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April 8, 2008

Mr. Steven Plunkett
Alameda County
Department of Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Fuel Leak Case No. RO0000317-5725 Thornhill Drive, Oakland, CA

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. If you have any questions or comments, please call me at (925) 734-6400.

Sincerely,

Mansour Sepehr, Ph.D.,PE
Principal Hydrogeologist

cc: Mr. Mohammad Mashhoon w/report enclosure

First Quarter 2008
Groundwater Monitoring Report

Mash Petroleum Inc.
5725 Thornhill Drive
Oakland, California

April 8, 2008

Project 2831

Prepared for
Mr. Mohammad Mashhoon
1721 Jefferson Street
Oakland, California 94612

SOMA ENVIRONMENTAL ENGINEERING, INC.
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CERTIFICATION

SOMA Environmental Engineering, Inc. has prepared this report on behalf of Mr. Mohammad Mashhoon, property owner of 5725 Thornhill Drive, Oakland, California, to comply with requirements of Alameda County Health Care Services and the California Regional Water Quality Control Board for the First Quarter 2008 groundwater monitoring event.

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

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1. INTRODUCTION

SOMA Environmental Engineering, Inc. (SOMA) has prepared this report on behalf of Mr. Mohammad Mashhoon, property owner of 5725 Thornhill Drive, Oakland, California (the Site, Figure 1). The Site is currently an active ARCO station located in an area of primarily commercial and residential land uses.

This report summarizes results of the First Quarter 2008 groundwater monitoring event conducted at the Site on March 4, 2008, and includes field measurements of physical and chemical properties of the groundwater at the time of sampling and laboratory analytical results for the groundwater samples.

1.1 Summary of Field Activities

On March 4, 2008, three on-site monitoring wells (SOMA-1 to SOMA-3), and two off-site wells (SOMA-4 and SOMA-5) were measured for depth to groundwater. Also on this date, additional field measurements and grab groundwater samples were collected from all monitoring wells.

Groundwater monitoring activities for this quarter were performed in accordance with general guidelines of the California Regional Water Quality Control Board (CRWQCB) and the Alameda County Health Care Services (ACHCS). Appendix A details groundwater monitoring procedures followed during this monitoring event.

1.2 Summary of Laboratory Analysis

Pacific Analytical Laboratory, a state certified laboratory, analyzed the groundwater samples for the following:

- total petroleum hydrocarbons as gasoline (TPH-g), as diesel (TPH-d), and as motor oil (TPH-mo)
- benzene, toluene, ethylbenzene, total xylenes (BTEX)
- methyl tertiary-butyl ether (MtBE)
- gasoline oxygenates tertiary-butyl alcohol (TBA), diisopropyl ether (DIPE), ethyl tertiary-butyl ether (ETBE), and tertiary-amyl methyl ether (TAME)
- lead scavengers 1,2-dichloroethane (1,2-DCA), and 1,2-dibromoethane (EDB)
- ethanol

Samples for measurements of TPH-g, BTEX, MtBE, gasoline oxygenates, lead scavengers and ethanol were prepared using EPA Method 5030B and analyzed using EPA Method 8260B. Samples for TPH-d and TPH-mo measurements were

prepared using EPA Method 3510B and analyzed using EPA Method 8015B modified.

2. RESULTS

Following are results of field measurements and laboratory analyses for the March 4, 2008 groundwater monitoring event.

2.1 Field Measurements

As shown in Table 1, depth to groundwater ranged from 5.14 feet in SOMA-1 to 8.51 feet in SOMA-5. Corresponding groundwater elevations ranged from 563.72 feet in SOMA-5 to 571.33 feet in SOMA-1. The contour map of the groundwater elevations is presented in Figure 3. Groundwater flows southwesterly across the Site, with an average gradient of 0.048 feet/feet. Since the previous monitoring event (Fourth Quarter 2007), the flow direction has remained southwesterly; however, the gradient has increased.

Field notes in Appendix B show detailed measurements of physical and chemical parameters of the groundwater for each well during this monitoring event.

2.2 Laboratory Analyses

Table 1 presents laboratory analysis results for TPH-g, TPH-d, TPH-mo, BTEX, and MtBE. Table 2 presents analysis results for gasoline oxygenates, lead scavengers and ethanol.

TPH-g was below the laboratory-reporting limit in wells SOMA-1 and SOMA-3. It was detected in SOMA-2, SOMA-4, and SOMA-5 at 1,400 µg/L, 1,840 µg/L and 824 µg/L, respectively. Figure 4 displays the contour map of TPH-g concentrations in the groundwater. TPH-g appears to have originated at the pump islands, as observed by the TPH-g concentration in SOMA-2, and has migrated to off-site wells SOMA-4 and SOMA-5. The southwesterly migration can be attributed to the groundwater flow direction across the Site.

TPH-d was below the laboratory-reporting limit in wells SOMA-1 and SOMA-3. Detectable TPH-d concentrations ranged from 200 µg/L in SOMA-5 to 1,090 µg/L in SOMA-4. During analytical testing for TPH-d results, several variations were observed that included, but were not limited to, the presence of unidentified hydrocarbons and irregular chromatographic patterns in reference to standard diesel patterns. The laboratory report in Appendix C provides clarification of diesel testing and results.

Figure 5 displays the contour map of TPH-d concentrations in the groundwater. Due to the southwesterly groundwater flow direction from the pump islands, TPH-d has migrated off-site to wells SOMA-4 and SOMA-5. Since the previous monitoring event, TPH-d appears to have increased in SOMA-2 and SOMA-4 and slightly decreased in SOMA-5.

TPH-mo was below the laboratory-reporting limit throughout the Site.

The following BTEX analytes were observed during this monitoring event:

- All BTEX analytes were below the laboratory-reporting limit in SOMA-1, SOMA-3, SOMA-4 and SOMA-5.
- In SOMA-2, all BTEX analytes were below the laboratory-reporting limit and ethylbenzene was at a low level.

MtBE was below laboratory reporting limit in SOMA-3 and at low concentrations in groundwater samples collected from all other wells. Detectable MtBE concentrations ranged from 0.85 µg/L in well SOMA-1 to 17.3 µg/L in SOMA-2. Due to the minimal concentrations detected, no iso-concentration figure was drawn for MtBE.

As shown in Table 2, all gasoline oxygenates and lead scavengers (DIPE, ETBE, TAME, 1,2-DCA, EDB) and ethanol were below the laboratory-reporting limit in all groundwater samples collected during the First Quarter 2008 monitoring event. TBA was detected in wells SOMA-4 and SOMA-5 at 97.8 µg/L and 147 µg/L, respectively; and below the laboratory-reporting limit in SOMA-1, SOMA-2, and SOMA-3. Due to the minimal concentrations detected, no iso-concentration figure was drawn for TBA.

Appendix C contains the laboratory report and chain-of-custody form from this monitoring event.

3. CONCLUSIONS AND RECOMMENDATIONS

Findings of the First Quarter 2008 groundwater monitoring event are summarized as follows:

- The groundwater flow direction has remained southwesterly across the Site.
- Based on previous site investigations and results of quarterly monitoring events, MtBE exists in the subsurface at low concentrations.

In September 2007, SOMA conducted an additional site investigation and concluded that the Site is a “Low Risk Petroleum Hydrocarbons Release Site.” Results of current groundwater monitoring data confirm SOMA’s conclusions. As

such, SOMA recommends that a “No Further Action” status be adopted for the Site.

4. REPORT LIMITATIONS

This report is the summary of work done by SOMA, including observations and descriptions of Site conditions. It includes analytical results produced by Pacific Analytical Laboratory in Alameda, 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 results of laboratory analysis. 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.

Tables

Table 1
SOMA Historical Groundwater Elevation Data
& Analytical Results (Hydrocarbons, BTEX, & MtBE)
5725 Thornhill Drive, Oakland California

Monitoring Well	Date	Top of Casing Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE* 8260B (µg/L)
SOMA-1	4/22/2004	576.47	5.75	570.72	63	<50	<300	<0.5	<0.5	<0.5	<0.5	7.7
	7/27/2004	576.47	6.21	570.26	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	9.1
	10/28/2004	576.47	5.76	570.71	<50	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	6.4
	1/11/2005	576.47	3.73	572.74	<50	200 HY	900	<0.5	<0.5	<0.5	<0.5	4.7
	4/12/2005	576.47	4.72	571.75	<200	<50	<300	<0.5	<0.5	<0.5	<1.0	7.49
	7/19/2005	576.47	5.87	570.60	<200	<50	<300	<0.5	<2.0	<0.5	<1.0	4.94
	10/18/2005	576.47	6.12	570.35	<50	<50	<300	<0.5	<2.0	<0.5	<1.0	5.33
	2/6/2006	576.47	5.10	571.37	<50	920LY	<300	<0.5	<2.0	<0.5	<1.0	2.74
	4/26/2006	576.47	4.71	571.76	<50	<50 [1]	<250 [1]	<0.5	<2.0	<0.5	<1.0	5.28
	8/3/2006	576.47	5.96	570.51	<50	<50	<250	<0.5	<2.0	<0.5	<1.0	4.52
	10/30/2006	576.47	6.22	570.25	<50	<50	<250	<0.5	<2.0	<0.5	<1.0	3.38
	1/8/2007	576.47	6.19	570.28	<50	<50 [4]	<250 [4]	<0.5	<2.0	<0.5	<2.0	3.07
	6/14/2007	576.47	5.96	570.51	<50	<50 [4]	<250 [4]	<0.5	<2.0	<0.5	<2.0	1.91
	9/13/2007	576.47	6.31	570.16	<50	<50 [1]	<250 [1]	<0.5	<2.0	<0.5	<2.0	0.85
	12/4/2007	576.47	6.11	570.36	<50	<50 [1]	<250	<0.5	<2.0	<0.5	<2.0	1.17
	3/4/2008	**576.47**	**5.14**	**571.33**	**<50**	**<50 [1]**	**<250 [1]**	**<0.5**	**<2.0**	**<0.5**	**<2.0**	**0.85**

Table 1
SOMA Historical Groundwater Elevation Data
& Analytical Results (Hydrocarbons, BTEX, & MtBE)
5725 Thornhill Drive, Oakland California

Monitoring Well	Date	Top of Casing Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE* 8260B (µg/L)
SOMA-2	4/22/2004	575.50	7.40	568.10	1,900	690 LY	<300	<0.5	<0.5	5.2	9.9	1,900
	7/27/2004	575.50	7.92	567.58	1,500	710 LY	<300	8.9 C	<0.5	1.5 C	2.9 C	740
	10/28/2004	575.50	7.62	567.88	955	790 LY	<1.0	<2.5	<2.5	<2.5	< 5	785
	1/11/2005	575.50	5.70	569.80	3,700	2100 LY	380	3.7	<2.0	3.5	102	310
	4/12/2005	575.50	6.28	569.22	5,960	1200 LY	<300	1.19	<0.5	20.6	25	241
	7/19/2005	575.50	7.42	568.08	2,480	800 LY	<300	1.09	<2.0	2.65	0.73	162
	10/18/2005	575.50	7.70	567.80	2,710	1,100 LY	<300	1.41	<2.0	2.24	0.64	130
	2/6/2006	575.50	6.71	568.79	2,730	66Y	<300	0.68	<2.0	0.71	6.33	49
	4/26/2006	575.50	6.32	569.18	6,490	1,580 [1,2,3]	<250 [1]	<0.5	<2.0	15.3	8.49	38.5
	8/3/2006	575.50	7.39	568.11	3,580	286 [1,3]	<250	0.8	0.7	2.65	0.7	44.8
	10/30/2006	575.50	7.60	567.90	1,680	608 [2,3]	448	<0.5	<2.0	3.78	<1.0	51.4
	1/8/2007	575.50	7.18	568.32	1,720	1010 [3,Y]	<250	<0.5	<2.0	2.75	<2.0	33.3
	6/14/2007	575.50	7.39	568.11	988	427 [3,4,Y]	<250 [4]	<0.5	<2.0	4.80	2.46	28.9
	9/13/2007	575.50	7.91	567.59	906	427 [1,2,3]	<250 [1]	<0.5	<2.0	4.64	2.37	58
	12/4/2007	575.50	7.64	567.86	868	182 [1,2,3]	<250	0.69	<2.0	0.65	<2.0	76
	3/4/2008	**575.50**	**6.62**	**568.88**	**1,400**	**229 [1,2,3]**	**<250 [1]**	**<0.5**	**<2.0**	**1.44**	**<2.0**	**17.3**
SOMA-3	4/22/2004	575.92	7.14	568.78	190	120 Y	<300	<0.5	<0.5	<0.5	<0.5	5.1
	7/27/2004	575.92	7.95	567.97	130	120 LY	<300	<0.5	<0.5	<0.5	<0.5	9.1
	10/28/2004	575.92	7.60	568.32	57	280 LY	<1.0	<0.5	<0.5	<0.5	<2	11.3

