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FIRST QUARTER 2004
GROUNDWATER MONITORING REPORT
TEXACO GASOLINE SERVICE STATION
15101 FREEDOM AVENUE
SAN LEANDRO, CALIFORNIA

February 3, 2004

Project 2551

Prepared for

Mr. Mohammad Pazdel
1770 Pistacia Court
Fairfield, California

Prepared by

SOMA Environmental Engineering, Inc.
2680 Bishop Drive, Suite 203
San Ramon, California

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February 3, 2004

Ms. Eva Chu
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

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

Dear Ms. Chu:

Enclosed for your review is a copy of SOMA's "First Quarter 2004 Groundwater Monitoring Report" for the subject property.

Thank you for your time in reviewing our report. If you have any questions or comments, please call me at (925) 244-6600.

Sincerely,

Mansour Sepehr, Ph.D., PE
Principal Hydrogeologist

REGISTERED PROFESSIONAL ENGINEER
MANSOUR SEPEHR
No. C042928
Exp. 3-31-04
CIVIL
STATE OF CALIFORNIA

Enclosure

cc: Mr. Mohammad Pazdel w/enclosure

Certification

This report has been prepared by SOMA Environmental Engineering, Inc. on behalf of Mr. Mohammad Pazdel, for the property located at 15101 Freedom Avenue, San Leandro, California, to comply with the Alameda County Health Care Services' requirements for the First Quarter 2004 groundwater monitoring event.

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

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1.0 INTRODUCTION

This report has been prepared by SOMA Environmental Engineering, Inc., (SOMA) on behalf of Mr. Mohammad Pazdel, the property owner. The property is located at 15101 Freedom Avenue, between 151st Street and Fairmont Boulevard, which is just west of Interstate 580 in San Leandro, California (the "Site"). 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 shows the location of the Site.

This groundwater monitoring report summarizes the results of the First Quarter 2004 groundwater monitoring event conducted at the Site on January 15, 2003. This report includes the results of on-site measurements of the physical and chemical properties of the groundwater, which include pH, temperature, and electrical conductivity (EC). During this monitoring event, five monitoring wells (MW-1 to MW-5) 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), and Methyl tertiary Amyl Ether (TAME).
- 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).

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 soil samples collected between 19 and 25.5 feet 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 at 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 below ground surface (bgs).

2.0 FIELD ACTIVITIES

In accordance with the procedures and guidelines of the CRWQCB. The depth to groundwater at each well was measured from the top of the casings to the nearest 0.01 foot using an electric sounder. To calculate the groundwater elevation at each monitoring well, the top of the casing elevation and depth to groundwater were used.

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. On January 15, 2004, SOMA's field crew delivered the

groundwater samples to Curtis & Tompkins, Ltd. laboratory in Berkeley, California.

3.0 LABORATORY ANALYSIS

Curtis & Tompkins, Ltd., a state certified laboratory, analyzed the groundwater samples for TPH-g, BTEX, MtBE, and gasoline oxygenates. Samples for TPH-g measurement were prepared using EPA Method 5030B and analyzed using Method 8015B. Samples for BTEX measurements were prepared using EPA Method 5030B and analyzed using EPA Method 8021B. MtBE, gasoline oxygenates, and lead scavengers measurements were prepared using EPA Method 5030B and analyzed using EPA Method 8260B.

4.0 RESULTS

The following sections provide the results of the field measurements and laboratory analyses for the January 15, 2004 groundwater monitoring event.

4.1 Field Measurements

Table 1 presents the calculated groundwater elevations at each groundwater monitoring well. As Table 1 shows, groundwater elevations ranged from 29.28 feet in monitoring well MW-1 to 29.37 feet in monitoring well MW-5. Variations in seasonal fluctuations, as well as, local recharge rates at each well determine the deviations in the groundwater elevations. The increase in all the groundwater elevations can be attributed to the rain encountered this quarter.

A map of the groundwater elevations, in feet, measured during the First Quarter 2004, is displayed in Figure 3. In general, the groundwater elevations remained consistent throughout the Site.

The field measurements taken during the First Quarter 2004 monitoring event, as well as, the top of casing survey data are shown in Appendix A.

4.2 Laboratory Analysis

Table 1 also presents the TPH-g, BTEX, and MtBE analytical results of the groundwater samples during this quarter. In general, the analytical results indicate that the groundwater samples collected from monitoring well MW-3 were the most impacted, with the exception of MtBE, which peaks in monitoring well MW-4. 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.

TPH-g concentrations ranged from 660 µg/L in monitoring well MW-2 to 51,000 µg/L in monitoring well MW-3. The TPH-g concentration detected in well MW-2 may have been misrepresentative due to heavier hydrocarbons detected in the analytical results of this sample. The laboratory designated this deviation by an "H" flag, see the laboratory report in Appendix B for further clarification. Figure 4 displays the contour map of TPH-g concentrations in the groundwater on January 15, 2004. The highest reported TPH-g concentration was in monitoring well MW-3, which is near the dispenser islands and former USTs.

In general, as shown in Table 1, the least impacted BTEX analyte location was in the vicinity of MW-2. BTEX concentrations in MW-2 were 1.5 µg/L, non-detectable, 8.9 µg/L, and 25 µg/L, respectively. Toluene was below the laboratory reporting limit in well MW-1, and at low concentrations in wells MW-4 and MW-5. The benzene concentration in well MW-2 and the toluene concentration detected in well MW-4 may have been misrepresentative. The deviations in the analytical results can be attributed to matrix interference encountered during analytical testing of the groundwater samples collected from these wells. The laboratory designated these interferences by a "C" flag, see the laboratory report, in Appendix B, for further clarification. The highest BTEX

concentrations were detected in MW-3 at 4,100 µg/L, 1,100 µg/L, 2,000 µg/L, and 8,400 µg/L, respectively.

Figure 5 displays the contour map of benzene concentrations in the groundwater on January 15, 2004. Similar to the results for TPH-g, the highest benzene concentration was detected in monitoring well MW-3, near the dispenser islands.

Table 1 presents the results of the MtBE analysis using EPA Method 8260B. MtBE concentrations were below the laboratory reporting limit in wells MW-1 and MW-2. The highest MtBE concentration was detected in monitoring well MW-4 at 7,300 µg/L.

Figure 6 displays the contour map of MtBE concentrations in the groundwater on January 15, 2004. As shown in Figure 6, the highest MtBE concentration was detected in the vicinity of the dispenser islands, in monitoring well MW-4. This can be attributed to the location of the product piping from the existing USTs to the dispenser islands and the solubility of MtBE in groundwater.

Table 2 shows the historical analytical results for gasoline oxygenates and lead scavengers. Figure 7 displays the map of TBA and TAME concentrations in the groundwater on January 15, 2004. As shown in Figure 7, the highest TBA concentration was detected near the dispenser islands in monitoring well MW-4 at 1,300 µg/L. The highest TAME concentration was detected in well MW-5 at 300 µg/L.

Appendix B includes the laboratory report and COC form for the First Quarter 2004.

4.3 Historical Analytical Results

Table 1 presents the historical groundwater analytical data. The following concentration trends were observed for TPH-g, BTEX, and MtBE since the previous monitoring event.

- TPH-g concentrations decreased in monitoring wells MW-1, MW-2 and MW-5. TPH-g increased in wells MW-3 and MW-4.
- In wells MW-1 and MW-5, all BTEX analytes decreased. In wells MW-2 and MW-3, all BTEX analytes decreased, with the exception of toluene. Toluene remained below the laboratory reporting limit in MW-2 and remained constant in well MW-3. In well MW-4, benzene slightly increased, however, all other BTEX analytes decreased.
- MtBE remained below the laboratory reporting limit in wells MW-1 and MW-2. MtBE decreased in wells MW-3 to MW-5.

As presented in Table 2, the following concentration trends were observed for gasoline oxygenates since the previous monitoring event.

- In wells MW-1 and MW-2, TBA decreased and DIPE, ETBE, and TAME remained below the laboratory reporting limit. In well MW-3, TBA, DIPE and ETBE remained below the laboratory reporting limit, and TAME decreased.
- In well MW-4, TBA and ETBE decreased, DIPE remained below the laboratory reporting limit, and TAME increased. In well MW-5, TBA, DIPE and ETBE remained below the laboratory reporting limit, and TAME decreased.

5.0 CONCLUSION AND RECOMMENDATIONS

The results of the January 2004 groundwater monitoring event can be summarized as follows:

1. The groundwater elevations remained fairly consistent throughout the Site. The increase in the groundwater elevations during this quarter can be attributed to the local recharge rates at each well, and the rain encountered this quarter.

2. The highest TPH-g and BTEX concentrations were detected in monitoring well MW-3. The high TPH-g and benzene concentrations detected in monitoring well MW-3 can be attributed to a possible earlier release in the vicinity of the former USTs. During the upgrade of the USTs in May 1999, petroleum chemicals were detected in the subsurface soils beneath the old USTs. This quarter, however, both benzene and MtBE decreased in well MW-3.

3. The highest concentration of MtBE was detected in monitoring well MW-4. This can be attributed to the proximity of the well to the dispenser islands. Monitoring well MW-4 is located west of the dispenser islands that were remodeled in May 1999. However, MtBE is still significantly lower in MW-4 than the concentration detected during the initial monitoring event in May 2002, where MtBE was detected at 12,000 µg/L.

4. TBA was detected in wells MW-1 and MW-4. However, TBA decreased in both of these wells. Historically, DIPE has remained below the laboratory limit in all monitoring wells. ETBE has historically remained below the laboratory reporting limit in all wells, with the exception of well MW-4. ETBE, in well MW-4, decreased during this quarter. Historically, TAME has remained below the laboratory reporting limit in wells MW-1 and MW-2. TAME decreased in wells MW-3 and MW-5, and increased slightly in well MW-4.

6.0 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 Curtis & Tompkins Laboratories for the current groundwater monitoring event. The number and location of the wells were selected to provide the required information, but may not be completely representative of the entire Site's conditions. All conclusions and recommendations are based on the results of the laboratory analysis. Conclusions beyond those specifically stated in this document should not be inferred from this report.

