2005 Sampler: Mehran Nowroozi John Lohman
Purging Method:	Bailer 🗆	Pump 🕎
Sampling Method:	Bailer =	Pump 🗆
Color:	Yes □ No 文	Describe:
Sheen:	Yes 🛮 No 🏂	Describe:
Odor:	Yes y≜ No □	Describe: Slight patro

Field Measurements:

Time	Vol (galions)	рH	Temp (°C)	Ξ.C. (μs/cm)
12:55 PM	STAR	TPh	RC E	2
12:58 PM	4	7.06	77.5	1620
1:01 Pm	6	6.92	216	1620
1:04 m	17	6.92	21,4	630
1:07 Vm	SALVI	SC E)	



ENVIRONMENTAL ENGINEERING, INC

				•
Well No.:	NWZ		Project No.:	2561
Casing Diameter:	4 ir	nches	Address:	15101 Freedom Ave.
Depth of Well:	30.00 to	eet		San Leandro, CA
Top of Casing Elevation:	52.41 fe	set .	Date:	August 26, 2005
Depth to Groundwater:	20.97 fe	eet	Sampler:	Mehran Nowroozi
Groundwater Elevation:	31,44 te	et	•	John Lohman
Water Column Height:	9 103 fe	eet		· · · · · · · · · · · · · · · · · · ·
Purged Volume:	17	allons		,
	-			
Purging Method:	Bailer 🗆		Pump 🖪	
Sampling Method:	B. II		_	
Sampling wethod:	Bailer 📧		Pump	
Color:	Yes □ N	lo ⊶ <u>∡a</u> `.	Describe:	
		~		
Sheen:	Yes 🗆 N	io ≱¥	Describe:	
Odor:	Yes □ N	lo 😾	Describe:	
	. 55 El 14	10 ×	Describe;	

Time	Vol (galions)	рH	Temp (°C)	E.C. (μs/cm)
12:34	START	PhR	Cs 18	
7:36	14	6.96	27.1	1710
(2:40	8	6.97	21.5	1720
17:44	17	7.03	71.1	1750
17:46	16	17.03	71.0	1770
12:50	5000		+	



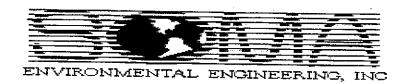
ENVIRONMENTAL ENGINEERING, INC

Well No.: Casing Diameter:	MW3 Hinches	Project No.: 2551 Address: 15101 Freedom Ave.
Depth of Well: Top of Casing Elevation:	29.60 feet 53.91 feet	San Leandro, CA Date: August 26, 2005
Depth to Groundwater: Groundwater Elevation:	27.49 feet 31.42 feet	Sampler: Mehran Nowroozi John Lohman
Water Column Height: Purged Volume:	feet gallons	
	·	
Purging Method:	Bailer	Pump 🗮
Sampling Method:	Bailer ■	Pump 🗆
Color:	Yes □ No p	Describe:
Sheen:	Yes □ No 🔀	Describe:
Odor:	Yes No □	Describe: <u>nud</u> petro]

Field Measurements:

Time	Voi (galions)	рН	Temp (°C)	E.C. (μ s/cm)
7:09 pm	STAR	4	MRCI	
7:11pm	Ĭ,	0.94	27.4	1770
2:13 pm	4	6.99	21.4	1750
2:15pm	12	6.95	2114	730
2.18pm	16	6.43	Z),7	1750

7:00 Pm



Well No.:	MWL	†	Project No.:	2551
Casing Diameter:	4	inches	Address:	15101 Freedom Ave.
Depth of Well:	30.10	> feet		San Leandro, CA
Top of Casing Elevation:	53.31	 feet	Date:	August 26, 2005
Depth to Groundwater:	22.00	₹ feet	Sampler:	Mehran Nowroozi
Groundwater Elevation:	31,29	7 feet	•	John Lohman
Water Column Height:	8.0	7 feet		
Purged Volume:	12	gallons		
Purging Method:	Bailer [3	Pump ළ	
Sampling Method:	Dallas		_	
Campany metrou.	Bailer _I		Pump 🗆	
Color:	Yes 🖂	No _{⊊h.}	Describe:	
Oh -		,		
Sheen:	Yes □	No 🦻	Describe:	
Odor:	Yes 🗆	/ No %	Describe:	
	··· <u>L</u>	No 🏂	20001100,	

Time	Vol (galions)	pH	Temp (°C)	E.C. (µs/cm)
1:43 pm	SMR	TP	nRG	E_
1:45 Pm	1	7.08	22.5	1970
1:47 pm	46	7.07	21.5	2000
1: 49 PW	17	V.05	210	2010
1:51 PM	SAMI	LVE	<u> </u>	