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5725 Thornhill Drive, Oakland California

Monitoring Well	Date	Top of Casing Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE* 8260B (µg/L)
SOMA-3 cont	1/11/2005	575.92	5.45	570.47	140	210 Y	<300	<0.5	<0.5	<0.5	<0.5	5.8
	4/12/2005	575.92	6.02	569.90	<200	<50	<300	<0.5	<0.5	<0.5	<1.0	4.53
	7/19/2005	575.92	7.49	568.43	<200	120 Y	<300	<0.5	<2.0	<0.5	<1.0	4.69
	10/18/2005	575.92	7.63	568.29	50.1	120 Y	<300	<0.5	<2.0	<0.5	<1.0	8.63
	2/6/2006	575.92	7.20	568.72	1,010	220Y	<300	<0.5	<2.0	<0.5	2.06	32
	4/26/2006	575.92	6.13	569.79	121	123 [1,2,3]	<250 [1]	<0.5	<2.0	<0.5	<1.0	5.49
	8/3/2006	575.92	7.35	568.57	<50	60 [1,2]	<250	<0.5	<0.5	<0.5	<1.0	8.05
	10/30/2006	575.92	7.64	568.28	<50	199 [2,3]	<250	<0.5	<2.0	<0.5	<1.0	7.37
	1/8/2007	575.92	7.82	568.10	<50	181 [3,Y]	<250	<0.5	<2.0	<0.5	<2.0	8.65
	6/14/2007	575.92	7.31	568.61	<50	569 [3,Y]	<250	<0.5	<2.0	<0.5	<2.0	5.57
	9/13/2007	575.92	8.00	567.92	<50	<50 [1]	<250 [1]	<0.5	<2.0	<0.5	<2.0	8.55
	12/4/2007	575.92	7.74	568.18	<50	<50 [1]	<250	<0.5	<2.0	<0.5	<2.0	13.2
	3/4/2008	**575.92**	**6.49**	**569.43**	**<50**	**<50 [1]**	**<250 [1]**	**<0.5**	**<2.0**	**<0.5**	**<2.0**	**<0.5**
SOMA-4	7/19/2005	572.65	8.10	564.55	3,350	1,200 LY	<300	<1.0	<4.0	<1.0	<2.0	455
	10/18/2005	572.65	8.15	564.50	1,580	1,200 LY	<300	<2.15	<8.6	<2.15	<4.3	425
	2/6/2006	572.65	7.68	564.97	1,940	830LY	<300	<2.15	<8.60	<2.15	<4.3	409
	4/26/2006	572.65	7.61	565.04	3,930	1,080 [1,2,3]	<250 [1]	<0.5	<2.0	<0.5	<1.0	231
	8/3/2006	572.65	8.08	564.57	4,340	357 [1,3]	<250	<0.5	0.52	<0.5	0.52	34.2
	10/30/2006	572.65	8.11	564.54	4,320	1070 [2,3]	<250	<0.5	<2.0	3.34	0.54	37.4
	1/8/2007	572.65	7.86	564.79	2,280	977 [3,Y]	<250	<0.5	<2.0	<0.5	<2.0	36
	6/14/2007	572.65	8.03	564.62	2,600	407 [3,4,Y]	<250 [4]	<0.5	<2.0	4.39	2.69	10.3
	9/13/2007	572.65	8.46	564.19	2,670	642 [1,2,3]	<250 [1]	<0.5	<2.0	4.52	2.79	25.3
	12/4/2007	572.65	7.93	564.72	1,960	623 [1,2,3]	<250	<0.5	<2.0	<0.5	<2.0	31.2
	3/4/2008	**572.65**	**7.62**	**565.03**	**1,840**	**1,090 [1,2,3]**	**<250 [1]**	**<0.5**	**<2.0**	**<0.5**	**<2.0**	**7.68**
SOMA-5	12/4/2007	572.23	8.05	564.18	1,310	295 [1,2,3]	<250	<0.5	<2.0	<0.5	<2.0	21
	3/4/2008	**572.23**	**8.51**	**563.72**	**824**	**200 [1,2,3]**	**<250 [1]**	**<0.5**	**<2.0**	**<0.5**	**<2.0**	**8.96**

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5725 Thornhill Drive, Oakland California

Monitoring Well	Date	Top of Casing Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MtBE* 8260B (µg/L)

Notes:
<: not detected at or above laboratory reporting limits.
C: Presence confirmed, but RPD between columns exceeds 40%.
H: Heavier hydrocarbons contributed to the quantitation.
L: Lighter hydrocarbons contributed to the quantitation.
Y: Sample exhibits chromatographic pattern which did not resemble standard.

1 To reduce matrix interference , the sample extract has undergone silica-gel clean-up, method 3630, which is specific to polar compound contamination, diesel .
2 The sample chromatographic pattern does not resemble fuel standard used for quantitation, diesel.
3 Unidentified hydrocarbons C9-C16, diesel.
4 Surrogate recovery for this sample is outside of established control limits due to sample matrix effect, diesel & motor oil.

The Second Quarter 2004 was the first time SOMA monitored the site. Wells SOMA-1 to SOMA-3 were monitored at that time.
Well SOMA-4 was installed on May 27, 2005. The Third Quarter 2005 was the first time SOMA monitored this well.

Table 2
Groundwater Analytical Results
Gasoline Oxygenates & Lead Scavengers
5725 Thornhill Drive,Oakland California

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Ethanol (µg/L)
SOMA-1	4/22/2004	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<1000
	7/27/2004	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<1000
	10/28/2004	<2.5	<0.5	<0.5	<2	<0.5	<0.5	<1.0
	1/11/2005	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<1,000
	4/12/2005	<2.5	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	7/19/2005	<10	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	10/18/2005	<10	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	2/1/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	4/26/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	8/3/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	10/30/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	1/8/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	6/14/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	9/13/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	12/4/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	3/4/2008	**<2.0**	**<0.5**	**<0.5**	**<2.0**	**<0.5**	**<0.5**	**<1000**
SOMA-2	4/22/2004	<100	<5.0	<5.0	19.0	<5.0	<5.0	<10000
	7/27/2004	<33	<1.7	<1.7	9.8	<1.7	<1.7	<3300
	10/28/2004	36.3	<2.5	<2.5	12.85	<0.5	<0.5	<1.0
	1/11/2005	67	<2.0	<2.0	6.7	<2.0	<2.0	<4,000
	4/12/2005	71	<0.5	<0.5	3.29	<0.5	<0.5	<1000
	7/19/2005	74.2	<0.5	<0.5	2.82	<0.5	<0.5	<1000
	10/18/2005	81.7	<0.5	<0.5	2.61	<0.5	<0.5	<1000
	2/1/2006	37.8	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	4/26/2006	36.1	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	8/3/2006	32.4	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	10/30/2006	20.7	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	1/8/2007	22.2	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	6/14/2007	35.6	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	9/13/2007	61.1	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	12/4/2007	23.2	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	3/4/2008	**<2.0**	**<0.5**	**<0.5**	**<2.0**	**<0.5**	**<0.5**	**<1000**

Table 2
Groundwater Analytical Results
Gasoline Oxygenates & Lead Scavengers
5725 Thornhill Drive,Oakland California

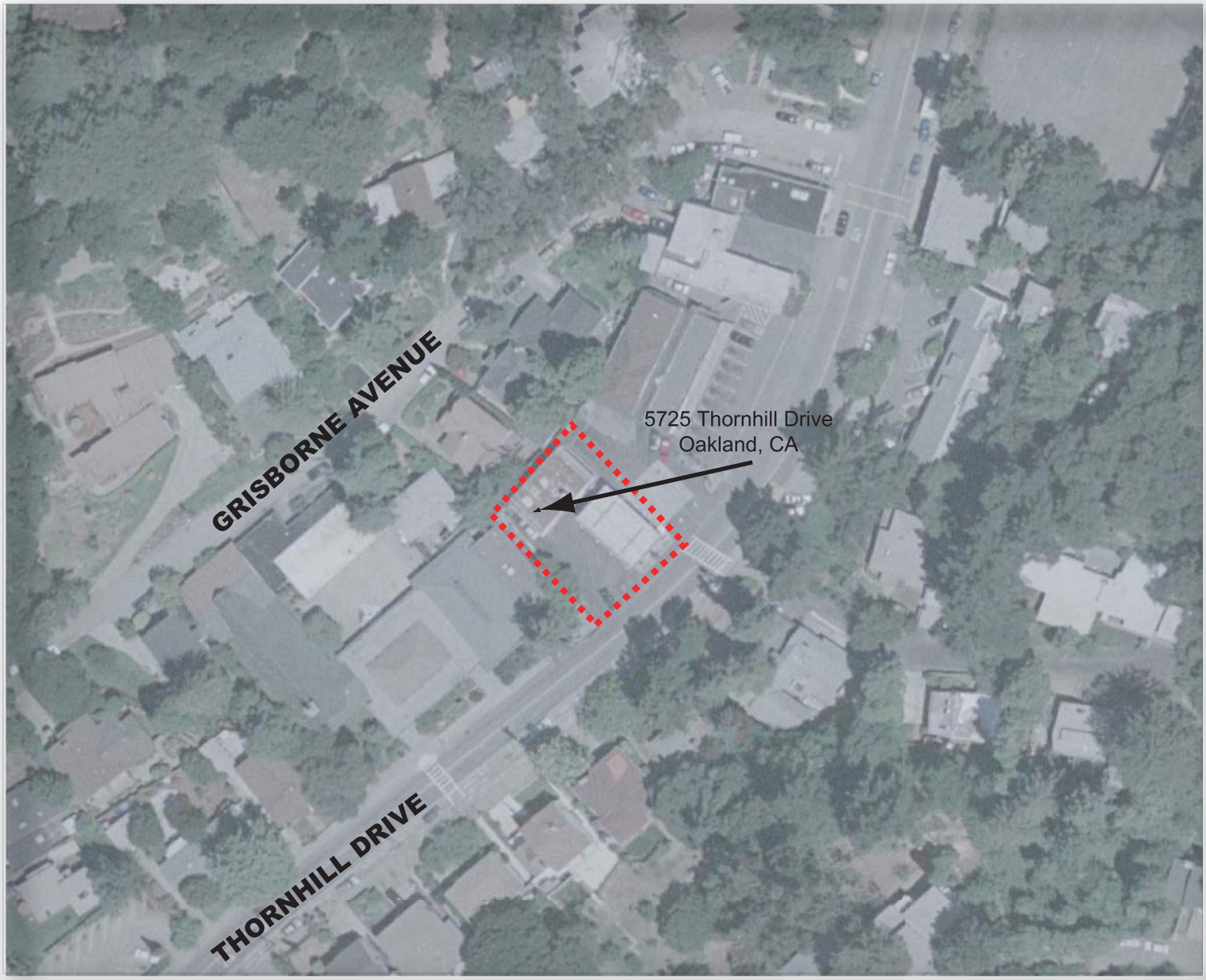
Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Ethanol (µg/L)
SOMA-3	4/22/2004	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<1000
	7/27/2004	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<1000
	10/28/2004	<2.5	<0.5	<0.5	<2	<0.5	<0.5	<1.0
	1/11/2005	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<1,000
	4/12/2005	<2.5	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	7/19/2005	<10	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	10/18/2005	<10	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	2/1/2006	40.9	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	4/26/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	8/3/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	10/30/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	1/8/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	6/14/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	9/13/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	12/4/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	3/4/2008	**<2.0**	**<0.5**	**<0.5**	**<2.0**	**<0.5**	**<0.5**	**<1000**
SOMA-4	7/19/2005	84.1	<1.0	<1.0	4.4	<1.0	<1.0	<1000
	10/18/2005	314	<2.15	<2.15	<8.6	<2.15	<2.15	<4300
	2/1/2006	417	<2.15	<2.15	<8.6	<2.15	<2.15	<4300
	4/26/2006	357	0.59	<0.5	2.1	<0.5	<0.5	<1000
	8/3/2006	216	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	10/30/2006	269	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	1/8/2007	233	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	6/14/2007	87.9	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	9/13/2007	278	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	12/4/2007	387	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	3/4/2008	**97.8**	**<0.5**	**<0.5**	**<2.0**	**<0.5**	**<0.5**	**<1000**
SOMA-5	12/4/2007	241	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
	3/4/2008	**147**	**<0.5**	**<0.5**	**<2.0**	**<0.5**	**<0.5**	**<1000**