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

Figures

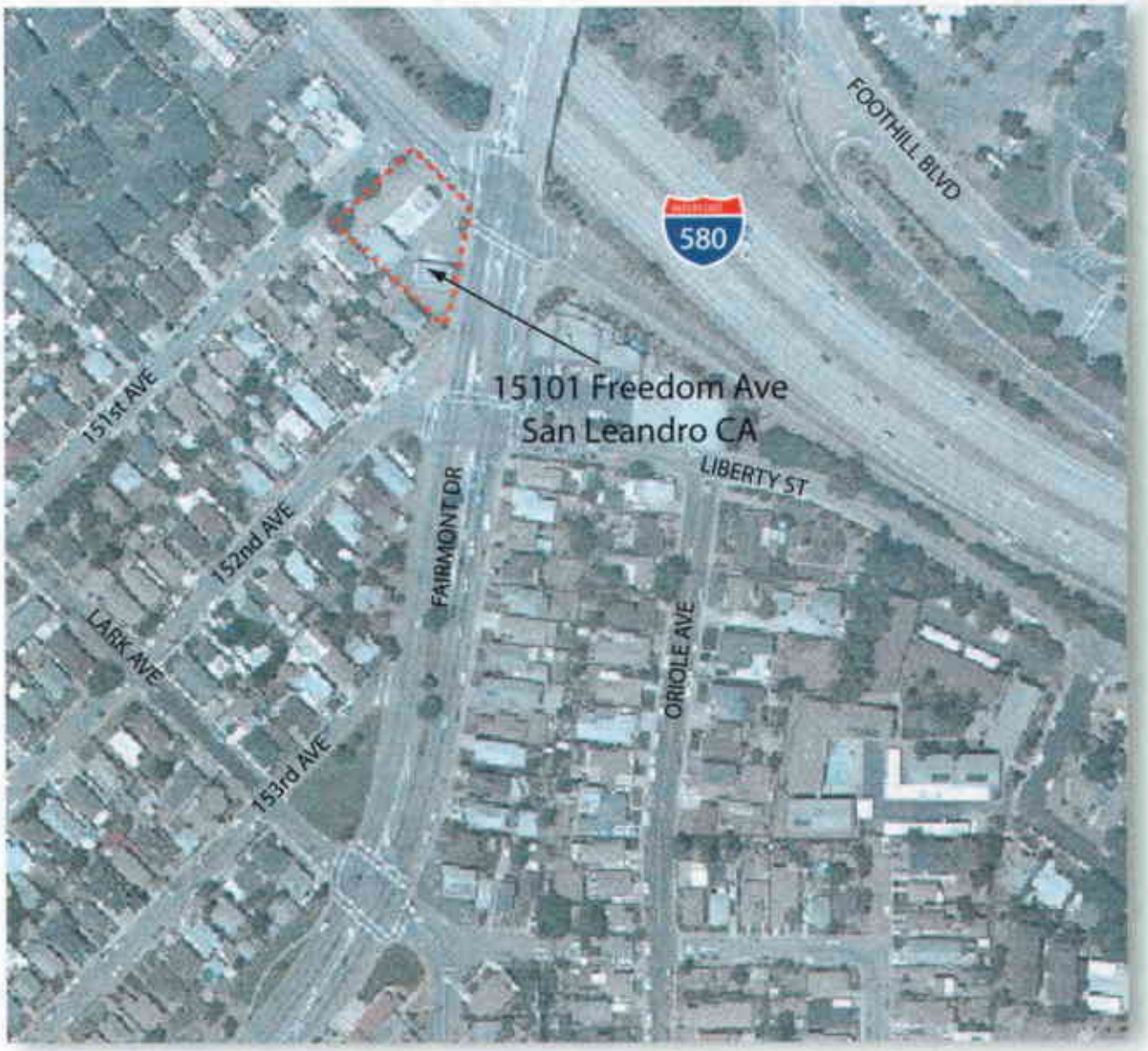

Figure 1: Site vicinity map.

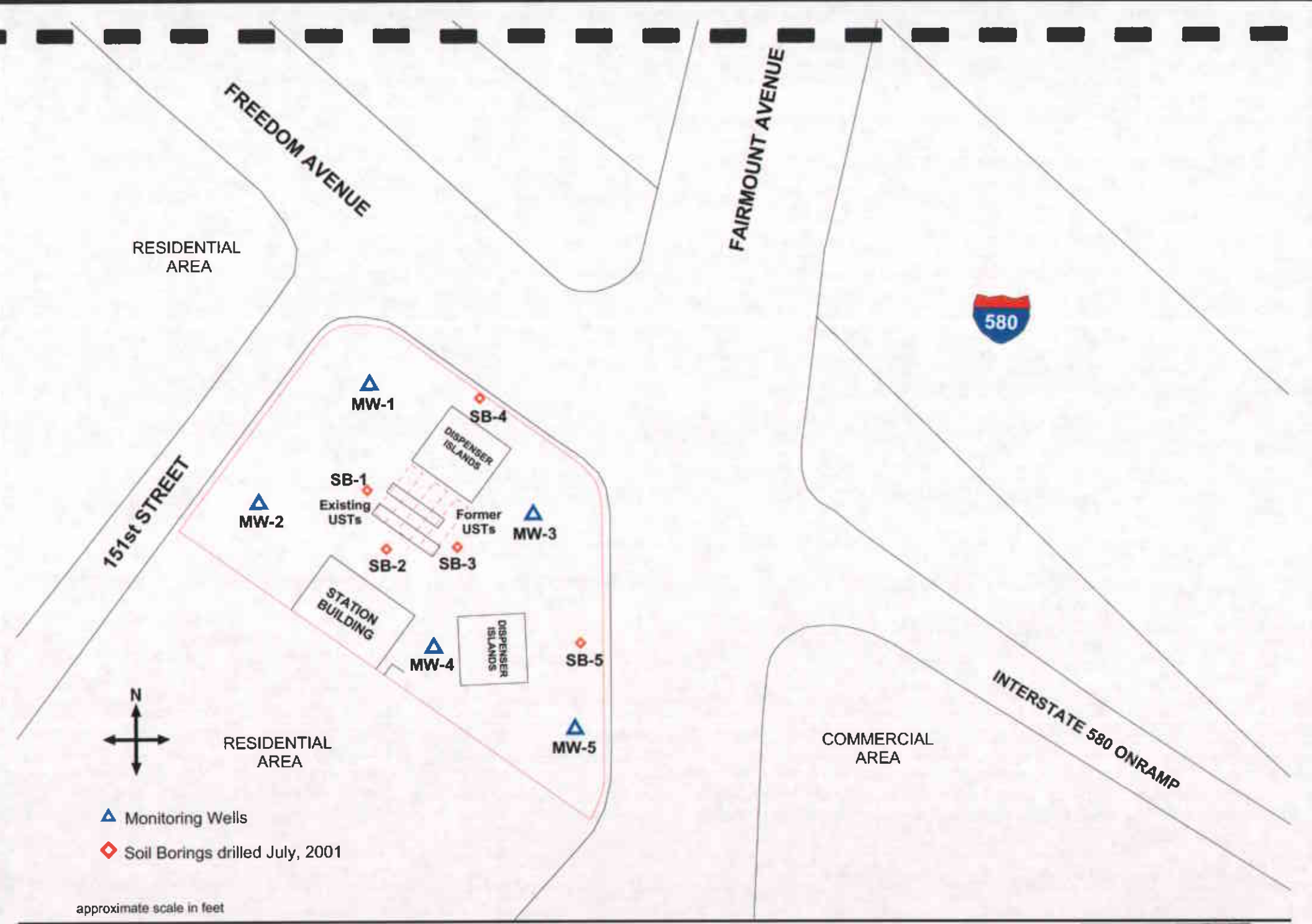

Figure 2: Site map showing locations of groundwater monitoring wells and soil borings.

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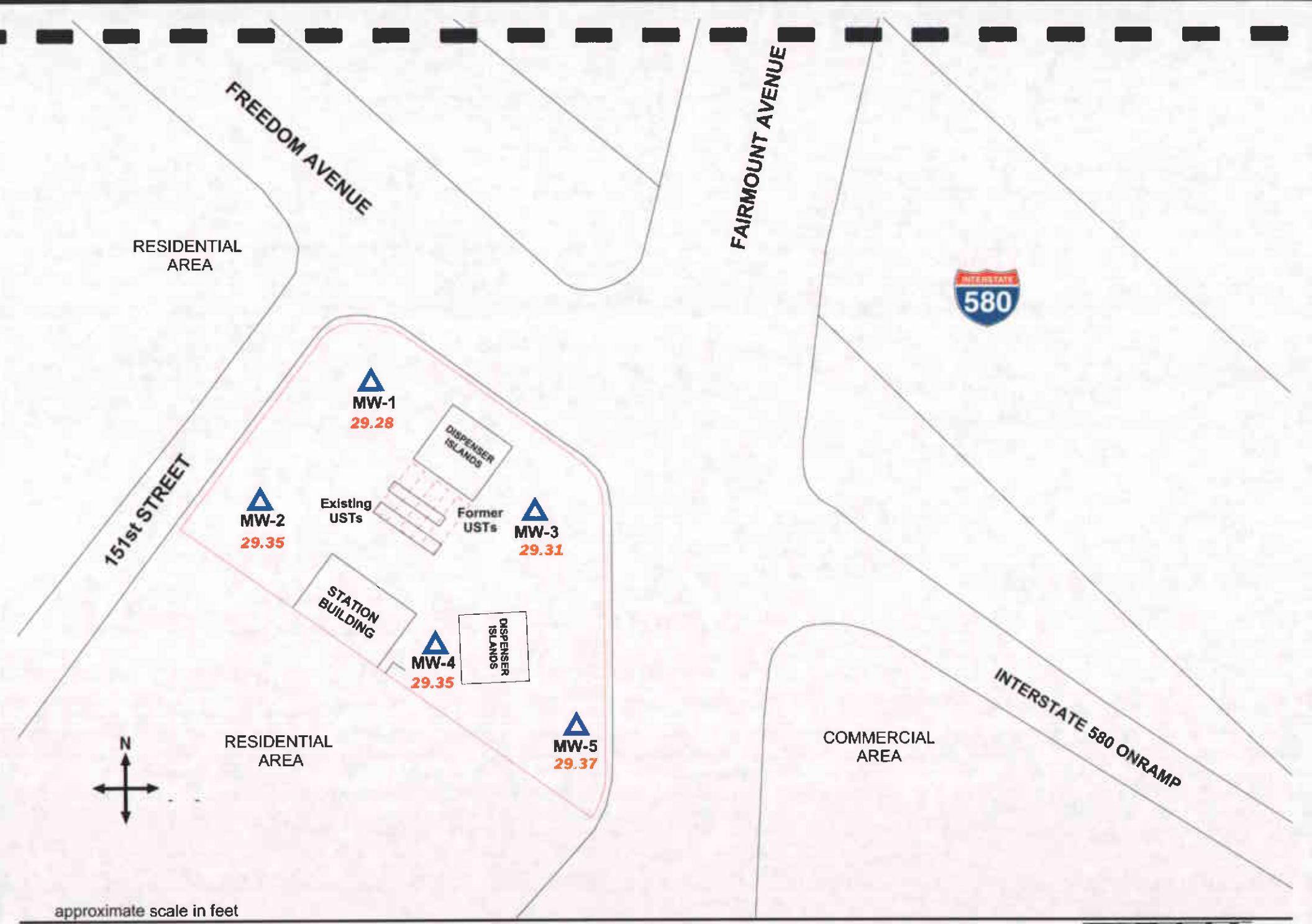


Figure 3: Map of Groundwater Elevations in feet.
January, 2004.