Well No.:	MWS	Project No.:	2551
Casing Diameter:	 inches	Address:	15101 Freedom Ave.
Depth of Well:	29.80 feet		San Leandro, CA
Top of Casing Elevation:	50.53 feet	Date:	August 26, 2005
Depth to Groundwater:	19,31 feet	Sampler:	Mehran Nowroozi
Groundwater Elevation:	31.27 feet	•	John Lohman
Water Column Height:	U 49 feet		
Purged Volume:	gallons		
			•
Purging Method:	Bailer 🗆	Pump 🚾	
Committee Missler of	-		
Sampling Method:	Bailer	Pump 🗆	
Color:	Yes □ No 🔽	Describe:	
Sheen:	Yes 🗆 No 🎢	Describe:	
Odor:	Voc ~	B W	ciant amoil
	Yes 7¢€ No □	Describe:	21.9 m 1 Dug 10 1

Time	Voi (galions)	рН	Temp (°C)	E.C. (μs/cm)
117 pm	START	P	PGE	-
120 pm	4	7,02	22.1	1620
1:23 pm	4	7.63	4.6	1620
1:25pm	12	7.01	21.6	630
1:27 pm	160	699	21.4	1620
1 :31PM	600001	c.L		



Well No.:	IVIW 6	Project No.: 2551
Casing Diameter:	inches	Address: 15101 Freedom Ave.
Depth of Well:	27,33 feet	San Leandro, CA
Top of Casing Elevation:	45.87 feet	Date: August 26, 2005
Depth to Groundwater:	15.91 feet	Sampler: Mehran Nowroozi
Groundwater Elevation:	29.91 feet	John Lohman
Water Column Height:	(, 42 feet	
Purged Volume:	6 gallons	
		. •
Purging Method:	Bailer 🗆	Pump 🛮
Sampling Method:		
Sampling Method:	Bailer =	Pump
•		
Color:	Yes □ No 🏂	Describe:
Sheen:	Yes 🗆 No 🍃	Describe:
Odor:	V	
·	Yes 🗆 No 🔀	Describe:

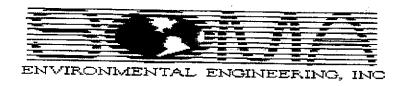
Time	Vol (galions)	рК	Temp (°C)	E.C. (us/cm)
10:57 MM	START	PURC	e F	· · · · · · · · · · · · · · · · · · ·
11:00 mm	4	7.11	21.9	1430
11,04 AM	8'	7.05	21.7	1430
1107 Am	12	7.65	71,2	1460
11:09 AM	6	7.04	21.	1460

11:11 PM SAMPLES



Well No.:	MW 7	Project No.:	2551
Casing Diameter:	inches	-	15101 Freedom Ave.
Depth of Well:	21,00 feet	•	San Leandro, CA
Top of Casing Elevation:	44.74 feet	Date:	August 26, 2005
Depth to Groundwater:	14,10 feet	Sampler:	Mehran Nowroozi
Groundwater Elevation:	30,64 feet		John Lohman
Water Column Height:	6 90 feet		
Purged Volume:	gallon	S .	
	- 		
Purging Method:	Bailer 🗀	Pump 🕞	
Sampling Method:	Bailer	· Pump 🗇	
Color:	Yes 🗆 No	Describe:	
Sheen:	Yes □ No	S- Describe:	
Odor:	Yes □ No	Describe:	
		•	

Time	Vo! (galions)	рН	Temp (°C)	E.C. (µs/am)
10:06 Am	START	Pue	GE I	
10:10 BM		7.08	19.5	1630
10:13 Am	8	6.97	19,1	1630
10:16 AM	12_	6.90	19.0	1610
10:20 pm	SAMPL	E		



Well No.:	MWE)	Project No.:	2551
Casing Diameter:	2	inches	Address:	15101 Freedom Ave.
Depth of Well:	28.70	— feet		San Leandro, CA
Top of Casing Elevation:	41.14	 feet	Date:	August 26, 2005
Depth to Groundwater:	11:53	feet	Sampler:	Mehran Nowroozi
Groundwater Elevation:	79.61	— feet		John Lohman
Water Column Height:	17:17	_ feet	•	
Purged Volume:	16	gallons		
	ē			
Purging Method:	Bailer _	1	Pump 👱	
Campling Stable of				
Sampling Method:	Bailer s	I	Pump	
Color:	Yes □	No ≱	Describe:	
	_	<u> </u>		
Sheen:	Yes 🖂	No ≢	Describe:	
Odor:	Yes n	Ni. /	. "	
	Yes 🗅	No E	Describe:	

Time	Voi (galions)	рН	Temp (°C)	E.C. (μs/cm)
10:35 Am	START	PNE	6-	
10:37 BM	4	7.45	19.8	14190
10,39 pm	8	7.33	19.7	1780
10:42 Am	{2	7.29	1915	1790
10:44 mm	6	7.30	9.8	1820
10:46 Am	SAMPL	FŚ		