Notes:
<: Not detected above the laboratory reporting limit.
The Second Quarter 2004 was the first time SOMA monitored the site.
Wells SOMA-1 to SOMA-3 were monitored at that time.
Well SOMA-4 was installed on May 27, 2005. The Third Quarter 2005 was the first time SOMA monitored this well.

Gasoline Oxygenates:
TBA: tertiary butyl alcohol
DIPE: Di-Isopropyl ether
ETBE: Ethyl tertiary butyl ether
TAME: Methyl tertiary amyl ether
Ethanol

Lead Scavengers:
1,2-Dichloroethane
EDB: 1,2-Dibromoethane

Figures



N

approximate scale in feet

0 100 200

Figure 1: Site vicinity map.

SOMA ENVIRONMENTAL ENGINEERING, INC.

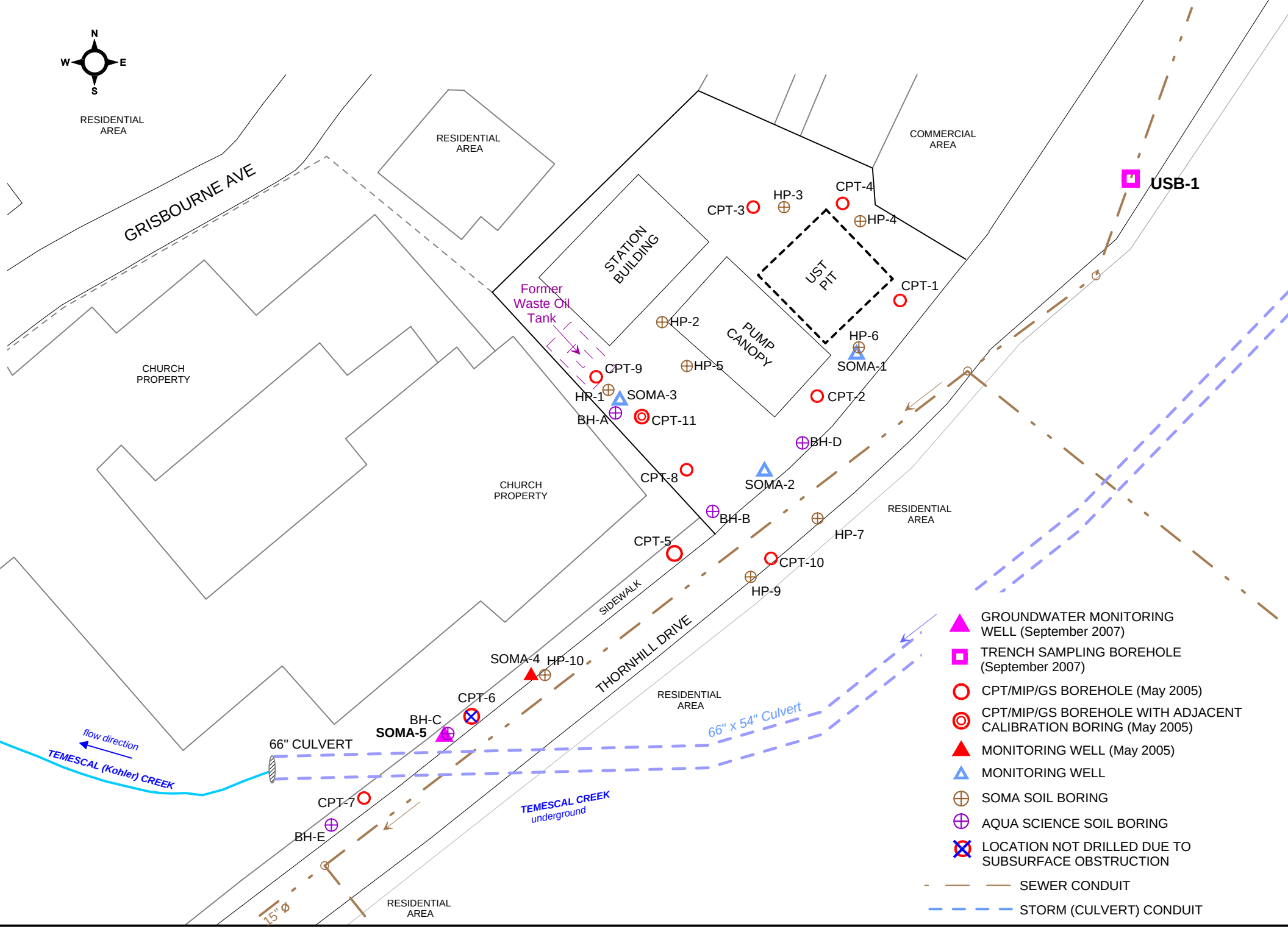


Figure 2: Site Map Showing the Locations of existing and newly installed borings and groundwater monitoring well

SOMA ENVIRONMENTAL ENGINEERING, INC.

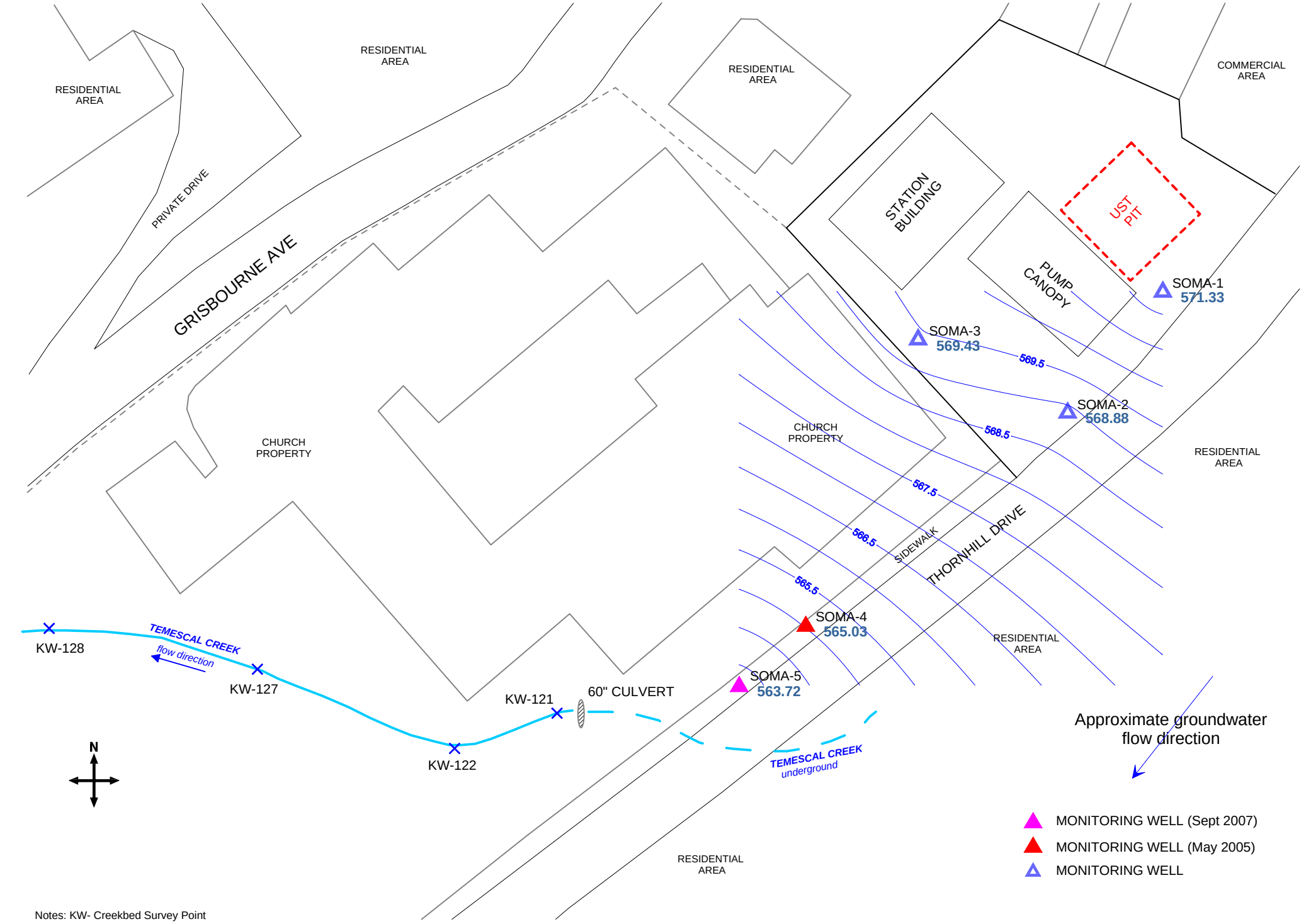
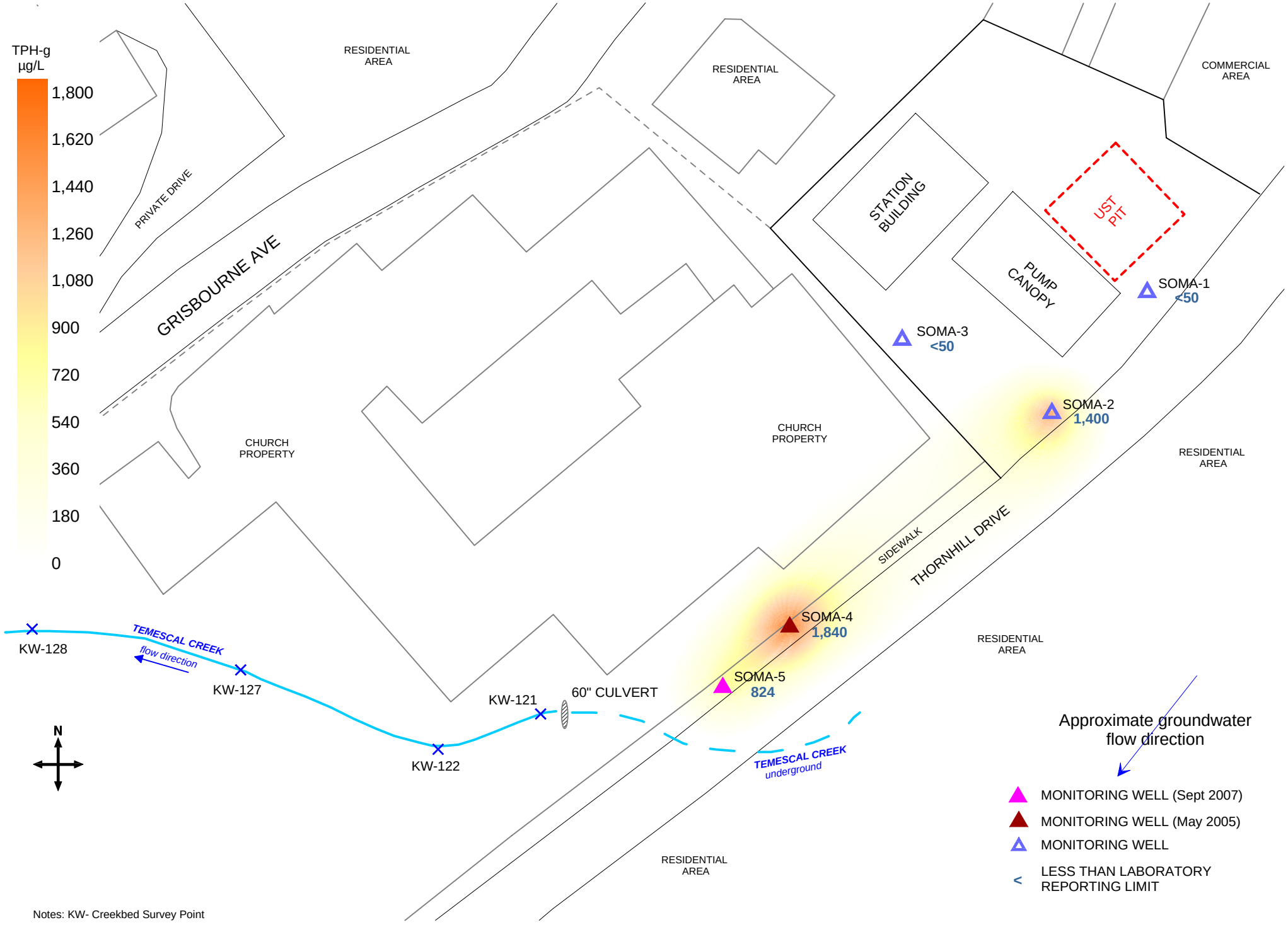