SOMA ENVIRONMENTAL ENGINEERING, INC.

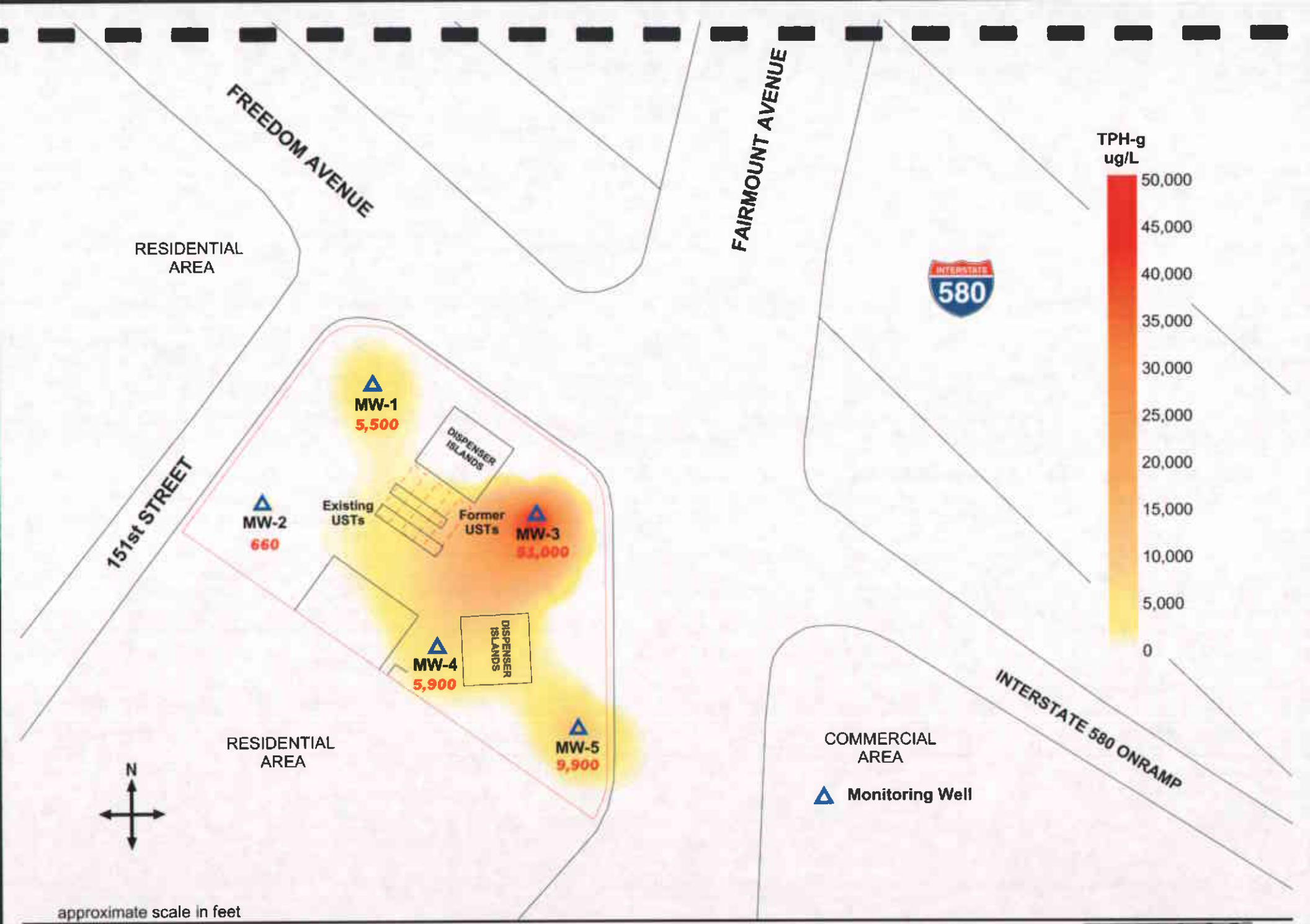


Figure 4: Contour map of TPH-g concentrations in groundwater.
January, 2004.

SOMA ENVIRONMENTAL ENGINEERING, INC

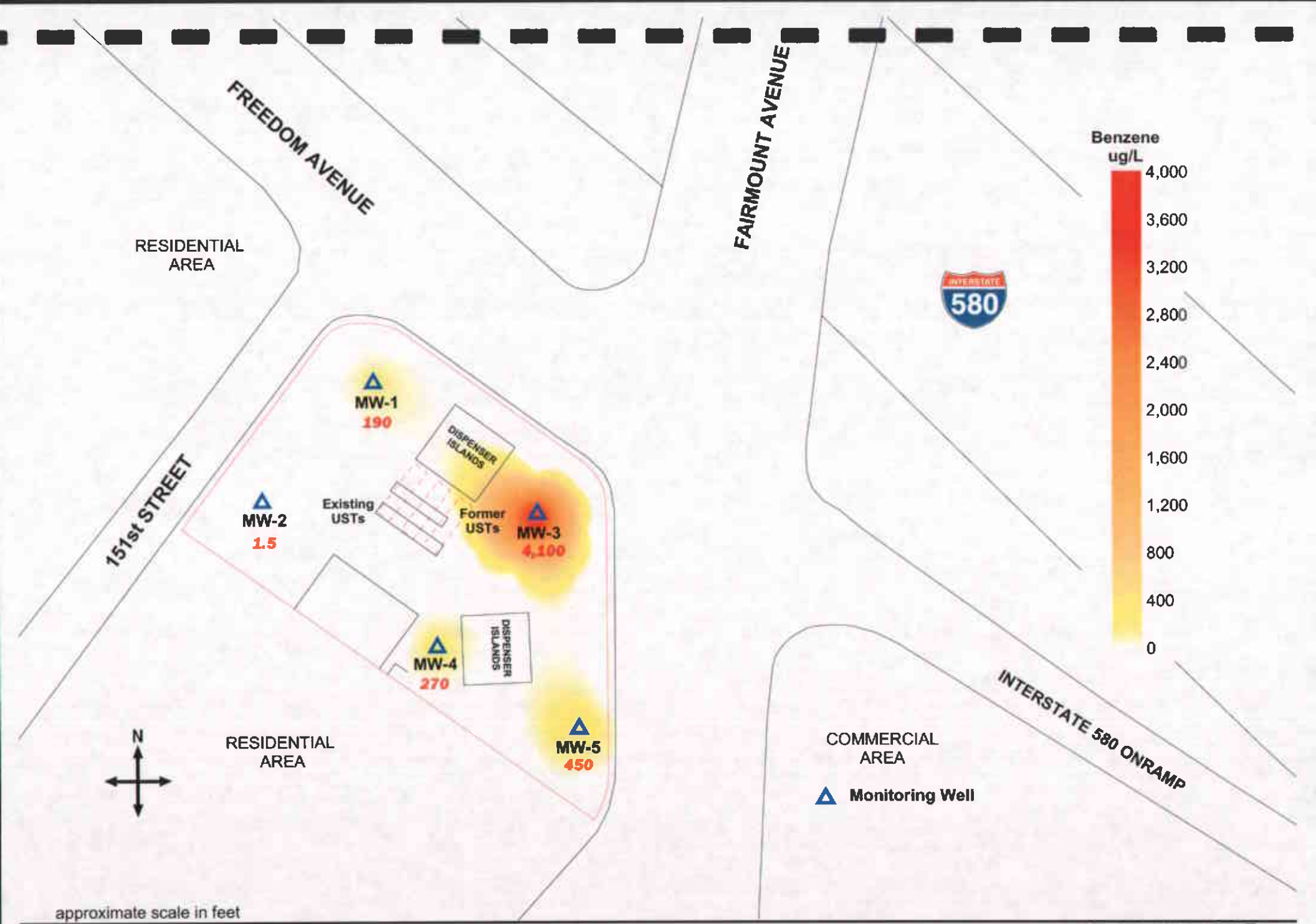


Figure 5: Contour map of Benzene concentrations in groundwater.
January, 2004.

SOMA ENVIRONMENTAL ENGINEERING, INC.