Well No.:	PW	7	Project No.:	2551	
Casing Diameter:		inches	Address:	15101 Freedom Ave.	
Depth of Well:	37.5	Z feet		San Leandro, CA	
Top of Casing Elevation:	40,76	======================================	Date:	August 26, 2005	
Depth to Groundwater:	10.50	feet	Sampler:	Mehran Nowroozi	
Groundwater Elevation:	29,67	7 feet		John Lohman	
Water Column Height:	21.93	feet			
Purged Volume:	-6	gallons			
Purging Method:	Bailer		Pump s		
Sampling Method:	Bailer	■	Pump 🗀		
Cotor:	Yes □	No 🏂	Describe:		
Sheen:	Yes □	No ps	Describe:	80-0000-00-01-01-01-01-01-01-01-01-01-01-	
Odor:	Yes □	No 🏂	Describe:		
		-			

Time	Vol (galions)	рH	Temp (°C)	E.C. (µs/cm)
9:36 AM	START	PURC	E	
9:39 Am	4	7.36	9.4	1430
4:42 Am		7.36	8.7	1530
9:44 AM	4	DRI	Į.	
9:48 Am	SAMPI	E5		

Appendix C

Laboratory Report and Chain of Custody Form for the

Third Quarter 2005 Monitoring Event



Pacific Analytical Laboratory

Phone (510) 864-0364

19 September 2005

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

RE: 15101 Freedom Ave., San Leandro

Work Order Number: 5080019

Mogra ARK

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

CHAIN OF CUSTODY FORM

Page 1 of

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

PAL Login# 5080019

Projec	t No: 2551			Søn	nple	r: 1	Jeliran Nowr	0002	ti/J	oho l	Lohns	an			Analy	ses/Mi	athod		
Projec	t Name: Freedo	m Ave, San	Leandro	Rep	aort	To:	Joyce Bob	ek		i Albana ana				MIBE	rates	Anna an			
Proie	ing super land to the super la	eneterij, zamijene, a i ozame visionala einelikistijek	e ann da e magagine magaise de feir ande de l'armanife en	Co	mpa	miy:	SOMĀ En	viror	ıme	ntel	Engi	neering, Inc.		1 1 2 1	[충분]			3 1///	
	iround Time: Si	enes es acción da Landarda	aan aan da bahaa	Tel Fas	•	925	- 244-6600 - 244-6601	e en en en en en en en						TPH-9, 81EX	Gasoline Oxygenates & Lead Scavengels				
		Sampling	Date/Thuc	M	lateir	•	# of Containers	j	rese	rrall	ves			產	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0		4.		
Lab No.	Somple 10	linte	Tisus	7	Water	Waste			10.10	HNA	e 2	Fi	id Notes						
an and an and an and	MW-1	XIZAINS	I G/PM		X	in nine	4 VOAs	adjoint in	en in international	- Annie i prominina	X	Gra	b Sample	X	X majaring militaring	ingka sartangna		and an are	in principality
	MW-2		17 5000		Х	المنجلسب ا	791	X	A COURT	i pigrojalijanje	X		1	X	X	1/////			
n., najpravaj ventestrom	en e	t escribiga a maggillaria de escriberaria.	2.30/1		×	À		X			X	///		X	X		- Contract of the Contract of	3/9/8	
	N/W-4		1.500		Х			X			/X			X	X X	popular de principal de la companya	-	-	
	MW-5		113000		Х		2//1/2/2014	X		Maria de la composição de La composição de la composição	_X_		to an armony	. X	<u> </u>	/- -		3.4 3.40	
	MW-6	1	licim		X			X			∴X.		- constraint	X	X	<u>.</u>			
o jogajanaway dam	MV4-7 specialisti (1888) (1888) (1888) (1888)		lorene		X	din sare		X	10000		X			X	X	_			5 5 76
1111	MW-8	อาปากอา	10-46-1mx	oimaannia	X	SHOW F	 	X	·	1	X		.	X	1 × 1			- mine de injuntité	*******
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	unamia La MVE 9 e criseum	agai sa a Maria a sa an aran a	J. H. SAW	Suspension	.0	Second		11/1/			13//	Contraction in the second section of	Mariana Sangangan	14446				And the Control of th	nate Capture Links
Sants	oler Nemarks:	sii Aireinierrienemusein	and the second s	diameter of	keereser	Bus comerce	Relinquis	hed	by:		Dat	e/Time:	Received by:			Date	e/Tim/	2:	#/S //
	REQUIRED	en fan de fan de fan ein stekklikken en en en en en en en geg	and the second s				1200	1	Lin	Bancari (44.44)	9,	176/05 5145Pm	Heceived by:	er.	Y	51	20/ 3:4	09 5 PA	20 ////
E70					1900 - 11 1900 - 11 1900 - 11 1900 - 11 1900 - 11			i propinsi sama			997/J// 97/3/J/ 97/3/3/			7					
							ाच्या व्यवस्थात्रे प्रत्ये क्षेत्रस्थात्रे विश्वस्थात्रे विश्वस्थात्रे स्थानस्थात्रे स्थानस्थात्रस्थात्रस्थात्			Wednesday of the State of the S	a a a a a a a a a a a a a a a a a a a								