Figure 3: Groundwater elevation contour map in feet. March 4, 2008.

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



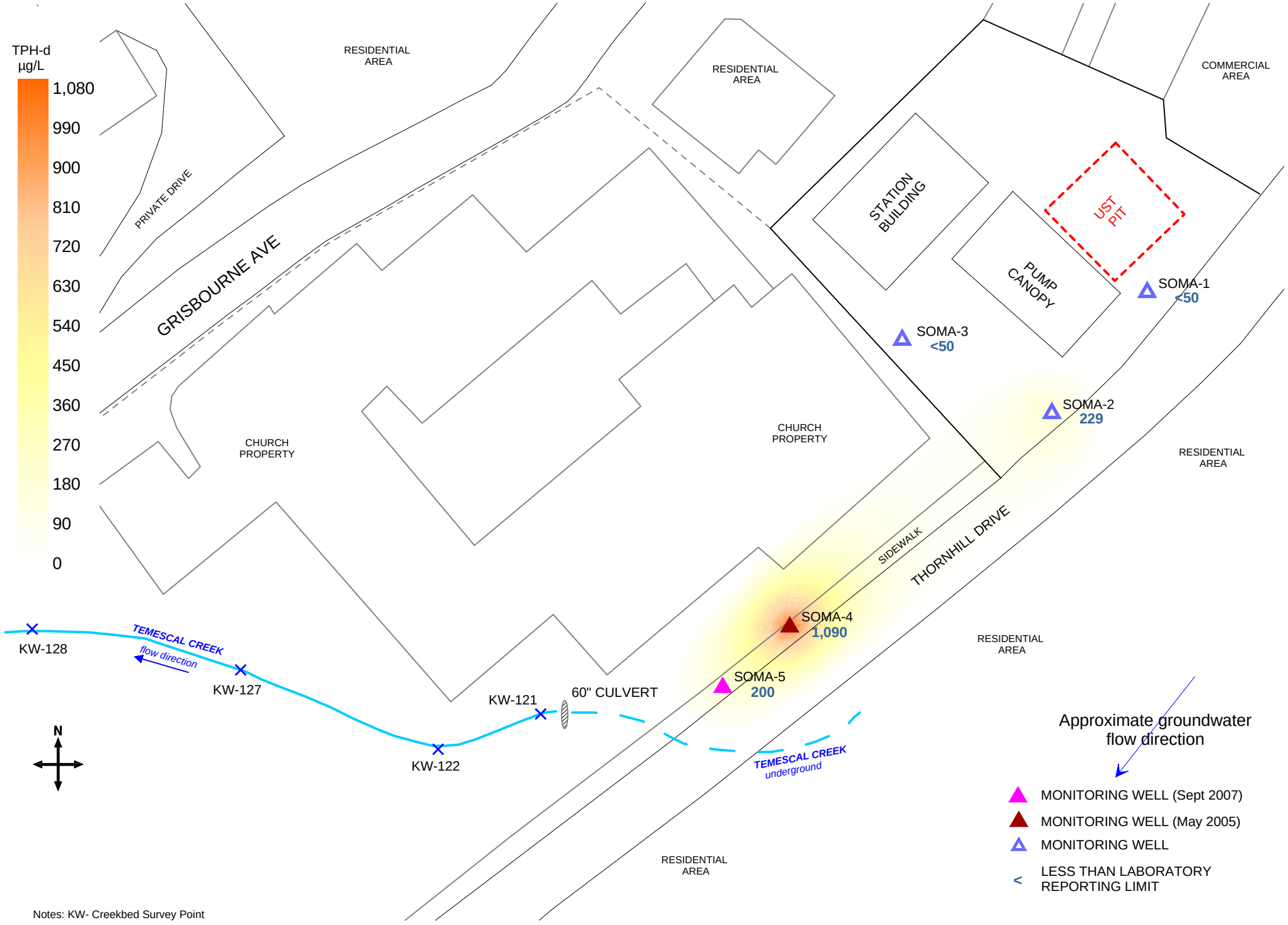
Notes: KW- Creekbed Survey Point

approximate scale in feet

0 25 50

Figure 4: Contour map of TPH-g concentrations in groundwater. March 4, 2008.

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



Notes: KW- Creekbed Survey Point

approximate scale in feet

0 25 50

Figure 5: Contour map of TPH-d concentrations in groundwater. March 4, 2008.

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

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 monitoring 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 in each monitoring well 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 monitoring well is purged using a battery-operated, 2-inch-diameter pump (Model ES-60 DC). To ensure that final samples are in equilibrium with, and representative of, the surrounding groundwater, during purging several samples are taken for field measurements of pH, temperature and electrical conductivity (EC). These parameters are measured with a Hanna pH, conductivity, and temperature meter. Equipment is calibrated on-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.

Purging continues until these parameters stabilize or three casing volumes are purged.

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 to 40-mL VOA vials and preserved with hydrochloric acid. The vials are sealed to prevent air bubbles from forming 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 for Monitoring Wells and Field Measurements of Physical and Chemical Properties of the Groundwater Samples

DATE: 4/28/04
JOB# A04549

TABLE OF ELEVATIONS & COORDINATES ON MONITORING WELLS

SOMA ENVIRONMENTAL, PROJECT # 2830
5725 THORNHILL DRIVE, OAKLAND

WELL ID #	NORTHING (FT.) / LATITUDE (D.M.S.)	EASTING (FT.) / LONGITUDE (D.M.S.)	ELEVATION (FT.)	DESCRIPTION
SOMA-1	2130799.64	6067141.82	576.47	TOP PIPE , BLACK MARK N. SIDE (FELT TIP) (LOCKED AND TIGHT)
	N 37°50'03.73174"	W 122°12'44.98565"	576.72	RIM
			576.70	CONC.
SOMA-2	2130764.55	6067114.08	575.50	TOP PIPE , BLACK MARK N. SIDE (FELT TIP) (LOCKED AND TIGHT)
	N 37°50'03.37985"	W 122°12'45.32339"	575.74	RIM
			575.75	CONC.
SOMA-3	2130785.85	6067071.01	575.92	TOP PIPE , BLACK MARK N. SIDE (FELT TIP) (LOCKED AND TIGHT)
	N 37°50'03.58261"	W 122°12'45.86506"	576.31	RIM
			576.30	CONC.

ADDITIONAL POINTS

PT#	NORTHING (FT.)	EASTING (FT.)	ELEVATION (FT.)	DESCRIPTION
108	2130820.55	6067045.27	N/A	BL<
109	2130800.14	6067066.40	N/A	BL<
110	2130830.97	6067096.14	N/A	BL<
104	2130818.02	6067033.92	N/A	BLOCK WALL 8" <PT
105	2130808.04	6067041.66	N/A	BLOCK WALL 8" END
106	2130821.74	6067037.78	N/A	BLOCK WALL 8" END
107	2130821.83	6067037.75	N/A	FNC-WD B-C CL
111	2130872.58	6067087.64	N/A	FNC-WD END CL
112	2130837.52	6067194.12	N/A	FOGL
113	2130793.20	6067156.45	N/A	FOGL
114	2130759.63	6067123.75	N/A	FOGL
115	2130740.79	6067101.26	N/A	FOGL END
117	2130628.30	6066947.69	N/A	TC
116	2130738.69	6067095.34	N/A	TC END
128	2130693.29	6066817.93	558.29	C/L CREEK +0.4' TO TOP OF WATER
127	2130685.30	6066880.75	559.78	C/L CREEK +0.4' TO TOP OF WATER
122	2130664.83	6066937.67	562.81	C/L CREEK +0.4' TO TOP OF WATER
121	2130676.03	6066966.79	563.15	C/L 60" CULVERT +0.5' TO TOP OF WATER

Kier & Wright Engineers Surveyors, Inc.
1233 Quarry Lane, Suite 145, Pleasanton, CA 94566
Phone (925) 249-6555,
Fax (925) 249-6563

PRINTED: 6/9/2005
11:27 AM

DATE: 4/28/04
JOB# A04549

TABLE OF ELEVATIONS & COORDINATES ON MONITORING WELLS

SOMA ENVIRONMENTAL, PROJECT # 2830
5725 THORNHILL DRIVE, OAKLAND

BENCH MARK: NGS Bench mark No.PID# HT2487
DESCRIPTION FROM NGS DATA SHEET:
DESCRIBED BY EAST BAY MUNICIPAL UTILITIES DISTRICT 1947 (SPH) THE AZIMUTH MARK IS AN EBMUD TRIANGULATION STATION DISC SET 1 FOOT BELOW THE SURFACE AND COVERED BY AN 8 INCH IRON CASTING WITH A REMOVABLE LID MARKED CITY MONUMENT. IT IS IN THE SIDEWALK IN FRONT OF A SAFEWAY STORE AT THE INTERSECTION OF GRAND AND WILDWOOD AVENUES. IT IS 1.5 FEET SOUTHEAST OF THE SOUTHEAST CURB OF WILDWOOD AVE., 6.2 FEET OF EAST CURB OF GRAND AVE. AND 10.4 FEET NORTHEAST OF POWERPOLE. THE MARK IS STAMPED LINDA AZIMUTH MARK 1947.