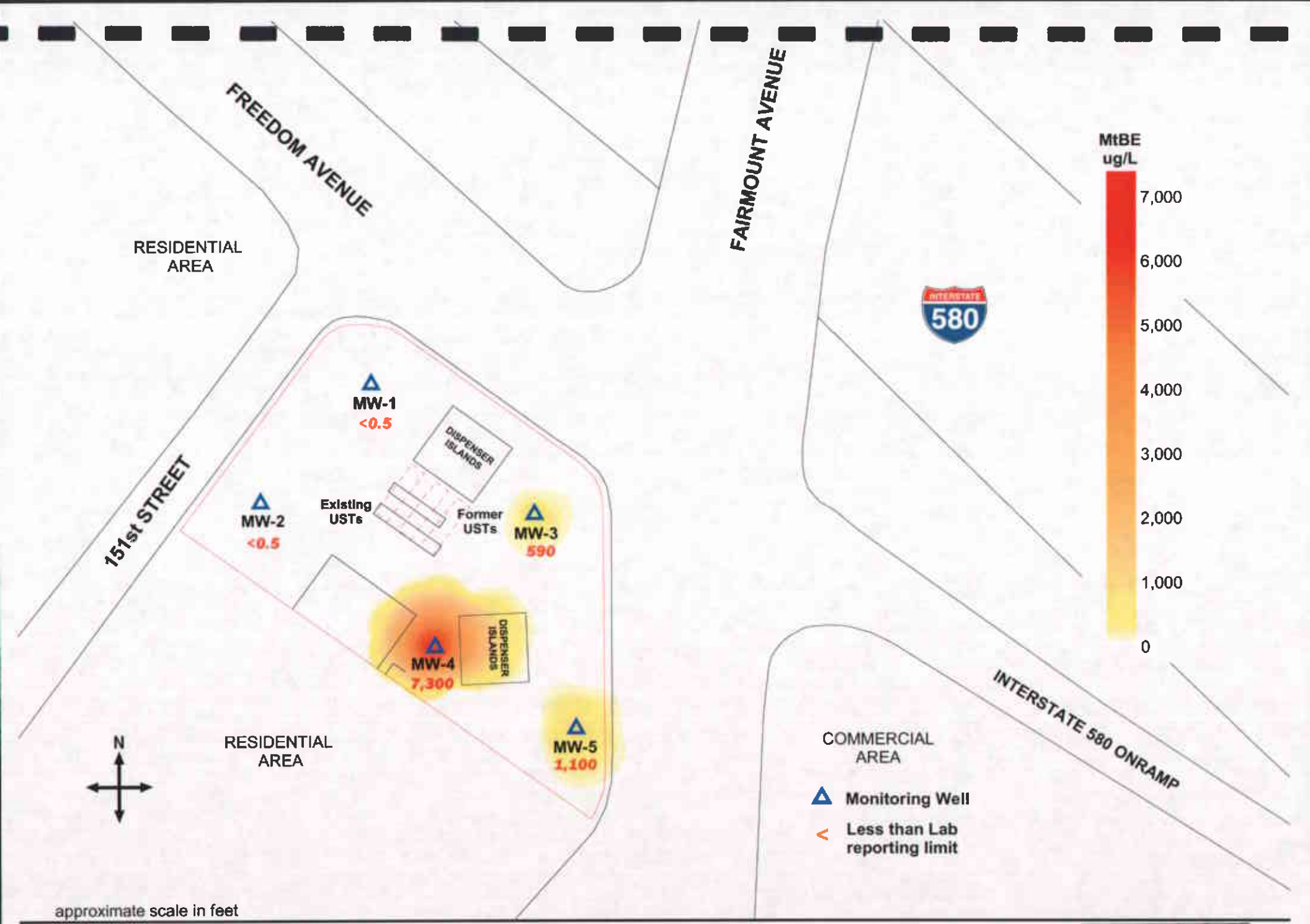


Figure 6: Contour map of MtBE concentrations in groundwater (EPA Method 8260).
January, 2004.

SOMA ENVIRONMENTAL ENGINEERING, INC.

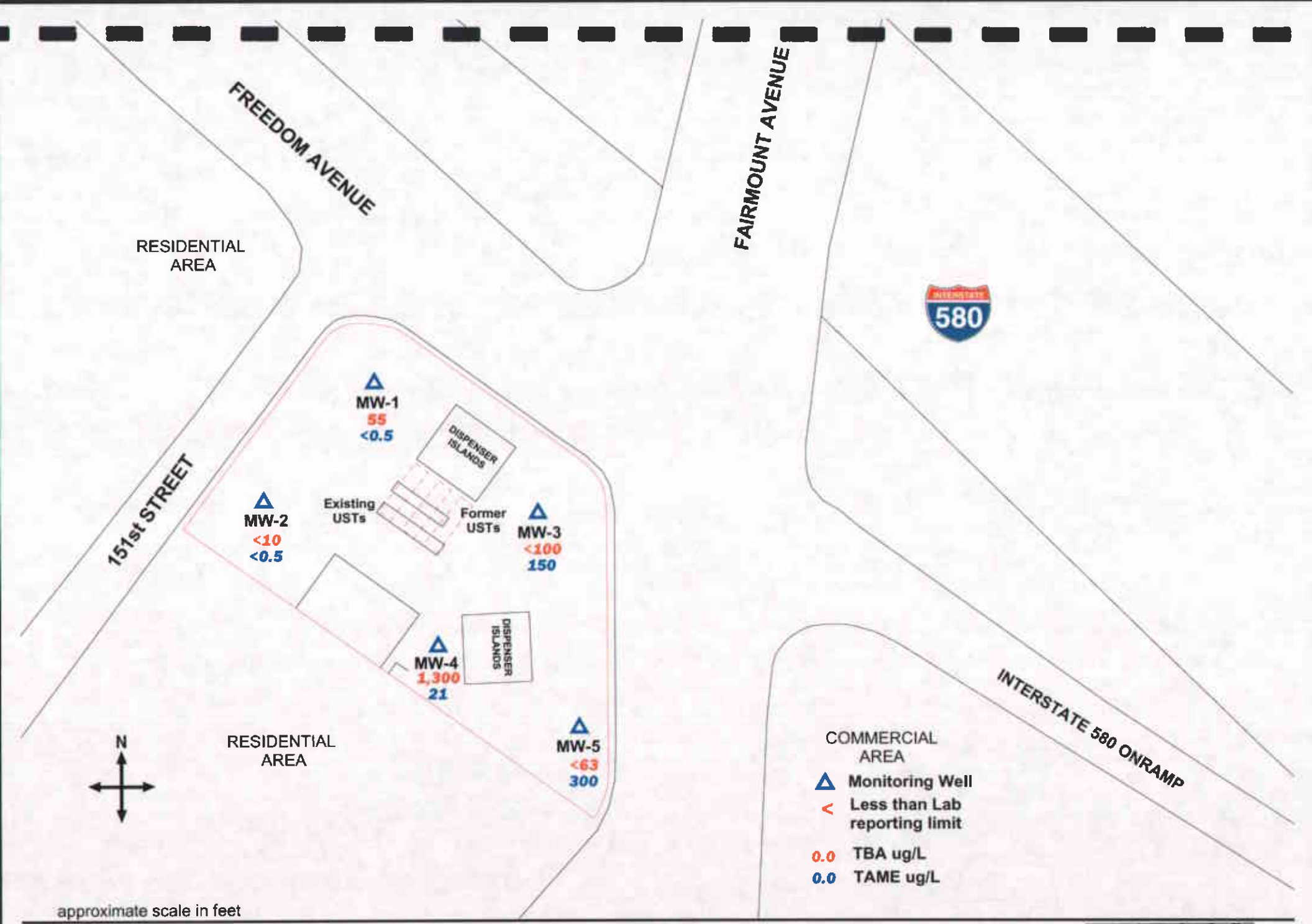


Figure 7 : Map of TBA and TAME concentrations in the groundwater.
January, 2004.

SOMA ENVIRONMENTAL ENGINEERING, INC.

Tables

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

Monitoring Well	Date	Casing Elevation [1] (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B [2] (µg/L)
MW-1	May-02	51.71	28.86	5,700	360	4.5	340	450	2
	Aug-02	51.71	28.40	9,100	590	2.6	830	362	<1.3
	Nov-02	51.71	28.13	7,900	570	3.1	680	392	< 1.0
	Feb-03	51.71	29.09	2,900	160	1.6 C	170	211	<0.5
	May-03	51.71	29.28	1,700	55	<0.5	90	115	2.00
	Aug-03	51.71	30.41	2,600	2.5	<0.5	190	130	<0.5
	Oct-03	51.71	28.22	9,200	560.0	2.7 C	670	648	<1.0
	Jan-04	**51.71**	**29.28**	**5,500**	**190**	**<1.0**	**220**	**124.4**	**<0.5**
MW-2	May-02	49.66	26.83 *	3,100	67	8	250	215	56
	Aug-02	49.66	28.25	2,700	4.6	<0.5	310	140	<0.5
	Nov-02	49.66	27.87	3,400	4.6	< 0.5	310	160	< 0.5
	Feb-03	49.66	29.15	890	1.7 C	0.80 C	68	38.92 C	<0.5
	May-03	49.66	29.33	2,700	5.2 C	<0.5	120	140	1.2
	Aug-03	49.66	26.48*	8,500	640	<2.5	560	659	<0.8
	Oct-03	49.66	27.95	3100 H	4.3 C	<0.5	210	160	<0.5
	Jan-04	**49.66**	**29.35**	**660 H**	**1.5 C**	**<0.5**	**8.9**	**25**	**<0.5**
MW-3	May-02	51.16	28.88	44,000	6,000	900	1,500	6,200	2,400
	Aug-02	51.16	28.28	40,000	5,800	1,100	1,600	6,500	1,300
	Nov-02	51.16	27.97	47,000	5,300	1,200	2,200	8,600	1,000
	Feb-03	51.16	29.14	39,000	5,500	1,500	2,000	8,600	1,300
	May-03	51.16	29.27	52,000	7,300	3,000	2,800	12,700	2,100
	Aug-03	51.16	28.50	31,000	6,100	860	1,500	6,900	1,200
	Oct-03	51.16	28.10	41,000	6,100	1,100	2,200	10,200	960
	Jan-04	**51.16**	**29.31**	**51,000**	**4,100**	**1,100**	**2,000**	**8,400**	**590**

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

Monitoring Well	Date	Casing Elevation [1] (feet)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B [2] (µg/L)
MW-4	May-02	50.54	28.76	880	25	1.0C	110	52	12,000
	Aug-02	50.54	28.04	3,800	70	<5.0	300	115	4,800
	Nov-02	50.54	27.73	5,100	150	10	460	258	2,400
	Feb-03	50.54	29.06	3,200	98	66	220	360	6,600
	May-03	50.54	29.30	6,200	140	46	200	790	2,300
	Aug-03	50.54	28.22	7,500	180	57	220	1450	1,900
	Oct-03	50.54	27.80	5,800	250	32	300	970	7,800
	Jan-04	**50.54**	**29.35**	**5,900**	**270**	**17 C**	**150**	**640**	**7,300**
MW-5	May-02	47.79	28.77	25,000	1,000	1200	1,100	3,060	1,800
	Aug-02	47.79	27.99	18,000	1,000	660	950	1,720	1,500
	Nov-02	47.79	27.65	16,000	1,300	380	930	1,550	1,200
	Feb-03	47.79	29.09	12,000	390	71	770	1,100	860
	May-03	47.79	29.27	9,100	210	31	560	790	600
	Aug-03	47.79	28.25	12,000	660	75	660	1,110	1,000
	Oct-03	47.79	27.73	15,000	1,000	130	1,000	1,430	1,700
	Jan-04	**47.79**	**29.37**	**9,900**	**450 C**	**16**	**500**	**431**	**1,100**

Notes:

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

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

Monitoring wells were surveyed by Kier and Wright Civil Engineer & Land Surveyors.

Surveying was conducted on May 7, 2002.

[1]: Top of casing elevations were surveyed to an assumed datum of 67.07 M.S.L.

<: Not detected above the laboratory reporting limit.

[c] Presence confirmed, but confirmation concentration differed by more than a factor of two.

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

H: Heavier hydrocarbons contributed to the quantitation.

[2] MtBE analyzed by EPA Method 8021B, and confirmed by EPA Method 8260B.