6620 Owens Drive, Suite A

Pleasanton CA, 94588

Project: 15101 Freedom Ave., San Leandro

Project Number: 2551

Project Manager; Mansour Sepehr

Reported: 19-Sep-05 14:33

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	5080019-01	Water	26-Aug-05 13:07	26-Aug-05 15:44
MW-2	5080019-02	Water	26-Aug-05 12:50	26-Aug-05 15:44
MW-3	5080019-03	Water	26-Aug-05 14:20	26-Aug-05 15:44
MW-4	5080019-04	Water	26-Aug-05 13:51	26-Aug-05 15:44
MW-5	5080019-05	Water	26-Aug-05 13:30	26-Aug-05 15:44
MW-6	5080019-06	Water	26-Aug-05 11:09	26-Aug-05 15:44
MW-7	5080019-07	Water	26-Aug-05 10:20	26-Aug-05 15:44
MW-8	5080019-08	Water	26-Aug-05 10:46	26-Aug-05 15:44
MW-9	5080019-09	Water	26-Aug-05 09:48	26-Aug-05 15:44



Project: 15101 Freedom Ave., San Leandro

6620 Owens Drive, Suite A

Pleasanton CA, 94588

Project Number: 2551

) Kej

Project Manager: Mansour Sepehr

Reported: 19-Sep-05 14:33

Volatile Organic Compounds by EPA Method 8260B Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-1 (5080019-01RE1) Water	Sampled: 26-Aug-05 13:07	Received: 26-A	ug-05 15:	44		·			
Gasoline (C6-C12)	7310	215	ug/l	4.3	BH53001	26-Aug-05	29-Aug-05	EPA 8260B	
Benzene	318	2,15	"	h	н	Ħ	0	U	
Ethylbenzene	475	2.15	*	lt .	h	#	n	0	
m&p-Xylene	273	4.30	"	"	" .	"	**	0	
o-xylene	43.0	2.15	и	"	"	n	71	н	
Toluene	ND	8.60	н	u u	11	If	71	**	
MTBE	5.15	2.15	f+	U	11	P	ч	71	
DIPE	ND	2.15	IP	19	*	0	н	п	
ETBE	ND	2.15	"	11	n	u	11	**	
TAME	ND	8.60	tt.	**	n	a	Ħ	"	
TBA	68.9	43.0	11	4		11	и	"	
1,2-dichloroethane	4.48	2.15	11	ч	n	**	"	"	
1,2-Dibromoethane (EDB)	ND	2.15	н	n	17	ч	n	h	
Ethanol	ND	4300	**	11	U	н	н	h	
Surrogate: 4-Bromofluorobenzene		107%	70-	130	"	"	Ħ	"	
Surrogate: Dibromofluoromethane		97.8 %	70-	130	o	"	"	"	
Surrogate: Perdeuterotoluene		97.6%	70-	130	o	и	н	"	
MW-2 (5080019-02) Water San	npled: 26-Aug-05 12:50 Rec	ceived: 26-Aug-	05 15:44						
Gasoline (C6-C12)	1500	50.0	ug/l	1	BH53001	26-Aug-05	26-Aug-05	EPA 8260B	
Benzene	0.930	0.500	ır.	n	n	II.	Ħ	Ħ	
Ethylbenzene	87.6	0.500	.,	11	Þ	u	н	н	
m&p-Xylene	21.0	1.00	**	н	h	"	**	n	
o-xylene	ND	0.500	v	,	ti .	41		P	
Toluene	ND	2.00	**	н	tr	п	n	n	
MTBE	0.860	0.500	11	"	tr	n	n	н	
DIPE	ND	0.500	11	"	e	41	17	n	
ETBE	ND	0.500	н	**	•	41		v	
TAME	ND	2.00	+	n	11	П	"	V .	
TBA	ND	10.0	4	n	н	н	11		
1,2-dichloroethane	ND	0.500	4	P	н	*	11	ti	
1,2-Dibromoethane (EDB)	ND	0.500	lı .	п	,	p	79	п	
Ethanol	ND	1000	H	н	,	h	"	н	
Surrogate: 4-Bromofluorohenzene		102 %	70-	130	,	и	и	n	

Pacific Analytical Laboratory

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Project: 15101 Freedom Ave., San Leandro