Elevation =37. FEET NAVD88 Datum
BY VERTCON

HORIZONTAL CONTROL:

PID - AA5496
NORTHING =1,988,577.07 , EASTING = 6,077,862.13 FEET; EPOCH DATE = 1991.35

PID - HT2541
NORTHING = 2,130,331.28 , EASTING = 6,062,624.49 FEET; EPOCH DATE = 1991.35

Coordinate values are based on the California Coordinate System, Zone III NAD 83 Datum.

Kier & Wright Engineers Surveyors, Inc.
1233 Quarry Lane, Suite 145, Pleasanton, CA 94566
Phone (925) 249-6555,
Fax (925) 249-6563

DATE: 8/17/05
Job No. 205048

DATE OF SURVEY 8/12/05
INSTRUMENT LEICA TCA 1100L

TABLE OF ELEVATIONS & COORDINATES ON MONITORING WELLS

SOMA ENVIRONMENTAL, PROJECT # 2830
5725 THORNHILL DRIVE, OAKLAND

WELL ID #	NORTHING (FT.) / LATITUDE (D.M.S.)	EASTING (FT.) / LONGITUDE (D.M.S.)	ELEVATION (FT.)	DESCRIPTION
SOMA-4	2130703.437	6067044.632	572.65	TOP PIPE , BLACK MARK N. SIDE (FELT TIP)
	N 37°50'02.76318"	W 122°12'46.17502"	573.03	RIM
			573.03	CONC.
DECIMAL DEGREES	N 37°.83410088	W 121°.21282639"		
LOCAL CONTROL				
SOMA-2	2130764.55	6067114.08	575.50	TOP PIPE
	N 37°50'03.37985"	W 122°12'45.32339"		
SOMA-3	2130785.85	6067071.01	575.92	TOP PIPE
	N 37°50'03.58261"	W 122°12'45.86506"		

BENCH MARK: NGS Bench mark No.PID# HT2487
DESCRIPTION FROM NGS DATA SHEET:
DESCRIBED BY EAST BAY MUNICIPAL UTILITIES DISTRICT 1947 (SPH) THE AZIMUTH MARK IS AN EBMUD TRIANGULATION STATION DISC SET 1 FOOT BELOW THE SURFACE AND COVERED BY AN 8 INCH IRON CASTING WITH A REMOVABLE LID MARKED CITY MONUMENT. IT IS IN THE SIDEWALK IN FRONT OF A SAFEWAY STORE AT THE INTERSECTION OF GRAND AND WILDWOOD AVENUES. IT IS 1.5 FEET SOUTHEAST OF THE SOUTHEAST CURB OF WILDWOOD AVE., 6.2 FEET OF EAST CURB OF GRAND AVE. AND 10.4 FEET NORTHEAST OF POWERPOLE. THE MARK IS STAMPED LINDA AZIMUTH MARK 1947.

Elevation =37. FEET NAVD88 Datum
BY VERTCON

ALIQUOT ASSOCIATES
1390 MAIN STREET STE 310
WALNUT CREEK, CA. 94596
925-476-2300

DATE: 8/17/05
Job No. 205048

DATE OF SURVEY 8/12/05
INSTRUMENT LEICA TCA 1100L

TABLE OF ELEVATIONS & COORDINATES ON MONITORING WELLS

SOMA ENVIRONMENTAL, PROJECT # 2830
5725 THORNHILL DRIVE, OAKLAND

HORIZONTAL CONTROL:

PID - AA5496
NORTHING =1,988,577.07 , EASTING = 6,077,862.13 FEET; EPOCH DATE = 1991.35

PID - HT2541
NORTHING = 2,130,331.28 , EASTING = 6,062,624.49 FEET; EPOCH DATE = 1991.35

Coordinate values are based on the California Coordinate System, Zone III NAD 83 Datum.

NOTE

THE VALUES FOR SOMA-4 ARE DERIVED FROM LOCAL CONTROL BASED UPON CONTROL VALUE USED FROM THE PREVIOUS SITE SURVEY AS PROVIDED BY KIER AND WRIGHT

ALIQUOT ASSOCIATES
1390 MAIN STREET STE 310
WALNUT CREEK, CA. 94596
925-476-2300

DATE: 10/04/07
Job No. 205072.1
DATE OF SURVEY 10/03/07

TABLE OF ELEVATIONS & COORDINATES ON MONITORING WELLS

INSTRUMENT LEICA TCA 1100L

SOMA ENVIRONMENTAL, PROJECT # 2831
5725 THORNHILL DRIVE, OAKLAND

WELL ID #	NORTHING (FT.) / LATITUDE (D.M.S.) / LATITUDE (D.D.)	EASTING (FT.) / LONGITUDE (D.M.S.) / LONGITUDE (D.D.)	ELEVATION (FT.)	DESCRIPTION
SOMA-5	2130693.310	6067027.659	572.23	TOP PIPE, BLACK MARK ON N. SIDE (FELT TIP)
	N 37°50'02.66001"	W 122°12'46.38426"	572.70	RIM
	N 37.834072225°	W 122.212884517°	571.93	CONC.

LOCAL CONTROL

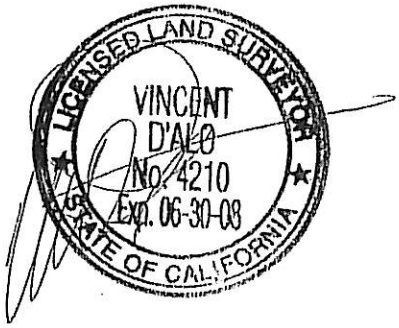
SOMA-2	2130764.55	6067114.08	575.50	TOP PIPE, BLACK MARK ON N. SIDE (FELT TIP)
	N 37°50'03.37985"	W 122°12'45.32339"		
SOMA-3	2130785.85	6067071.01	575.92	TOP PIPE, BLACK MARK ON N. SIDE (FELT TIP)
	N 37°50'03.58261"	W 122°12'45.86506"		

NOTE
THE VALUES FOR SOMA-5 ARE DERIVED FROM A LOCAL CONTROL BASED UPON CONTROL VALUES USED FROM A PREVIOUS SITE SURVEY AS PROVIDED BY KIER AND WRIGHT

VERTICAL CONTROL:
BENCH MARK: NGS Bench mark No.PID# HT2487
DESCRIPTION FROM NGS DATA SHEET:
DESCRIBED BY EAST BAY MUNICIPAL UTILITIES DISTRICT 1947 (SPH) THE AZIMUTH MARK IS AN EBMUD TRIANGULATION STATION DISC SET 1 FOOT BELOW THE SURFACE AND COVERED BY AN 8 INCH IRON CASTING WITH A REMOVABLE LID MARKED CITY MONUMENT. IT IS IN THE SIDEWALK IN FRONT OF A SAFEWAY STORE AT THE INTERSECTION OF GRAND AND WILDWOOD AVENUES. IT IS 1.5 FEET SOUTHEAST OF THE SOUTHEAST CURB OF WILDWOOD AVE., 6.2 FEET OF EAST CURB OF GRAND AVE. AND 10.4 FEET NORTHEAST OF POWERPOLE. THE MARK IS STAMPED LINDA AZIMUTH MARK 1947.
Elevation =37. FEET NAVD88 Datum
BY VERTCON

HORIZONTAL CONTROL:
PID - AA5496
NORTHING =1,988,577.07 , EASTING = 6,077,862.13 FEET; EPOCH DATE = 1991.35
PID - HT2541
NORTHING = 2,130,331.28 , EASTING = 6,062,624.49 FEET; EPOCH DATE = 1991.35

Coordinate values are based on the California Coordinate System, Zone III NAD 83 Datum.



ALIQUOT ASSOCIATES
1390 South Main Street, Suite 310
Walnut Creek, CA 94596
(925) 476-2300 / FAX (925) 476-2350

ENVIRONMENTAL ENGINEERING, INC

Well No.:	SOMA-1	**Project No.:**	2831
Casing Diameter:	2 inches	**Address:**	5725 Thornhill Drive
Depth of Well:	27.85 feet		Oakland CA
Top of Casing Elevation:	576.47 feet	**Date:**	March 4, 2008
Depth to Groundwater:	5.14 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	571.33 feet		
Water Column Height:	22.71 feet		
Purged Volume:	12 gallons		

Purging Method:	**Bailer** ☐	**Pump** ☑			
Sampling Method:	**Bailer** ☑	**Pump** ☐			
Color:	**No** ☐	**Yes** ☑	**Describe:**	Brownish	
Sheen:	**No** ☑	**Yes** ☐	**Describe:**		
Odor:	**No** ☑	**Yes** ☐	**Describe:**		

Field Measurements:

Time	Vol (gallons)	pH	Temp (^{0}C)	E.C. (µs/cm)
11:50	Started purging well			
11:51	3	6.99	17.30	545
11:52	6	6.98	16.7	541
11:53	9	6.90	16.6	535
11:54	12	6.91	16.6	535
11:57	Sampled			

ENVIRONMENTAL ENGINEERING, INC

Well No.:	SOMA-2	**Project No.:**	2831
Casing Diameter:	2 inches	**Address:**	5725 Thornhill Drive
Depth of Well:	28.00 feet		Oakland CA
Top of Casing Elevation:	575.50 feet	**Date:**	March 4, 2008
Depth to Groundwater:	6.62 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	568.88 feet		
Water Column Height:	21.38 feet		
Purged Volume:	12 gallons		

Purging Method:	**Bailer** ☐	**Pump** ☑		
Sampling Method:	**Bailer** ☑	**Pump** ☐		
Color:	**No** ☐	**Yes** ☑	**Describe:**	cloudy
Sheen:	**No** ☑	**Yes** ☐	**Describe:**	
Odor:	**No** ☐	**Yes** ☑	**Describe:**	Slight Petro Odor

Field Measurements:

Time	Vol (gallons)	pH	Temp (^{0}C)	E.C. (µs/cm)
12:55	Started purging well			
12:56	3	7.46	17.4	645
12:57	6	7.31	17.3	654
12:58	9	7.26	17.1	660
12:59	12	7.22	17.0	653
13:03	Sampled			

ENVIRONMENTAL ENGINEERING, INC

Well No.:	SOMA-3	**Project No.:**	2831
Casing Diameter:	2 inches	**Address:**	5725 Thornhill Drive
Depth of Well:	27.77 feet		Oakland CA
Top of Casing Elevation:	575.92 feet	**Date:**	March 4, 2008
Depth to Groundwater:	6.49 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	569.43 feet		
Water Column Height:	21.28 feet		
Purged Volume:	12 gallons		

Purging Method:	**Bailer** ☐		**Pump** ☑		
Sampling Method:	**Bailer** ☑		**Pump** ☐		
Color:	**No** ☐		**Yes** ☑	**Describe:**	Cloudy
Sheen:	**No** ☑		**Yes** ☐	**Describe:**	
Odor:	**No** ☑		**Yes** ☐	**Describe:**	

Field Measurements:

Time	Vol (gallons)	pH	Temp (^{0}C)	E.C. (µs/cm)
12:23	Started purging well			
12:24	3	7.67	16.9	828
12:25	6	7.40	16.7	719
12:26	9	7.37	16.9	740
12:27	12	7.41	17.2	795
12:31	Sampled			