NA Not Analyzed

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)
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**
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
	Aug-03	69	<0.8	<0.8	<0.8
	Oct-03	12	<0.5	<0.5	<0.5
	Jan-04	**<10**	**<0.5**	**<0.5**	**<0.5**
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**
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**
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**

Notes:

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

<: Not detected above the laboratory reporting limit.

TBA: tert-Butyl Alcohol

DIPE: Isopropyl Ether

ETBE: Ethyl tert-Butyl Ether

TAME: Methyl tert-Amyl Ether

Appendix A

Table of Elevations & Coordinates on Monitoring Wells Measured by Kier Wright Civil Engineers Surveyors, Inc., and Field Measurements of Physical and Chemical Parameters of Groundwater Samples

Survey Date 05/07/02
Job No. A02545

Table of Elevations & Coordinates

On Monitoring Wells
Texaco Service Station
15101 Freedom Avenue
San Leandro, California

Well No.	Northing	Easting	Elevation
MW-1	5106.89	4812.60	51.71 -Top of PVC casing, North side @ Punch Mark 52.08 – Top North Rim of Box
MW-2	5056.82	4766.17	49.66 – Top of PVC Casing, North Side @ Punch Mark 50.19 - Top North Rim of Box
MW-3	5051.97	4881.26	51.16 - Top of PVC Casing, North side @ Punch Mark 51.60 - Top North Rim of Box
MW-4	4996.14	4839.06	50.54 – Top of PVC Casing, North side @ Punch Mark 50.98 - Top North Rim of Box
MW-5	4961.75	4898.20	47.79 – Top of PVC Casing, North side @Punch Mark 48.25 - Top North Rim of Box
Building Corner	5035.26	4796.09	
Building Corner	5009.72	4831.30	
Building Corner	4979.40	4808.97	
Building Corner	5005.06	4773.92	

Benchmark: Alameda County Benchmark "Fair-580"
Alameda County disc stamped "Fair-580 – 1976" set in the top of the Northwesterly concrete walk at the Northwest corner of the Fairmont Drive over-crossing of I-580, 1' southeast of the northwesterly concrete bridge rail, 1.9' southwesterly of the northeasterly end of the northwest concrete walk for the bridge.
Elevation = 67.07 M.S.L. Datum

Kier & Wright Civil Engineer & Land Surveyors, Inc.
1233 Quarry Lane, Suite 145 ♦ PLEASANTON, CALIFORNIA 94566 ♦ (925) 249-6555 ♦ (925) 249-6563

ENVIRONMENTAL ENGINEERING, INC

Well No.:	MW-1	**Project No.:**	2551
Casing Diameter:	4 inches	**Address:**	15101 Freedom Ave.
Depth of Well:	30 feet		San Leandro, CA
Top of Casing Elevation:	57.71 feet	**Date:**	15-Jan-04
Depth to Groundwater:	22.43 feet	**Sampler:**	Tony Perini
Groundwater Elevation:	29.28 feet		Roy Zarrin
Water Column Height:	7.57 feet		
Purged Volume:	8 gallons		

Purging Method:	**Bailer**	☐	**Pump**	■
Sampling Method:	**Bailer**	■	**Pump**	☐

Color:	**Yes**	☐	**No**	☑	**Describe:** _____
Sheen:	**Yes**	☐	**No**	☑	**Describe:** _____
Odor:	**Yes**	☐	**No**	☑	**Describe:** _____

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
11:49 AM	1	6.38	19.5	1500
11:52 AM	5	6.35	19.7	1490
11:54AM	8	6.29	19.9	1460
11:55AM	Sampled			

ENVIRONMENTAL ENGINEERING, INC

Well No.:	MW-2	**Project No.:**	2551
Casing Diameter:	4 inches	**Address:**	15101 Freedom Ave.
Depth of Well:	30 feet		San Leandro, CA
Top of Casing Elevation:	49.66 feet	**Date:**	15-Jan-04
Depth to Groundwater:	20.31 feet	**Sampler:**	Tony Perini
Groundwater Elevation:	29.35 feet		ROY ZARRIN
Water Column Height:	9.69 feet		
Purged Volume:	10 gallons		

Purging Method:	**Bailer**	□	**Pump**	■
Sampling Method:	**Bailer**	■	**Pump**	□

Color:	**Yes**	☑	**No** □	**Describe:**	cloudy
Sheen:	**Yes**	□	**No** ☑	**Describe:**	
Odor:	**Yes**	□	**No** ☑	**Describe:**	

Field Measurements:

Time	Vol (gallons)	pH	Temp (° C)	E.C. (µs/cm)
11:23 AM	1.0	6.83	19.60	1730
11:27 AM	4.0	6.44	19.40	1640
11:29 AM	8.0	6.34	19.70	1630
11:31 AM	10	6.36	20.00	1610
11:35 AM	Sampled			

ENVIRONMENTAL ENGINEERING, INC

Well No.:	MW-3	**Project No.:**	2551
Casing Diameter:	4 inches	**Address:**	15101 Freedom Ave.
Depth of Well:	30 feet		San Leandro, CA
Top of Casing Elevation:	51.16 feet	**Date:**	15-Jan-04
Depth to Groundwater:	21.85 feet	**Sampler:**	Tony Perini
Groundwater Elevation:	29.31 feet		ROY ZARRIN
Water Column Height:	8.15 feet		
Purged Volume:	8 gallons		

Purging Method: Bailer ☐ Pump ■

Sampling Method: Bailer ■ Pump ☐

Color: Yes ☐ No ☑ **Describe:** _____

Sheen: Yes ☐ No ☑ **Describe:** _____

Odor: Yes ☐ No ☑ **Describe:** _____

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
12:50 PM	1.5	6.43	20.20	1460
12:53 PM	5.5	6.39	20.20	1420
12:55 PM	8.0	6.37	20.40	1400

ENVIRONMENTAL ENGINEERING, INC

Well No.:	MW-4	**Project No.:**	2551
Casing Diameter:	4 inches	**Address:**	15101 Freedom Ave.
Depth of Well:	30 feet		San Leandro, CA
Top of Casing Elevation:	50.54 feet	**Date:**	15-Jan-04
Depth to Groundwater:	21.19 feet	**Sampler:**	Tony Perini
Groundwater Elevation:	29.35 feet		Roy Zarrin
Water Column Height:	8.81 feet		
Purged Volume:	10 gallons		

Purging Method:	**Bailer**	☐	**Pump**	■
Sampling Method:	**Bailer**	■	**Pump**	☐

Color:	**Yes**	☐	**No**	☑	**Describe:**
Sheen:	**Yes**	☐	**No**	☑	**Describe:**
Odor:	**Yes**	☑	**No**	☐	**Describe:** slight odor

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
12:13 PM	1.5	6.42	19.10	1820
12:16 PM	6.0	6.35	19.30	1810
12:18 PM	10	6.32	19.40	1800
12:20 PM	sampled			

ENVIRONMENTAL ENGINEERING, INC

Well No.:	MW-5	**Project No.:**	2551
Casing Diameter:	4 inches	**Address:**	15101 Freedom Ave.
Depth of Well:	30 feet		San Leandro, CA
Top of Casing Elevation:	47.79 feet	**Date:**	15-Jan-04
Depth to Groundwater:	18.42 feet	**Sampler:**	Tony Perini
Groundwater Elevation:	29.37 feet		ROY JOHNSON
Water Column Height:	11.58 feet		
Purged Volume:	10 gallons		

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

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
12:32 PM	1	6.45	19.9	1460
12:34 PM	4	6.44	20.1	1440
12:35 PM	6	6.41	20.3	1430
12:38 PM	10	6.39	20.3	1430
12:40 PM	Sampled			

Appendix B

Laboratory Report and Chain of Custody Form

for the

First Quarter 2004 Monitoring Event

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

SOMA Environmental Engineering Inc.
2680 Bishop Dr.
Suite 203
San Ramon, CA 94583

Date: 27-JAN-04
Lab Job Number: 170022
Project ID: 2551
Location: 15101 Freedom Avenue

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by: _____
Project Manager

Reviewed by: _____
Operations Manager

CHAIN OF CUSTODY

Page ____ of ____

Curtis & Tompkins, Ltd.
Analytical Laboratory Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510)486-0900 Phone
(510)486-0532 Fax

C&T LOGIN # 170022

Sampler: ROY DARRIN

Project No: 2551

Report To: Tony Perini

Project Name: 15101 Freedom Ave.,San Leandro

Company : SOMA Environmental

Turnaround Time: Standard

Telephone: 925-244-6600

Fax: 925-244-6601

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Matrix: Water	Matrix: Waste	# of Containers	Preservative: HCL	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: ICE	Analyses: TPHg 8015	Analyses: BTEX + MBE 8021 GC	Analyses: ~~MBE Confirmation 8260 GCMS~~	Analyses: Gasoline Oxygenates, Lemb Schwinger
-1	MW-1	1/15/04 11:55 AM		✓		4-VOAs	✓			✓	✓	✓		✓
-2	MW-2	11:35 AM		↓		↓	↓			↓	↓	↓		↓
-3	MW-3	12:55 PM		↓		↓	↓			↓	↓	↓		↓
-4	MW-4	12:20 PM		↓		↓	↓			↓	↓	↓		↓
-5	MW-5	12:40 PM		↓		↓	↓			↓	↓	↓		↓

Notes: **EDF OUTPUT REQUIRED**

Received: ☑ Cold ☐ Ambient ☐ Intact ☑ On ice

RELINQUISHED BY:	RECEIVED BY:
Tony Perini / Tony Perini 1/15/04 2:30PM DATE/TIME	1/15/04 1430 DATE/TIME
DATE/TIME	DATE/TIME
DATE/TIME	DATE/TIME

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	170022	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551		
Matrix:	Water	Sampled:	01/15/04
Units:	ug/L	Received:	01/15/04
Batch#:	87706	Analyzed:	01/16/04

Field ID: MW-1 Lab ID: 170022-001
Type: SAMPLE Diln Fac: 2.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	5,500	100	8015B
Benzene	190	1.0	EPA 8021B
Toluene	ND	1.0	EPA 8021B
Ethylbenzene	220	1.0	EPA 8021B
m,p-Xylenes	120	1.0	EPA 8021B
o-Xylene	4.4	1.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	128	57-150	8015B
Bromofluorobenzene (FID)	113	65-144	8015B
Trifluorotoluene (PID)	102	54-149	EPA 8021B
Bromofluorobenzene (PID)	102	58-143	EPA 8021B

Field ID: MW-2 Lab ID: 170022-002
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	660 H	50	8015B
Benzene	1.5 C	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	8.9	0.50	EPA 8021B
m,p-Xylenes	25	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	106	57-150	8015B
Bromofluorobenzene (FID)	112	65-144	8015B
Trifluorotoluene (PID)	94	54-149	EPA 8021B
Bromofluorobenzene (PID)	106	58-143	EPA 8021B