6620 Owens Drive, Suite A

Pleasanton CA, 94588

Project Number: 2551

Project Manager: Mansour Sepehr

Reported: 19-Sep-05 14:33

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-2 (5080019-02) Water Sampled: 26-A	ug-05 12:50 Recei	ved: 26-Aug-l	05 15:44						
Surrogate: Dibromofluoromethane		94.4 %	70-	130	BH53001	26-Aug-05	26-Aug-05	EPA 8260B	_
Surrogate: Perdeuterotoluene		97.6 %	70-	130	ρ	н	e e	"	
MW-3 (5080019-03) Water Sampled: 26-A	.ug-05 14:20 Recei	ved: 26-Aug-	05 15:44						
Gasoline (C6-C12)	43500	2150	ug/l	43	BH53001	26-Aug-05	26-Aug-05	EPA 8260B	
Велгене	3630	21.5	н	17	H	u	h	u	
Ethylbenzene	2500	21.5	ų	u	n	11		0	
m&p-Xylene	3870	43.0	0	"	н	11	"	#1	
o-xylene	2960	21.5	11	"	ır	н	v	n	
Toluene	1080	86.0	11	ч	17	н	U	a4	
MTBE	1440	21.5	**	и	U	**	q	21	
DIPE	ND	21.5	"	n		n	7	17	
ETRE	ND	21.5	*1	11	"	h	4	n	
TAME	277	86.0	17	*	"	h	•	n	
ТВА	699	430	*	Ir	"	FT	n	h	
1,2-dichloroethane	ND	21.5	"	n		"	n	ч	
1,2-Dibromoethane (EDB)	ND	21.5		11	41	"	ie .	tf	
Ethanol	ND	43000		10	11	"	· n	"	
Surrogate: 4-Bromofluorobenzene		104 %	70-	-130	#	n	н	, ,	
Surrogate: Dibromofluoromethane		96.696	70-	-130	п		tr	71	
Surrogate: Perdeuterotoluene		96.4%	70-	-130	"	,,	n	"	
MW-4 (5080019-04RE1) Water Sampled:	26-Aug-05 13:51	Received: 26-2	Aug-05 15	:44					
Gasoline (C6-C12)	8850	550	ug/l	11	BH53001	26-Aug-05	29-Aug-05	EPA 8260B	
Benzene	175	5.50	**	*	11	н	ŋ	n	
Ethvlbenzene	150	5.50		n	4	n	11	n	
m&p-Xylene	547	11.0	n	n	11	"	**		
o-xylene	304	5.50	н		n	tr	**	er er	
Toluene	24.6	22.0	u.	u	**	ti -	r	17	
МТВЕ	1380	5.50	o	11	*	ш	n	n	
DIPE	ND	5.50	n	11	,	н	n	11	
ETBE	ND	5.50	11	н	"	"	u	**	
TAME	37.4	22.0	н	н	"	"	u	м	
TBA	902	110	"	н	tr	1 4	1)	Ħ	
1,2-dichloroethane	ND	5.50	4	n	n	#1	11	И	
1,2-Dibromoethane (EDB)	ND	5.50	11	н	11	н	"	H	
	ND	11000			**	n	,	,,	

Pacific Analytical Laboratory

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Project: 15101 Freedom Ave., San Leandro

6620 Owens Drive, Suite A

Pleasanton CA, 94588

Project Number: 2551

Project Manager: Mansour Sepehr

Reported: 19-Sep-05 14:33

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-4 (5080019-04RE1) Water	Sampled: 26-Aug-05 13:51	Received: 26-A	ug-05 15	:44					
Surrogate: 4-Bromofluorobenzene		104 %	70-	-130	BH53001	26-Aug-05	29-Aug-05	EPA 8260B	
Surrogate: Dibromofluoromethane		98.0 %	70-	-130	"	"	Ħ	п	
Surrogate: Perdeuterotoluene		98.0 %	70-	-130	n	"	H	"	
MW-5 (5080019-05RE1) Water	Sampled: 26-Aug-05 13:30	Received: 26-A	Aug-05 15	:44					
Gasoline (C6-C12)	9500	550	ug/l	11	BH53001	26-Aug-05	29-Aug-05	EPA 8260B	
Benzene	261	5.50	11	11	n	n	#1	71	
Ethylbenzene	726	5.50	u u	7	н	11	**	ч	
m&p-Xylene	294	11.0	0	*	.,	*	,	н	
o-xylene	27.3	5.50	11	ч	n	h	21	n	
Toluene	ND	22.0	н	tt	"	h	п	lt	
MTBE	749	5.50	н	"	11	It	Ħ	н	
DIPE	ND	5.50		*	**	tt.	*	н	
ETBE	ND	5.50	**	n	n	u	"	IT .	
ТАМЕ	195	22.0	11	h	4	et .	н	n	
TBA	274	110	**	н	n	11	u,	e	
1,2-dichloroethane	ND	5.50	*	17	"	н	.,	11	
1,2-Dibromoethane (EDB)	ND	5.50	h	**	"	"	11	11	
Ethanol	ND	11000	f T	e e	,,	**	***	н	
Surrogate: 4-Bromofluorobenzene		103 %	70	-130	rr	n	"	n	
Surrogate: Dibromofluoromethane		97.4 %	70	-130	"	"	,,	'n	
Surrogate: Perdeuterotoluene		96.4%	70	-130	"	"	,,	"	
MW-6 (5080019-06) Water Sam	npled: 26-Aug-05 11:09 Re	ceived: 26-Aug-	05 15:44						
Gasoline (C6-C12)	6130	215	ug/l	4.3	BH53001	26-Aug-05	26-Aug-05	EPA 8260B	
Веплене	99.0	2.15	*	н	41	"	11	11	
Ethylbenzene	378	2.15	r	"	H	n	11	*1	
m&p-Xylene	448	4.30	h	"	**	н	10	"	
o-xylene	44.9	2.15	н	17	h	*1	"	н	
Toluene	ND	8.60	41	11	h	ч	н	11	
MTBE	5.66	2.15	0		11	"	41	ti	
DIPE	ND	2.15	17	"	D	n	17	H	
ETBE	ND	2.15	п	n	o.	н	"	н	
TAME	ND	8.60	4	н	n	II .	n	н	
	ND	43.0	"	11	ч		n	D	
TBA	ND								
TBA 1.2-dichloroethane	ND	2.15	•	"	ч	"	h	"	