ENVIRONMENTAL ENGINEERING, INC

Well No.:	SOMA-4	**Project No.:**	2831
Casing Diameter:	2 inches	**Address:**	5725 Thornhill Drive
Depth of Well:	19.70 feet		Oakland CA
Top of Casing Elevation:	572.65 feet	**Date:**	March 4, 2008
Depth to Groundwater:	7.62 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	565.03 feet		
Water Column Height:	12.08 feet		
Purged Volume:	6 gallons		

Purging Method:	**Bailer** ☐	**Pump** ☑		
Sampling Method:	**Bailer** ☑	**Pump** ☐		
Color:	**No** ☐	**Yes** ☑	**Describe:**	Cloudy
Sheen:	**No** ☑	**Yes** ☐	**Describe:**	
Odor:	**No** ☐	**Yes** ☑	**Describe:**	Petro Odor

Field Measurements:

Time	Vol (gallons)	pH	Temp (^{0}C)	E.C. (µs/cm)
14:02	started purging well			
14:03	3	7.24	16.2	617
14:04	6	7.23	16.0	611
14:07	sampled			

ENVIRONMENTAL ENGINEERING, INC

Well No.:	SOMA-5	**Project No.:**	2831
Casing Diameter:	2 inches	**Address:**	5725 Thornhill Drive
Depth of Well:	14.77 feet		Oakland CA
Top of Casing Elevation:	572.23 feet	**Date:**	March 4, 2008
Depth to Groundwater:	8.51 feet	**Sampler:**	Lizzie Hightower
Groundwater Elevation:	563.72 feet		
Water Column Height:	6.26 feet		
Purged Volume:	_____ gallons		

Purging Method:	**Bailer** ☐		**Pump** ☑		
Sampling Method:	**Bailer** ☑		**Pump** ☐		
Color:	**No** ☐		**Yes** ☑	**Describe:**	Grayish/Cloudy
Sheen:	**No** ☑		**Yes** ☐	**Describe:**	
Odor:	**No** ☐		**Yes** ☑	**Describe:**	Petro Odor

Field Measurements:

Time	Vol (gallons)	pH	Temp (^{0}C)	E.C. (µs/cm)
13:30	Started purging well			
13:31	3	7.50	14.5	643
13:32	Dried			
13:36	Sampled			

Appendix C

Chain of Custody Form and Laboratory Report

CHAIN OF CUSTODY FORM

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

PAL Login# 8030008

Project No: 2831	Sampler: Lizzie Hightower
Project Name: 5725 Thornhill Drive, Oakland	Report To: Joyce Bobek
	Company: SOMA Environmental Engineering, Inc.
Turnaround Time: Standard	Tel: 925-734-6400 Fax: 925-734-6401

Lab No.	Sample ID	Sampling Date/Time: Date	Sampling Date/Time: Time	Matrix: Soil	Matrix: Water	Matrix: Waste	# of Containers	Preservatives: HCL	Preservatives: H_2SO_4	Preservatives: HNO_3	Preservatives: ICE	Field Notes	Analyses/Method: TPHg, BTEX, MtBE 8260B	Gasoline Oxygenates, Lead Scavengers 8260B	Ethanol	TPHd 8015	TPHmo 3550/8015			
	SOMA-1	3/4/08	11:57		*		3 - VOAs	*			*	Grab Sample	*	*	*					
	SOMA-2	3/4/08	13:03		*		3 – VOAs	*			*	↓	*	*	*					
	SOMA-3	3/4/08	12:31		*		3 – VOAs	*			*		*	*	*					
	SOMA-4	3/4/08	14:07		*		3 - VOAs	*			*		*	*	*					
	SOMA-5	3/4/08	13:36		*		3 - VOAs	*			*		*	*	*					
	SOMA-1	3/4/08	11:57		*		1 – 1L Amber				*					*	*			
	SOMA-2	3/4/08	13:03		*		1– 1L Amber				*					*	*			
	SOMA-3	3/4/08	12:31		*		1 – 1L Amber				*					*	*			
	SOMA-4	3/4/08	14:07		*		1 – 1L Amber				*					*	*			
	SOMA-5	3/4/08	13:36		*		1 – 1L Amber				*	↓				*	*			

Sampler Remarks:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Gasoline Oxygenates: DIPE, ETBE, TAME, TBA Lead Scavengers: EDB, 1,2-DCA Silica Gel Cleanup Method Ho[illegible] EB-PMP, EB-PMP2, EB-PRB, EB-PRB2	E. Highto[illegible]	15:52 3/4/08	V. Vasquez	1600 3-4-08

CHAIN OF CUSTODY FORM

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

PAL Login# 8030008

Project No: 2831	Sampler: Lizzie Hightower	Analyses/Method
Project Name: 5725 Thornhill Drive, Oakland	Report To: Joyce Bobek	
	Company: SOMA Environmental Engineering, Inc.	
Turnaround Time: Standard	Tel: 925-734-6400 Fax: 925-734-6401	

Lab No.	Sample ID	Sampling Date/Time		Matrix			# of Containers	Preservatives				Field Notes	TPHg, BTEX, MtBE 8260B	Gasoline Oxygenates, Lead Scavengers 8260B	Ethanol	TPHd 8015	TPHmo 3550/8015
		Date	Time	Soil	Water	Waste		HCL	H_2SO_4	HNO_3	ICE						
	EB-PMP	3/4/08	10:50		*		3 - VOAs	*			*	Equipment Blank					
	EB-PRB	3/4/08	10:55		*		3 – VOAs	*			*						
	EB-PMP2	3/4/08	14:33		*		3 – VOAs	*			*						
	EB-PRB2	3/4/08	14:37		*		3 - VOAs	*			*						

Hold

Sampler Remarks:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Gasoline Oxygenates: DIPE, ETBE, TAME, TBA Lead Scavengers: EDB, 1,2-DCA Silica Gel Cleanup Method Hold EB-PMP, EB-PMP2 Hold EB-PRB, EB-PRB2	E. Hightower	15:52 3/4/08	V. Vaughan	16:00 3-4-08

PAL Pacific Analytical Laboratory
851 West Midway Ave. Suite 201
Alameda, CA 94501
Phone (510) 864-0364

26 March 2008

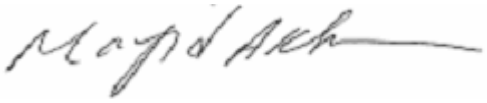
Mansour Sepehr
SOMA Environmental Engineering Inc.
6620 Owens Drive, Suite A
Pleasanton, CA 94588

RE: 5725 Thornhill Dr., Oakland

Work Order Number: 8030008

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

SOMA Environmental Engineering Inc.	Project: 5725 Thornhill Dr., Oakland	
6620 Owens Drive, Suite A	Project Number: 2831	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	26-Mar-08 18:58

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SOMA-1	8030008-01	Water	04-Mar-08 11:57	05-Mar-08 15:15
SOMA-2	8030008-02	Water	04-Mar-08 13:03	05-Mar-08 15:15
SOMA-3	8030008-03	Water	04-Mar-08 12:31	05-Mar-08 15:15
SOMA-4	8030008-04	Water	04-Mar-08 14:07	05-Mar-08 15:15
SOMA-5	8030008-05	Water	04-Mar-08 13:36	05-Mar-08 15:15

SOMA Environmental Engineering Inc.	Project: 5725 Thornhill Dr., Oakland	
6620 Owens Drive, Suite A	Project Number: 2831	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	26-Mar-08 18:58

Extractable Petroleum Hydrocarbons by 8015 DRO

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SOMA-1 (8030008-01) Water	**Sampled: 04-Mar-08 11:57**	**Received: 05-Mar-08 15:15**							
Diesel (C10-C24)	ND	50.0	ug/l	1	BC81802	05-Mar-08	19-Mar-08	EPA 8015M	C-03
Motor Oil (C24-C36)	ND	250	"	"	"	"	"	"	C-03
Surrogate: Pentacosane		*83.2 %*	*50.4-137*		*"*	*"*	*"*	*"*	
SOMA-2 (8030008-02) Water	**Sampled: 04-Mar-08 13:03**	**Received: 05-Mar-08 15:15**							
Diesel (C10-C24)	**229**	50.0	ug/l	1	BC81802	05-Mar-08	19-Mar-08	EPA 8015M	C-03, D-06, D-30
Motor Oil (C24-C36)	ND	250	"	"	"	"	"	"	C-03
Surrogate: Pentacosane		*84.2 %*	*50.4-137*		*"*	*"*	*"*	*"*	
SOMA-3 (8030008-03) Water	**Sampled: 04-Mar-08 12:31**	**Received: 05-Mar-08 15:15**							
Diesel (C10-C24)	ND	50.0	ug/l	1	BC81802	05-Mar-08	19-Mar-08	EPA 8015M	C-03
Motor Oil (C24-C36)	ND	250	"	"	"	"	"	"	C-03
Surrogate: Pentacosane		*61.4 %*	*50.4-137*		*"*	*"*	*"*	*"*	
SOMA-4 (8030008-04) Water	**Sampled: 04-Mar-08 14:07**	**Received: 05-Mar-08 15:15**							
Diesel (C10-C24)	**1090**	50.0	ug/l	1	BC81802	05-Mar-08	19-Mar-08	EPA 8015M	C-03, D-06, D-30
Motor Oil (C24-C36)	ND	250	"	"	"	"	"	"	C-03
Surrogate: Pentacosane		*101 %*	*50.4-137*		*"*	*"*	*"*	*"*	
SOMA-5 (8030008-05) Water	**Sampled: 04-Mar-08 13:36**	**Received: 05-Mar-08 15:15**							
Diesel (C10-C24)	**200**	50.0	ug/l	1	BC81802	05-Mar-08	19-Mar-08	EPA 8015M	C-03, D-06, D-30
Motor Oil (C24-C36)	ND	250	"	"	"	"	"	"	C-03
Surrogate: Pentacosane		*74.0 %*	*50.4-137*		*"*	*"*	*"*	*"*	

SOMA Environmental Engineering Inc.	Project: 5725 Thornhill Dr., Oakland	
6620 Owens Drive, Suite A	Project Number: 2831	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	26-Mar-08 18:58

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SOMA-1 (8030008-01RE1) Water Sampled: 04-Mar-08 11:57 Received: 05-Mar-08 15:15									
Gasoline (C6-C12)	ND	50.0	ug/l	1	BC81601	11-Mar-08	16-Mar-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	**0.850**	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		*92.6 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*100 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*97.2 %*		*70-130*	"	"	"	"	
SOMA-2 (8030008-02RE1) Water Sampled: 04-Mar-08 13:03 Received: 05-Mar-08 15:15									
Gasoline (C6-C12)	**1400**	50.0	ug/l	1	BC81601	11-Mar-08	16-Mar-08	EPA 8260B	
Benzene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	**1.44**	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	2.00	"	"	"	"	"	"	
o-xylene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
MTBE	**17.3**	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		*104 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*99.8 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*99.6 %*		*70-130*	"	"	"	"	

SOMA Environmental Engineering Inc.	Project: 5725 Thornhill Dr., Oakland	
6620 Owens Drive, Suite A	Project Number: 2831	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	26-Mar-08 18:58