Field ID: MW-3 Lab ID: 170022-003
Type: SAMPLE Diln Fac: 20.00

Analyte	Result	RL	Analysis
Gasoline C7-C12	51,000	1,000	8015B
Benzene	4,100	10	EPA 8021B
Toluene	1,100	10	EPA 8021B
Ethylbenzene	2,000	10	EPA 8021B
m,p-Xylenes	5,800	10	EPA 8021B
o-Xylene	2,600	10	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	112	57-150	8015B
Bromofluorobenzene (FID)	114	65-144	8015B
Trifluorotoluene (PID)	99	54-149	EPA 8021B
Bromofluorobenzene (PID)	105	58-143	EPA 8021B

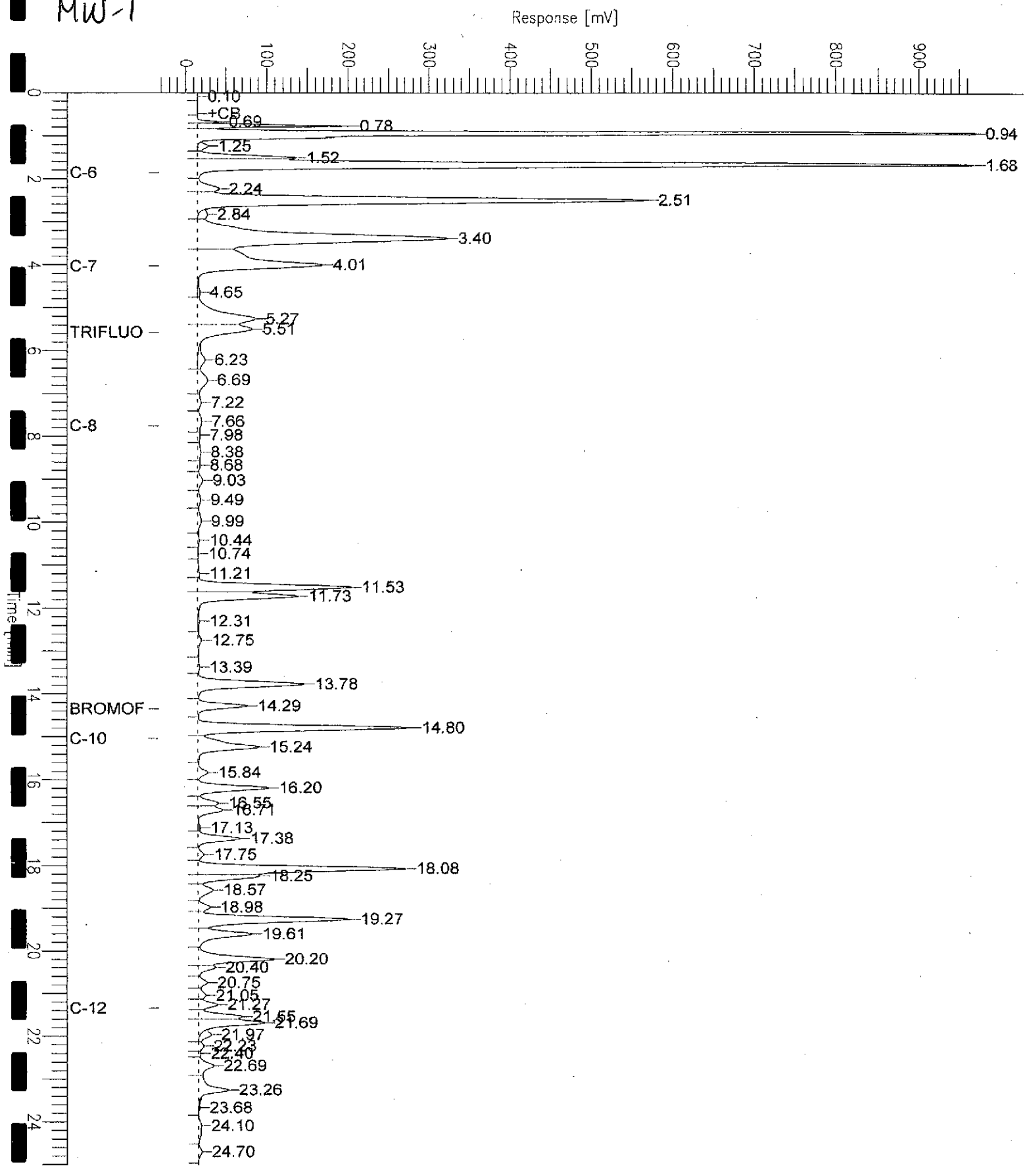
C= Presence confirmed, but RPD between columns exceeds 40%
H= Heavier hydrocarbons contributed to the quantitation
ND= Not Detected
RL= Reporting Limit

Chromatogram

Sample Name : 170022-001,87706
FileName : G:\GC05\DATA\016G007.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 25.00 min
Scale Factor: 1.0 Plot Offset: -33 mV

Sample #: a1.0 Page 1 of 1
Date : 1/16/04 02:59 PM
Time of Injection: 1/16/04 02:34 PM
Low Point : -33.06 mV High Point : 969.36 mV
Plot Scale: 1002.4 mV

MW-1

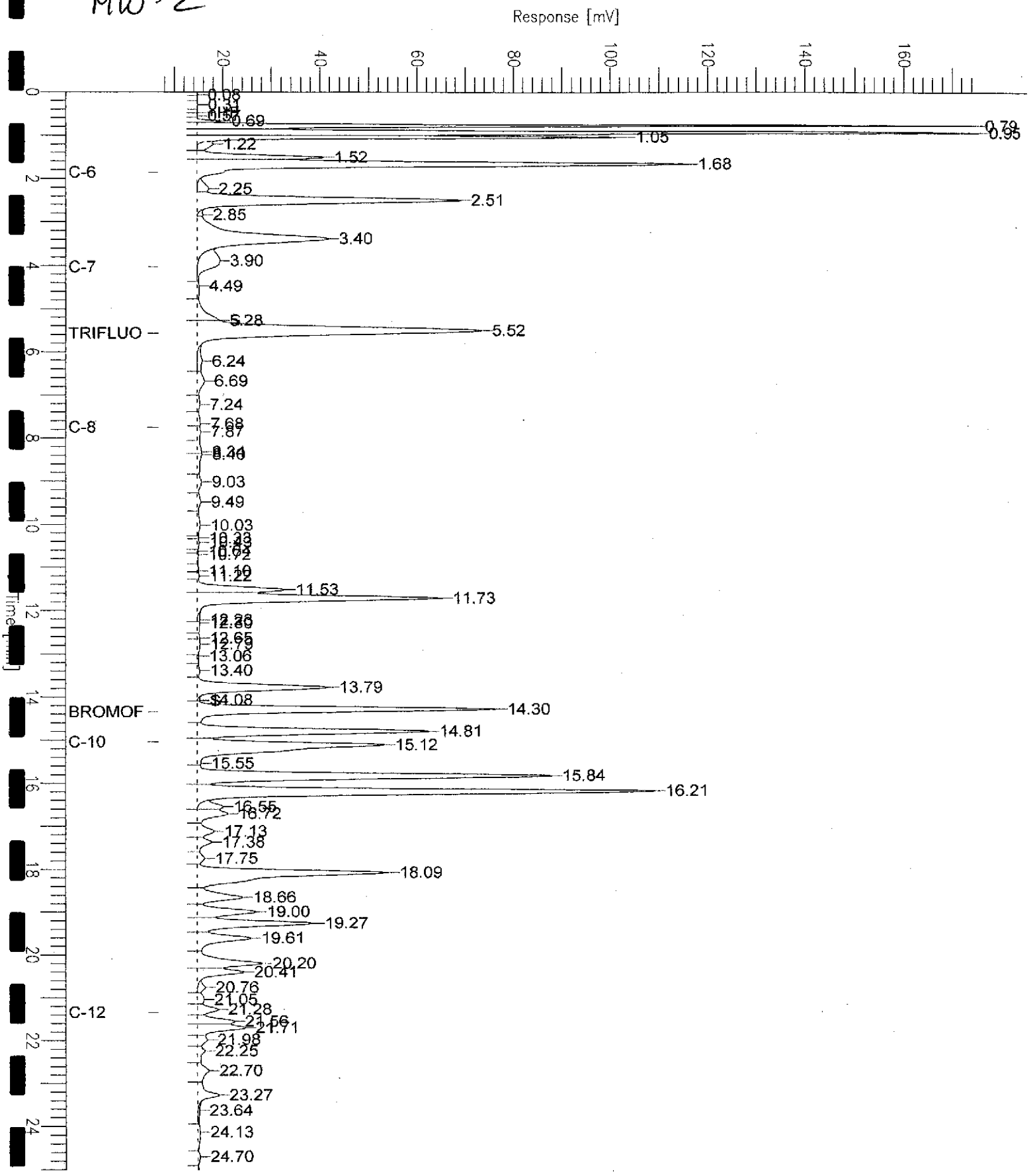


Chromatogram

Sample Name : 170022-002,87706
FileName : G:\GC05\DATA\016G009.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 25.00 min
Scale Factor: 1.0 Plot Offset: 7 mV

Sample #: a1.0 Page 1 of 1
Date : 1/19/04 09:10 AM
Time of Injection: 1/16/04 03:40 PM
Low Point : 6.58 mV High Point : 175.45 mV
Plot Scale: 168.9 mV