Pacific Analytical Laboratory

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Project: 15101 Freedom Ave., San Leandro

6620 Owens Drive, Suite A Pleasanton CA, 94588

Project Number: 2551

Project Manager: Mansour Sepchr

Reported: 19-Sep-05 14:33

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

			·•	Daborat					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6 (5080019-06) Water Sampled: 26-Aug-	05 11:09 Rece	ived: 26-Aug-t)5 15:44						
Ethanol	ND	4300	ug/l	4.3	BH53001	26-Aug-05	26-Aug-05	EPA 8260B	
Surrogate: 4-Bromofluorobenzene		106 %	70-	130	#	"	и	п	
Surrogate: Dibromofluoromethane		96.8 %	70-	130	n	"	"	и	
Surrogate: Perdeuterotoluene		95.8 %	70-	130	•	n	rr	"	
MW-7 (5080019-07) Water Sampled: 26-Aug-	05 10:20 Rece	ived: 26-Aug-	05 15:44						
Gasoline (C6-C12)	2310	50.0	ug/l	1	BH53001	26-Aug-05	26-Aug-05	EPA 8260B	
Benzene	ND	0.500	"	п	**	'n	*	"	
Ethylbenzene	55.7	0.500		it	11	l y	р	n	
m&p-Xylene	29.6	1.00	**	*	4	n	н	n	
o-xylene	ND	0.500	11	R	n	U	n	*	
Toluene	ND	2.00		n	11	n	17	**	
MTBE	4.01	0.500	"	I†	n	"	0	n	
DIPE	ND	0.500	п	ir	р	ч	u	n	
ETBE	ND	0.500	н	0	h	n	11	17	
TAME	ND	2.00	17	9	н	n	**	u	
TBA	ND	10.0	u	11	••	n	n	"	
1,2-dichloroethane	ND	0,500	11	71	0	"	"	11	
1,2-Dibromoethane (EDB)	ND	0.500	**	n	fi	n	#	11	
Ethanol	ND	1000	"	11	#	н	ht .	H	
Surrogate: 4-Bromofluorobenzene		101 %	70-	130	n	"	"	u	
Surrogate: Dibromofluoromethane		92.6 %	70-	130	"	1/	"	"	
Surrogate: Perdeuterotoluene		101 %	70-	130	"	v	н	n	
MW-8 (5080019-08) Water Sampled: 26-Aug-	05 10:46 Rece	ived: 26-Aug-	05 15:44						
Gasoline (C6-C12)	ND	50.0	ug/l	1	BH53001	26-Aug-05	26-Aug-05	EPA 8260B	
Benzene	ND	0.500	11	н	"	Ħ	•	11	
Ethylbenzene	ND	0.500	п	4	11	n	11	*1	
m&p-Xylene	ND	1.00	"	ŋ	11	h	Ħ	ы	
o-xylene	ND	0.500	"	9	п	Ħ	"	Ħ	
Toluene	ND	2.00	"	n	"	17	н	n	
MTBE	ND	0.500	н	*	#	.,	н	#	
DIPE	ND	0.500	"	h	11	u	n	n	
ETBE	ND	0.500	1:	h	н	ú	U	n	
TAME	ND	2.00	,	n	"	н	U	н	
TBA	ND	10.0	PT	0	"	"	u	U	
1,2-dichloroethane	ND	0.500	fr	tr	"	н	ч	u	

Pacific Analytical Laboratory

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Project: 15101 Freedom Ave., San Leandro

6620 Owens Drive, Suite A

Pleasanton CA, 94588

Project Number: 2551

Project Manager: Mansour Sepehr

Reported:

19-Sep-05 14:33

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-8 (5080019-08) Water Sampled: 26-	Aug-05 10:46 Rece	ived: 26-Aug-l	05 15:44						
1,2-Dibromoethane (EDB)	ND	0.500	ug/l	1	BH53001	26-Aug-05	26-Aug-05	EPA 8260B	
Ethanol	ND	1000	r	n	н	4	fr	0	
Surrogate: 4-Bromofluorobenzene		92.4 %	70-	130	и	n	и	"	
Surrogate: Dibromofluoromethane		96.4 %	70-	130	и	#	н	,,	
Surrogate: Perdeuterotoluene		96.0 %	70	130	lt .	Ħ	ч	u	
MW-9 (5080019-09) Water Sampled: 26-	-Aug-05 09:48 Rece	ived: 26-Aug-	05 15:44						
Gasoline (C6-C12)	ND	50.0	ug/l	1	BH53001	26-Aug-05	26-Aug-05	EPA 8260B	
Benzene	ND	0.500	11	11	"	ir	"	e	
Ethylbenzene	ND	0.500	н	It	4		н	11	
m&p-Xylene	ND	1.00	n	"	n	D	н		
o-xylene	ND	0.500	11	н	n	O	. н	"	
Toluene	ND	2.00	11	h	n	n n	"	и	
MTBE	ND	0,500	77	It	17	u	tt	h	
DIPE	ND	0,500	"	n	**	11	l:	н	
ETBE	ND	0,500) 1	0	В	**	н	H	
TAME	ND	2.00	h	"		"	11	0	
TBA	ND	10.0	"	11	н	n	· ·	u	
1,2-dichloroethane	3.59	0.500	II.	11	. 11	n	Đ.	Œ	
1,2-Dibromoethane (EDB)	ND	0,500	v	71	tt.	11	te	ti	
Ethanol	ND	1000	9	n	et e	h	n n	11	
Surrogate: 4-Bromofluorobenzene		91.2%	70-	130	"	"	"	o	
Surrogate: Dibromofluoromethane		98.4 %	70-	130	п	n	ν	n	
Surrogate: Perdeuterotoluene		96.0%	70-	130	**	н	"	"	



Project: 15101 Freedom Ave., San Leandro

Spike

Source

%REC

6620 Owens Drive, Suite A

Pleasanton CA, 94588

Project Number: 2551

Reporting

Project Manager: Mansour Sepehr

Reported:

19-Sep-05 14:33

RPD

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
·	rodur	Ditti	CIME			-				
Batch BH53001 - EPA 5030 Water MS				-			·			
Blank (BH53001-BLK1)				Prepared &	k Analyzed	: 30-Aug-05				
Surrogate: 4-Bromofluorobenzene	45.8		ug/l	50.0		91.6	70-130			
Surrogate: Dibromofluoromethane	51.2			50.0		102	70-130			
Surrogate: Perdeuterotoluene	48.7		и	50.0		97.4	70-130			
MTBE	ND	0.500	n							
DIPE	ND	0.500	н							
ETBE	ND	0.500	п							
TAME	ND	2.00	н							
Gasoline (C6-C12)	ND	50.0	17							
TBA	ND	10.0	**							
1,2-dichloroethane	ND	0.500	87							
1,2-Dibromoethane (EDB)	ND	0.500	•							
Ethanol .	ND	1000	•							
Renzene	ND	0.500	0							
Ethylbenzene	ND	0.500	11							
m&p-Xylene	ND	1.00	11							
o-xylene	ND	0.500	**							
Toluene	ND	2.00	ч							
LCS (BH53001-BS1)				Prepared &	& Analyzed	: 30-Aug-0:	5			
Surrogate: 4-Bromofluorobenzene	50.3		ug/l	50.0		101	70-130		-	
Surrogate: Dibromofluoromethane	49.8		n	50.0		99.6	70-130			
Swrogate: Perdeuterotoluene	48.2		"	50.0		96.4	70-130			
MTBE	83.7	0.500	n	100		83.7	70-130			
Gasoline (C6-C12)	1550	50.0	n	2000		77.5	70-130			
TBA	546	10.0	n	500		109	70-130			
Benzene	102	0.500		100		102	70-130			
Toluene	106	2.00	17	100		106	70-130			



6620 Owens Drive, Suite A

Pleasanton CA, 94588

Analyte

Toluene

Project: 15101 Freedom Ave., San Leandro

Spike

Level

100 100 Source

Result

%REC

109

114

Project Number: 2551

Reporting

Result

109

114

Limit

0,500

2.00

Project Manager: Mansour Sepehr

Reported: 19-Sep-05 14:33

RPD

Limit

20

20

Notes

%REC

Limits

70-130

70-130

RPD

6.64

7.27

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

Units

LCS Dup (BH53001-BSD1) Surrogate: 4-Bromofluorobenzene	Prepared & Analyzed: 30-Aug-05							
	49.3		ug/l	50.0	98.6	70-130		
Surrogate: Dibromofluoromethane	49.0		p	50.0	98.0	70-130		
Surrogate: Perdeuterotoluene	47.6		n	50.0	95.2	70-130		
мтве	82.1	0.500	11	100	82.1	70-130	1.93	20
Gasoline (C6-C12)	1560	50.0	#	2000	78.0	70-130	0.643	20
TBA	622	10.0	17	500	124	70-130	13.0	20