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SOMA-3 (8030008-03RE1) Water Sampled: 04-Mar-08 12:31 Received: 05-Mar-08 15:15									
Gasoline (C6-C12)	ND	50.0	ug/l	1	BC81601	11-Mar-08	16-Mar-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		*88.4 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*97.4 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*97.6 %*		*70-130*	"	"	"	"	
SOMA-4 (8030008-04RE1) Water Sampled: 04-Mar-08 14:07 Received: 05-Mar-08 15:15									
Gasoline (C6-C12)	**1840**	50.0	ug/l	1	BC81601	11-Mar-08	16-Mar-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	**7.68**	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	**97.8**	2.00	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*105 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*103 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*99.8 %*		*70-130*	"	"	"	"	

SOMA Environmental Engineering Inc.	Project: 5725 Thornhill Dr., Oakland	
6620 Owens Drive, Suite A	Project Number: 2831	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	26-Mar-08 18:58

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SOMA-5 (8030008-05RE1) Water	**Sampled: 04-Mar-08 13:36**	**Received: 05-Mar-08 15:15**							
Gasoline (C6-C12)	**824**	50.0	ug/l	1	BC81601	11-Mar-08	16-Mar-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	**8.96**	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	**147**	2.00	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*100 %*		*70-130*	"	"	"	"	
Surrogate: Dibromofluoromethane		*101 %*		*70-130*	"	"	"	"	
Surrogate: Perdeuterotoluene		*99.2 %*		*70-130*	"	"	"	"	

SOMA Environmental Engineering Inc.	Project: 5725 Thornhill Dr., Oakland	
6620 Owens Drive, Suite A	Project Number: 2831	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	26-Mar-08 18:58

Extractable Petroleum Hydrocarbons by 8015 DRO - Quality Control

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BC81802 - EPA 3510B										
Blank (BC81802-BLK1)				Prepared & Analyzed: 19-Mar-08						
Surrogate: Pentacosane	*52.2*		*ug/l*	*50.0*		*104*	*50.4-137*			
Diesel (C10-C24)	ND	50.0	"							
Motor Oil (C24-C36)	ND	250	"							
LCS (BC81802-BS1)				Prepared & Analyzed: 19-Mar-08						
Surrogate: Pentacosane	*43.6*		*ug/l*	*50.0*		*87.2*	*50.4-137*			
Diesel (C10-C24)	705	50.0	"	1000		70.5	70-130			
LCS Dup (BC81802-BSD1)				Prepared & Analyzed: 19-Mar-08						
Surrogate: Pentacosane	*56.2*		*ug/l*	*50.0*		*112*	*50.4-137*			
Diesel (C10-C24)	789	50.0	"	1000		78.9	70-130	11.2	40	

SOMA Environmental Engineering Inc.	Project: 5725 Thornhill Dr., Oakland	
6620 Owens Drive, Suite A	Project Number: 2831	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	26-Mar-08 18:58

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 BC81601 - EPA 5030 Water MS										
Blank (BC81601-BLK2)				Prepared & Analyzed: 11-Mar-08						
Surrogate: 4-Bromofluorobenzene	*41.1*		*ug/l*	*50.0*		*82.2*	*70-130*			
Surrogate: Dibromofluoromethane	*57.8*		*"*	*50.0*		*116*	*70-130*			
Surrogate: Perdeuterotoluene	*44.1*		*"*	*50.0*		*88.2*	*70-130*			
MTBE	ND	0.500	"							
DIPE	ND	0.500	"							
ETBE	ND	0.500	"							
TAME	ND	2.00	"							
TBA	ND	2.00	"							
Gasoline (C6-C12)	ND	50.0	"							
1,2-dichloroethane	ND	0.500	"							
1,2-Dibromoethane (EDB)	ND	0.500	"							
Ethanol	ND	1000	"							
Benzene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
m&p-Xylene	ND	2.00	"							
o-xylene	ND	0.500	"							
Toluene	ND	2.00	"							
LCS (BC81601-BS1)				Prepared & Analyzed: 11-Mar-08						
Surrogate: 4-Bromofluorobenzene	*45.9*		*ug/l*	*50.0*		*91.8*	*70-130*			
Surrogate: Dibromofluoromethane	*53.4*		*"*	*50.0*		*107*	*70-130*			
Surrogate: Perdeuterotoluene	*41.7*		*"*	*50.0*		*83.4*	*70-130*			
MTBE	118	0.500	"	100		118	70-130			
ETBE	66.7	0.500	"	100		66.7	65-130			
TAME	88.1	2.00	"	100		88.1	70-130			
TBA	643	2.00	"	500		129	70-130			
Gasoline (C6-C12)	1830	50.0	"	2000		91.5	70-130			
Benzene	86.1	0.500	"	100		86.1	70-130			
Toluene	80.2	2.00	"	100		80.2	70-130			

SOMA Environmental Engineering Inc.	Project: 5725 Thornhill Dr., Oakland	
6620 Owens Drive, Suite A	Project Number: 2831	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	26-Mar-08 18:58

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

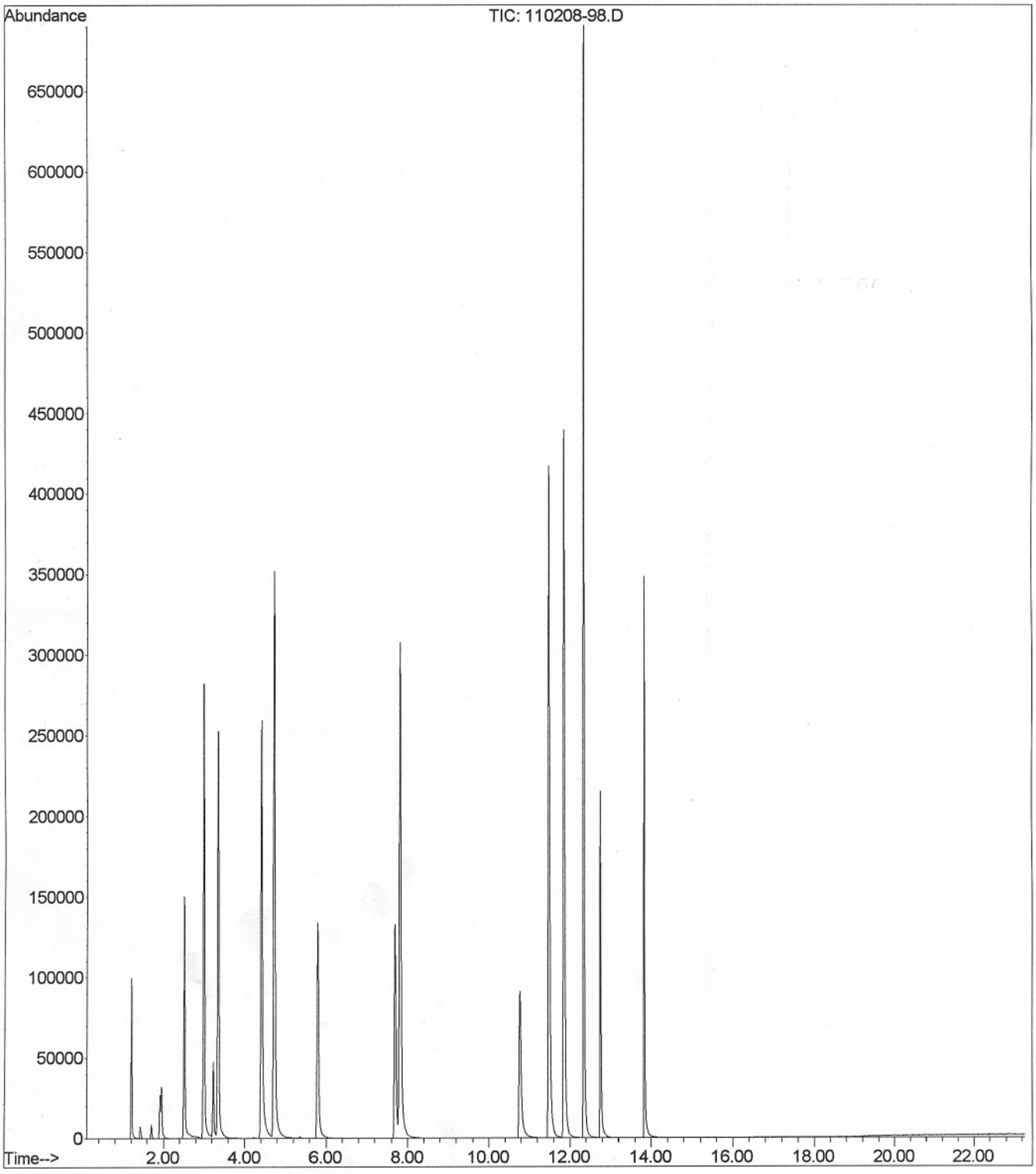
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BC81601 - EPA 5030 Water MS										
LCS Dup (BC81601-BSD1)				Prepared: 11-Mar-08 Analyzed: 16-Mar-08						
Surrogate: 4-Bromofluorobenzene	*49.8*		*ug/l*	*50.0*		*99.6*	*70-130*			
Surrogate: Dibromofluoromethane	*53.6*		*"*	*50.0*		*107*	*70-130*			
Surrogate: Perdeuterotoluene	*44.9*		*"*	*50.0*		*89.8*	*70-130*			
MTBE	76.9	0.500	"	100		76.9	70-130	42.2	20	QR-02
ETBE	69.8	0.500	"	100		69.8	65-130	4.54	20	
TAME	88.4	2.00	"	100		88.4	70-130	0.340	20	
Gasoline (C6-C12)	1860	50.0	"	2000		93.0	70-130	1.63	20	
TBA	639	2.00	"	500		128	70-130	0.624	20	
Benzene	83.8	0.500	"	100		83.8	70-130	2.71	20	
Toluene	87.7	2.00	"	100		87.7	70-130	8.93	20	

SOMA Environmental Engineering Inc.	Project: 5725 Thornhill Dr., Oakland	
6620 Owens Drive, Suite A	Project Number: 2831	**Reported:**
Pleasanton CA, 94588	Project Manager: Mansour Sepehr	26-Mar-08 18:58