MW-2

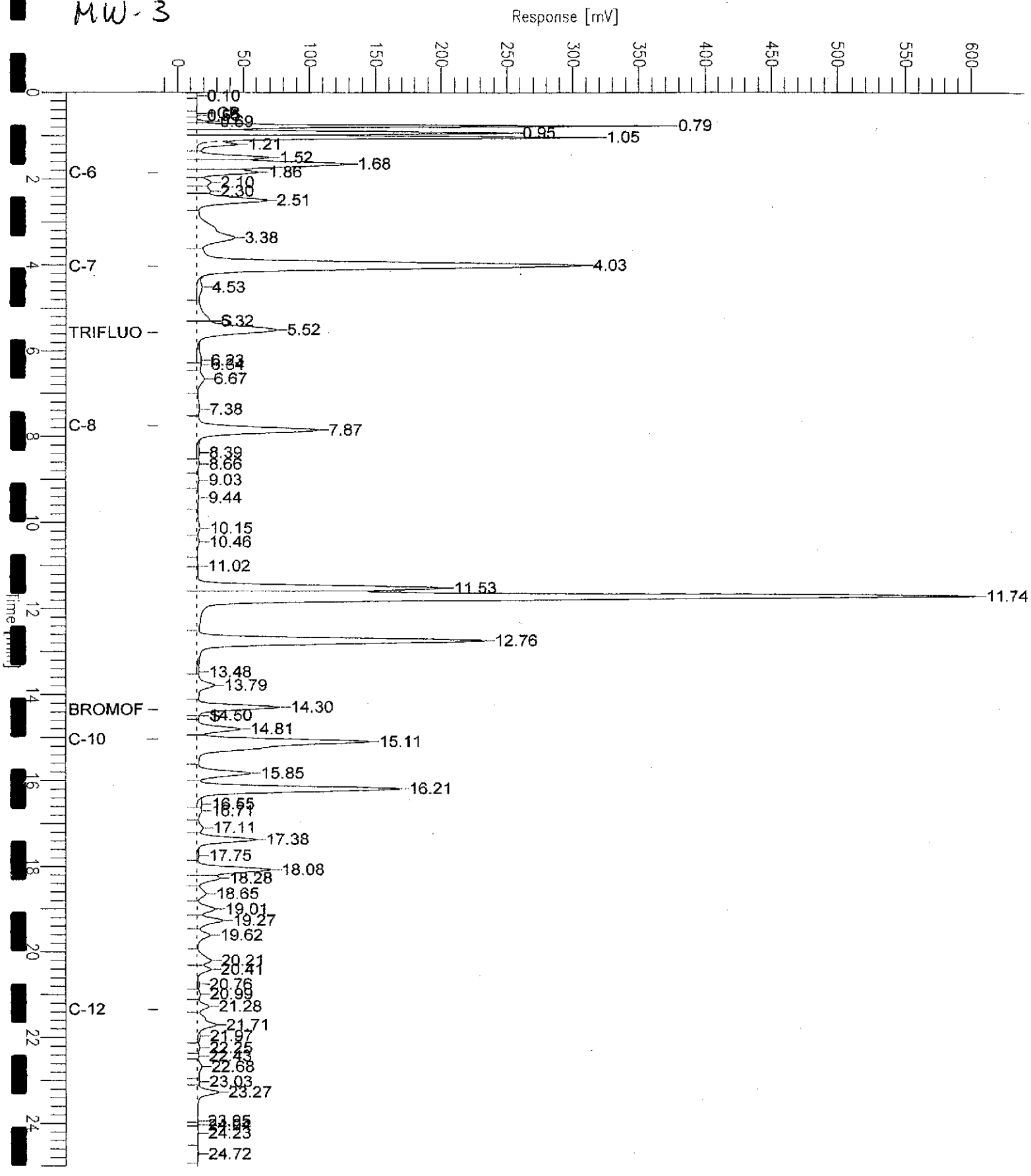


Chromatogram

Sample Name : 170022-003,87706
FileName : G:\GC05\DATA\016G005.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 25.00 min
Scale Factor: 1.0 Plot Offset: -15 mV

Sample #: a1.0 Page 1 of 1
Date : 1/19/04 09:10 AM
Time of Injection: 1/16/04 01:27 PM
Low Point : -14.86 mV High Point : 603.56 mV
Plot Scale: 618.4 mV

MW-3



Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	170022	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551		
Matrix:	Water	Sampled:	01/15/04
Units:	ug/L	Received:	01/15/04
Batch#:	87706	Analyzed:	01/16/04

Field ID:	MW-4	Lab ID:	170022-004
Type:	SAMPLE	Diln Fac:	2.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	5,900	100	8015B
Benzene	270	1.0	EPA 8021B
Toluene	17 C	1.0	EPA 8021B
Ethylbenzene	150	1.0	EPA 8021B
m,p-Xylenes	410	1.0	EPA 8021B
o-Xylene	230	1.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	134	57-150	8015B
Bromofluorobenzene (FID)	122	65-144	8015B
Trifluorotoluene (PID)	104	54-149	EPA 8021B
Bromofluorobenzene (PID)	107	58-143	EPA 8021B

Field ID:	MW-5	Lab ID:	170022-005
Type:	SAMPLE	Diln Fac:	10.00

Analyte	Result	RL	Analysis
Gasoline C7-C12	9,900	500	8015B
Benzene	450 C	5.0	EPA 8021B
Toluene	16	5.0	EPA 8021B
Ethylbenzene	500	5.0	EPA 8021B
m,p-Xylenes	390	5.0	EPA 8021B
o-Xylene	41	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	123	57-150	8015B
Bromofluorobenzene (FID)	117	65-144	8015B
Trifluorotoluene (PID)	109	54-149	EPA 8021B
Bromofluorobenzene (PID)	111	58-143	EPA 8021B

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC238053		

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	101	57-150	8015B
Bromofluorobenzene (FID)	102	65-144	8015B
Trifluorotoluene (PID)	95	54-149	EPA 8021B
Bromofluorobenzene (PID)	99	58-143	EPA 8021B

C= Presence confirmed, but RPD between columns exceeds 40%
H= Heavier hydrocarbons contributed to the quantitation
ND= Not Detected
RL= Reporting Limit

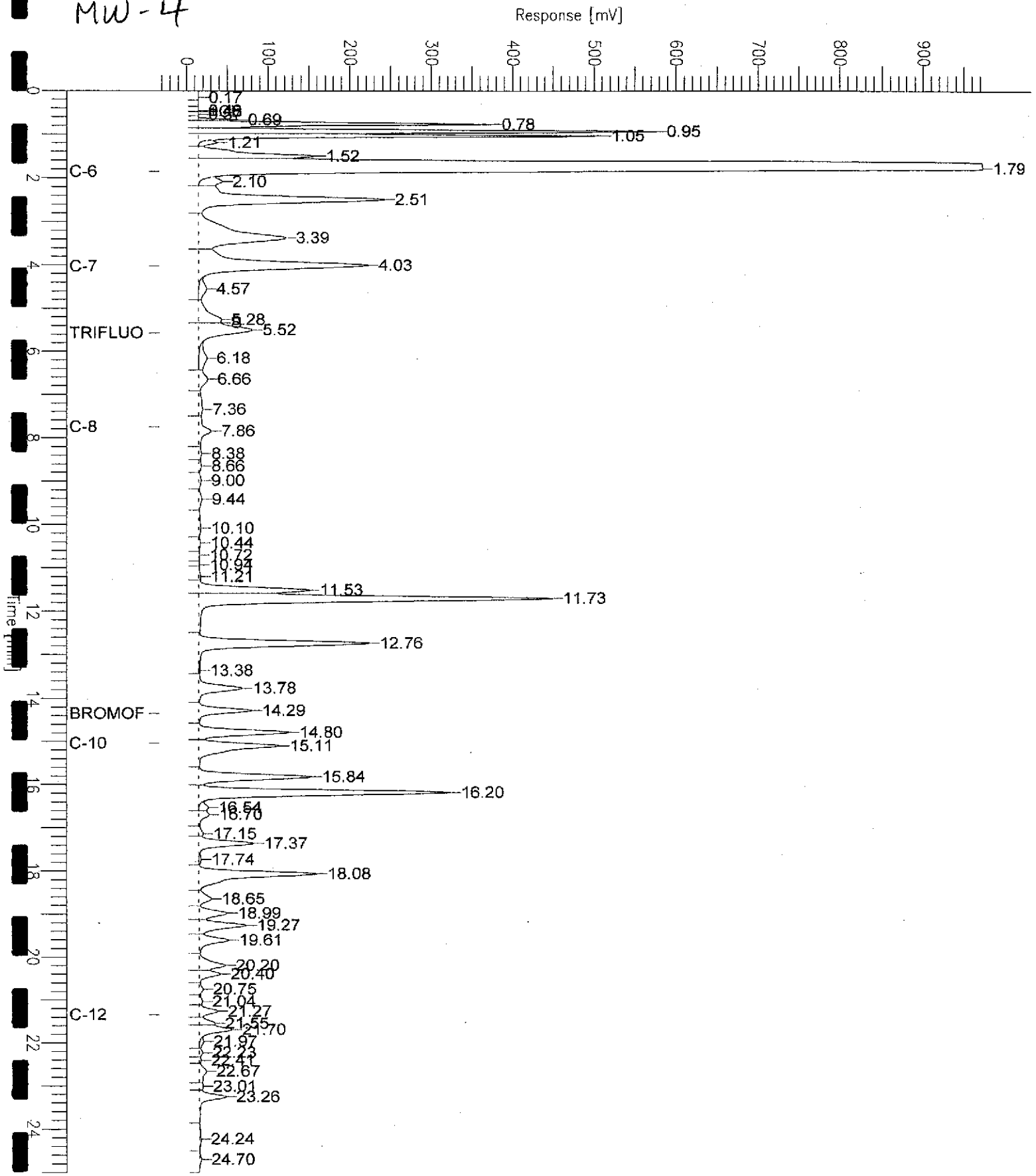
1.0

Chromatogram

Sample Name : 170022-004,87706
FileName : G:\GC05\DATA\016G008.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 25.00 min
Scale Factor: 1.0 Plot Offset: -33 mV

Sample #: a1.0 Page 1 of 1
Date : 1/19/04 09:10 AM
Time of Injection: 1/16/04 03:07 PM
Low Point : -33.26 mV High Point : 972.72 mV
Plot Scale: 1006.0 mV