Project: 15101 Freedom Ave., San Leandro

6620 Owens Drive, Suite A

Pleasanton CA, 94588

Project Number: 2551

Project Manager: Mansour Sepehr

Reported:

19-Sep-05 14:33

Notes and Definitions

Analyte DETECTED DET

Analyte NOT DETECTED at or above the reporting limit ND

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference File :C:\MSDChem\1\DATA\2005-Aug-29-0918.b\29080504.D

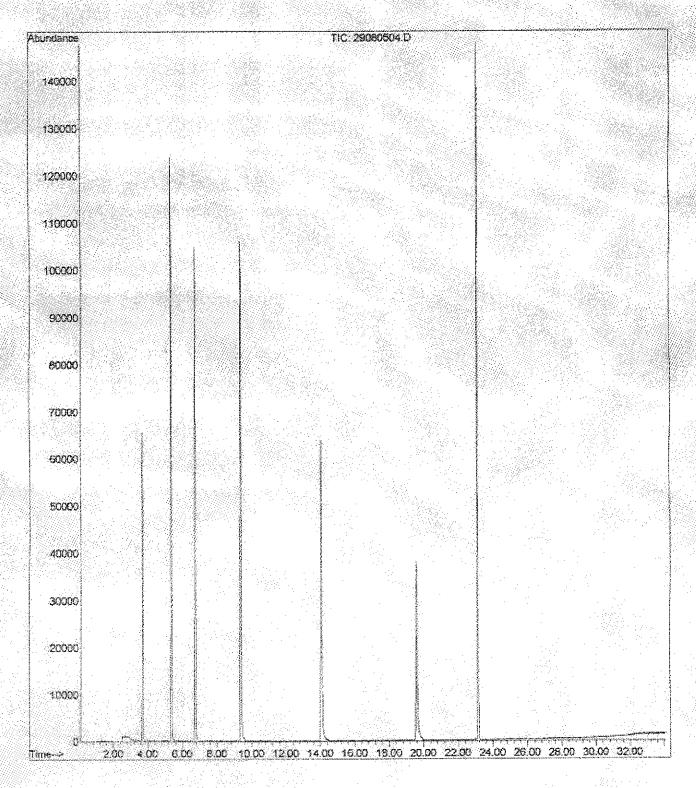
Operator :

Acquired : 29 Aug 2005 12:08 pm using AcqMethod VOCOXY.M

Instrument : PAL GCMS

Sample Name: BH53001-BLK1@voc

Misc Info : Vial Number: 4



File :C:\MSDChem\1\DATA\2005-Aug-29-0918.b\29080502.D

Operator

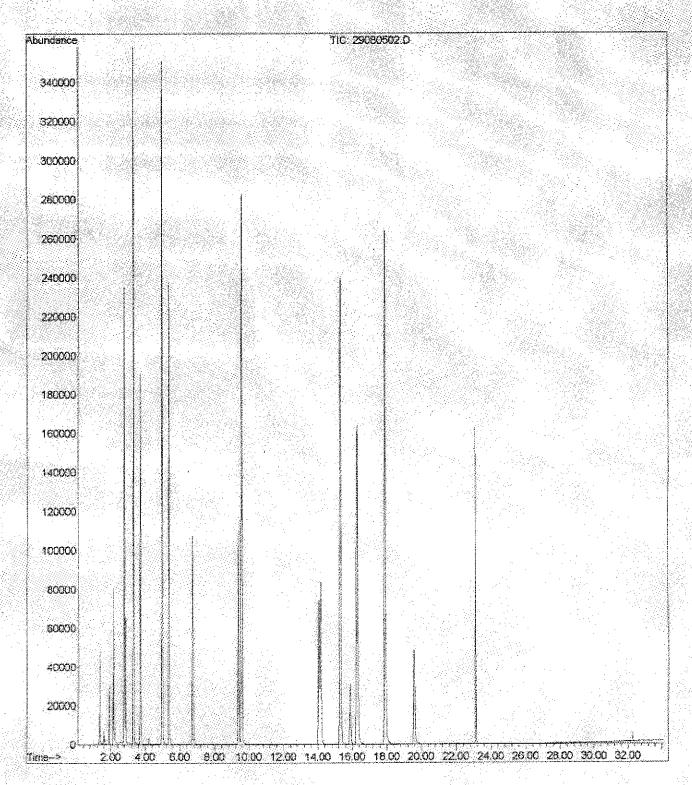
: 29 Aug 2005 10:36 am using AcqMethod VOCOXY.M

Acquired : Instrument :

PAL GCMS

Sample Name: BH53001-BS1@voc

Misc Info : Vial Number: 2



File :C:\MSDChem\1\DATA\2005-Aug-29-0918.b\29080503.D

Operator

Acquired : 29 Aug 2005 11:22 am using AcqMethod VOCOXY.M

Instrument : PAL GCMS Sample Name: BH53001-BS1@gas

Misc Info : Vial Number: 3