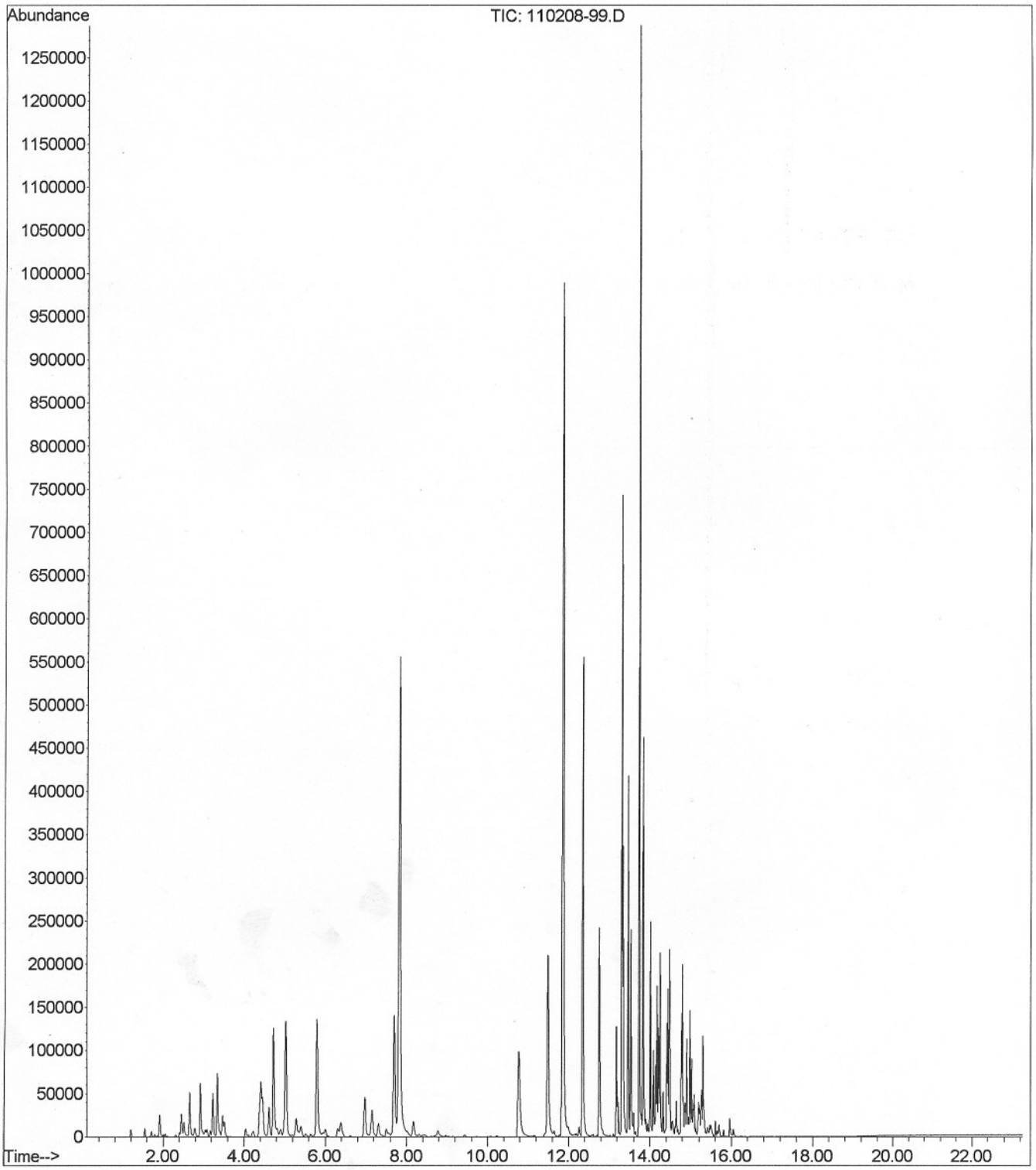
Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
D-30	Unidentified hydrocarbons C9-C16.
D-06	The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
C-03	To reduce matrix interference, the sample extract has undergone silica-gel clean-up, method 3630, which is specific to polar compound contamination.
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-Mar-11-1036.b\110208-98.D
Operator :
Acquired : 16 Mar 2008 10:32 pm using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BC81601-BSD1
Misc Info :
Vial Number: 98



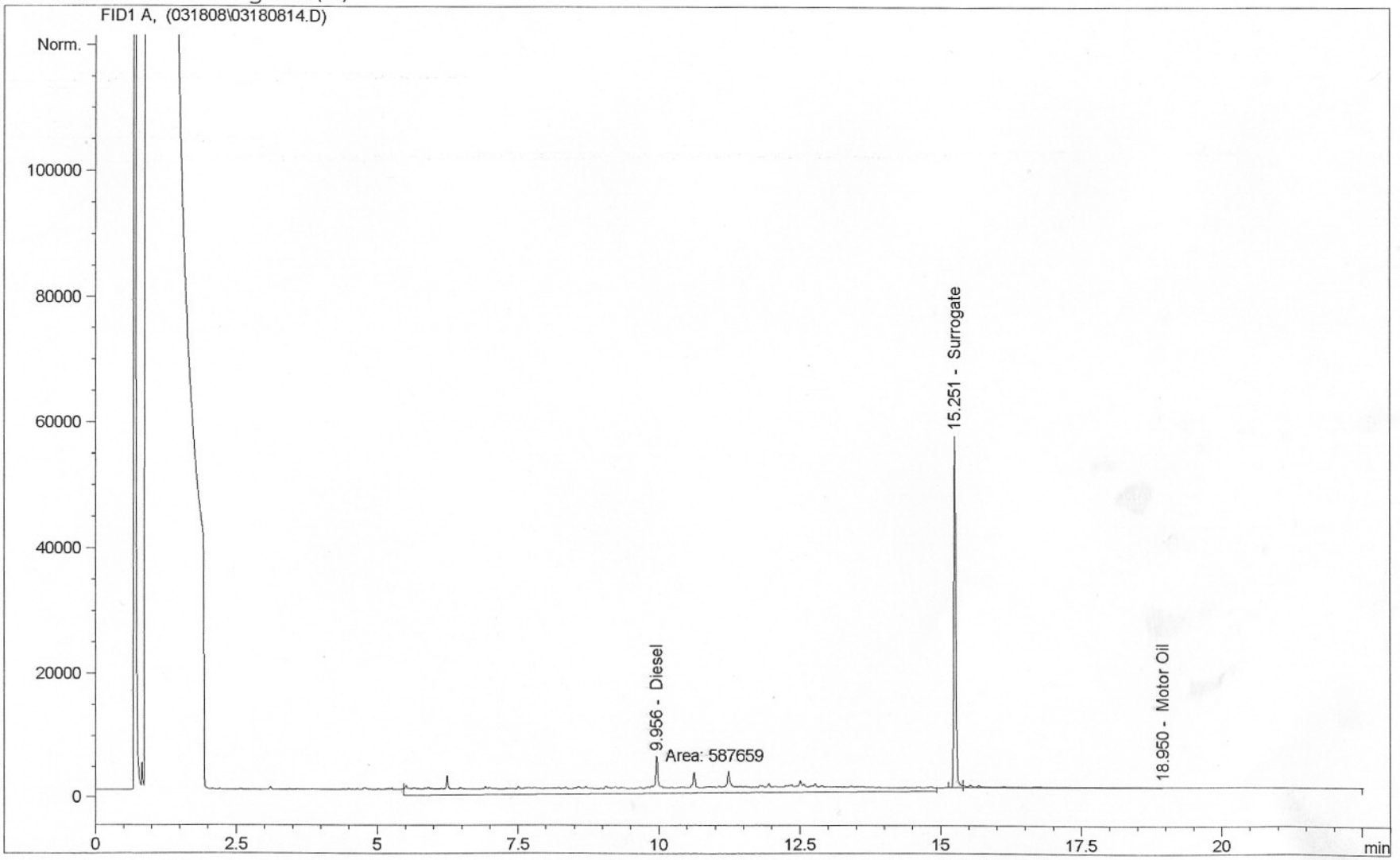
File :C:\MSDChem\1\DATA\2008-Mar-11-1036.b\110208-99.D
Operator :
Acquired : 16 Mar 2008 11:03 pm using AcqMethod OXY21506.M
Instrument : PAL GCMS
Sample Name: BC81601-BSD1
Misc Info :
Vial Number: 99



Print of Window 38: Current Chromatogram(s)

Injection Date	: 3/19/08 2:09:21 AM	Seq. Line	: 14
Sample Name	: BC81802-BLK1	Vial	: 13
Acq. Operator	: jz	Inj	: 1
		Inj Volume	: 2 ul
Acq. Method	: C:\HPCHEM\1\METHODS\GC122607.M		
Last changed	: 3/7/08 1:00:28 PM by jz		
Analysis Method	: C:\HPCHEM\1\METHODS\GC122607.M		
Last changed	: 3/19/08 5:09:20 PM by jz		

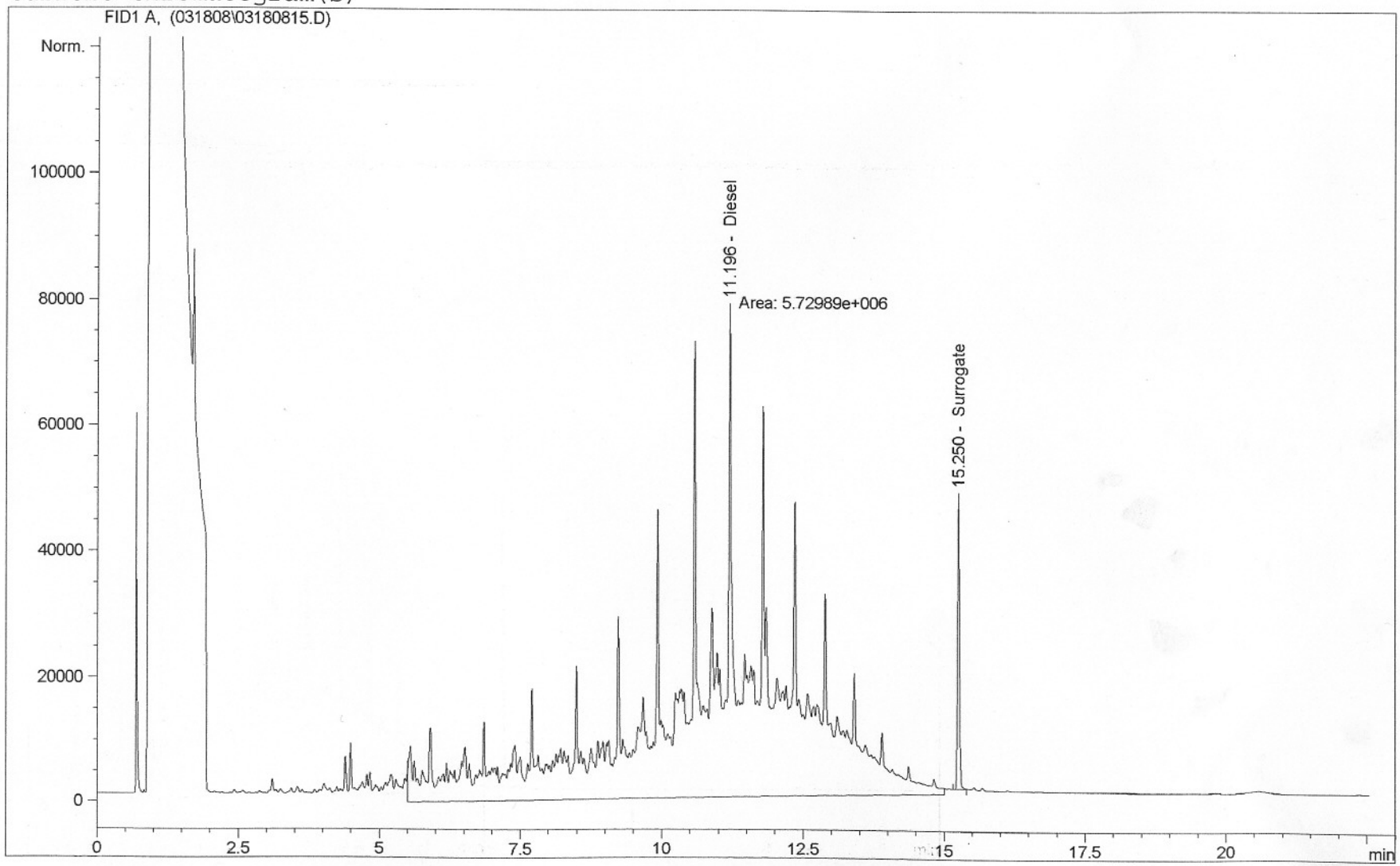
Current Chromatogram(s)



Print of window 38: Current Chromatogram(s)

Injection Date	: 3/19/08 2:40:47 AM	Seq. Line	: 15
Sample Name	: BC81802-BS1	Vial	: 14
Acq. Operator	: jz	Inj	: 1
		Inj Volume	: 2 ul
Acq. Method	: C:\HPCHEM\1\METHODS\GC122607.M		
Last changed	: 3/7/08 1:00:28 PM by jz		
Analysis Method	: C:\HPCHEM\1\METHODS\GC122607.M		
Last changed	: 3/19/08 5:09:20 PM by jz		

Current Chromatogram(s)



Instrument 1 3/26/08 5:04:19 PM jz