MW-4

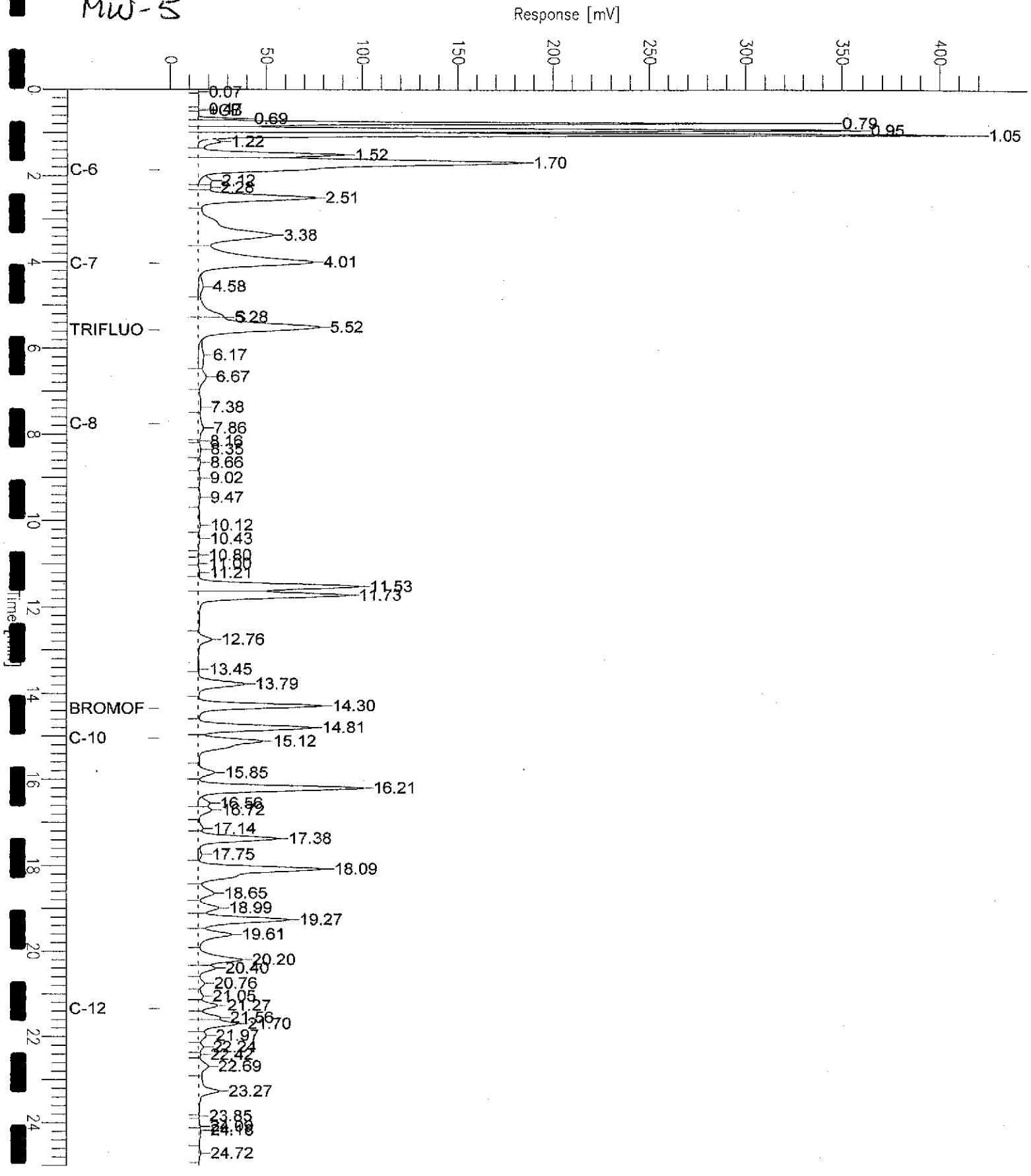


Chromatogram

Sample Name : 170022-005,87706
FileName : G:\GC05\DATA\016G006.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 25.00 min
Scale Factor: 1.0 Plot Offset: -6 mV

Sample #: a1.0 Page 1 of 1
Date : 1/19/04 09:10 AM
Time of Injection: 1/16/04 02:00 PM
Low Point : -5.61 mV High Point : 420.13 mV
Plot Scale: 425.7 mV

MW-5

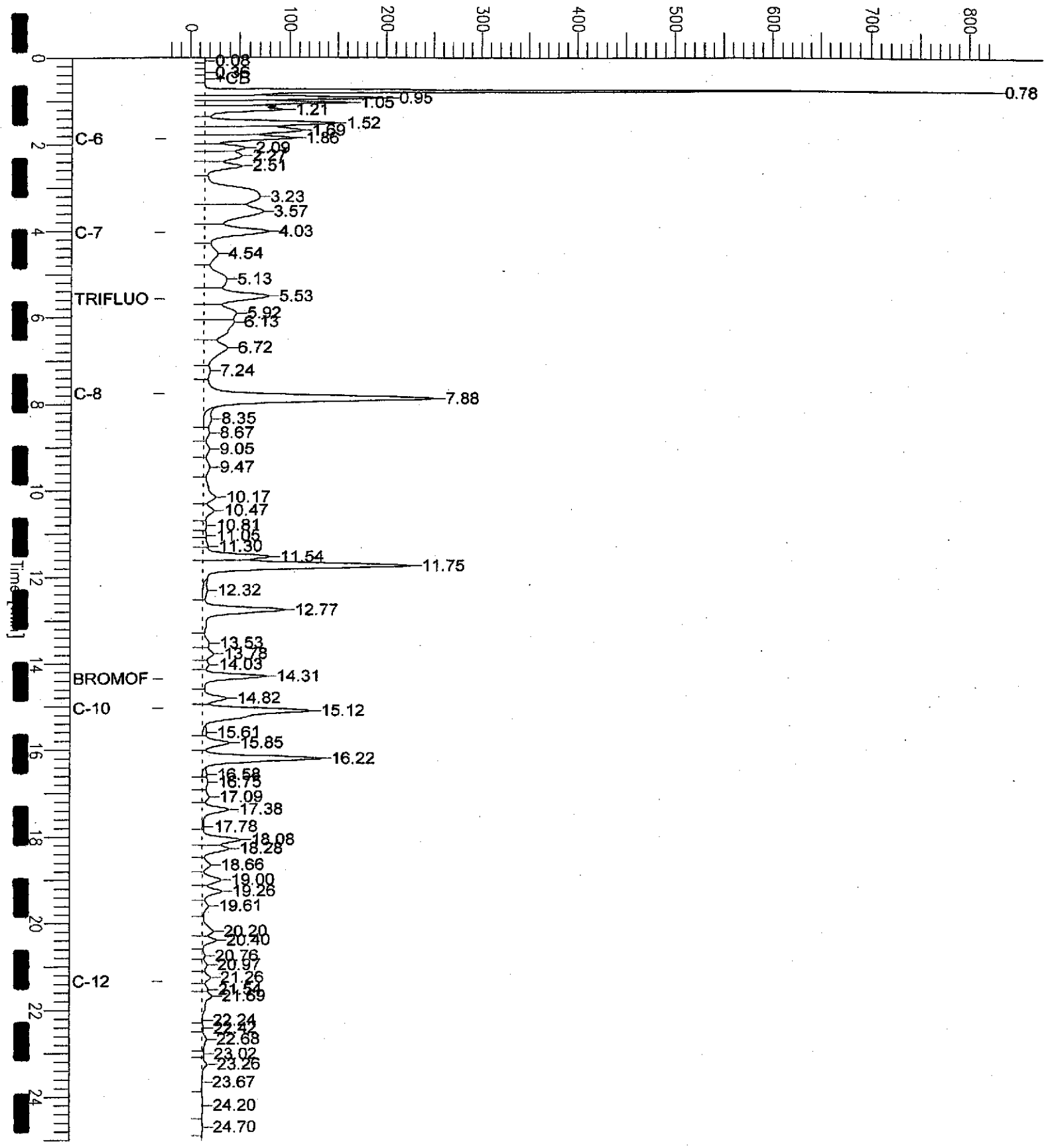


Chromatogram

Sample Name : ccv/lcs,qc238055,87706,03ws2034,5/5000
FileName : G:\GC05\DATA\016G002.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 25.00 min
Scale Factor: 1.0 Plot Offset: -26 mV

Sample #: Page 1 of 1
Date : 1/16/04 11:36 AM
Time of Injection: 1/16/04 11:11 AM
Low Point : -26.03 mV High Point : 825.50 mV
Plot Scale: 851.5 mV

Gasoline



Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	170022	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8021B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC238054	Batch#:	87706
Matrix:	Water	Analyzed:	01/16/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12		NA		
Benzene	20.00	20.62	103	78-123
Toluene	20.00	19.03	95	79-120
Ethylbenzene	20.00	18.87	94	80-120
m,p-Xylenes	40.00	36.43	91	76-120
o-Xylene	20.00	19.66	98	80-121

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		91	54-149
Bromofluorobenzene (PID)		94	58-143

NA= Not Analyzed

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	170022	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC238055	Batch#:	87706
Matrix:	Water	Analyzed:	01/16/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,133	107	80-120
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		128	57-150
Bromofluorobenzene (FID)		125	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	170022	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	8015B
Field ID:	ZZZZZZZZZZ	Batch#:	87706
MSS Lab ID:	170035-001	Sampled:	01/15/04
Matrix:	Water	Received:	01/15/04
Units:	ug/L	Analyzed:	01/17/04
Diln Fac:	1.000		

Type: MS Lab ID: QC238127

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	20.91	2,000	2,090	103	76-120
Benzene			NA		
Toluene			NA		
Ethylbenzene			NA		
m,p-Xylenes			NA		
o-Xylene			NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		123	57-150
Bromofluorobenzene (FID)		125	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

Type: MSD Lab ID: QC238128

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,120	105	76-120	1	20
Benzene		NA				
Toluene		NA				
Ethylbenzene		NA				
m,p-Xylenes		NA				
o-Xylene		NA				

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		125	57-150
Bromofluorobenzene (FID)		128	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Gasoline Oxygenates by GC/MS

Lab #:	170022	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Sampled:	01/15/04
Units:	ug/L	Received:	01/15/04

Field ID:	MW-1	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	87753
Lab ID:	170022-001	Analyzed:	01/19/04

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	55	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-121
1,2-Dichloroethane-d4	105	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	95	80-123

Field ID:	MW-2	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	87720
Lab ID:	170022-002	Analyzed:	01/16/04

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-121
1,2-Dichloroethane-d4	108	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	106	80-123

ND = Not Detected
RL = Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline Oxygenates by GC/MS

Lab #:	170022	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Sampled:	01/15/04
Units:	ug/L	Received:	01/15/04

Field ID:	MW-3	Diln Fac:	10.00
Type:	SAMPLE	Batch#:	87753
Lab ID:	170022-003	Analyzed:	01/19/04

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	100
MTBE	590	5.0
Isopropyl Ether (DIPE)	ND	5.0
Ethyl tert-Butyl Ether (ETBE)	ND	5.0
Methyl tert-Amyl Ether (TAME)	150	5.0
1,2-Dichloroethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Ethanol	ND	10,000

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-121
1,2-Dichloroethane-d4	97	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	98	80-123

Field ID:	MW-4	Diln Fac:	40.00
Type:	SAMPLE	Batch#:	87753
Lab ID:	170022-004	Analyzed:	01/19/04

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	1,300	400
MTBE	7,300	20
Isopropyl Ether (DIPE)	ND	20
Ethyl tert-Butyl Ether (ETBE)	25	20
Methyl tert-Amyl Ether (TAME)	21	20
1,2-Dichloroethane	ND	20
1,2-Dibromoethane	ND	20
Ethanol	ND	40,000

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-121
1,2-Dichloroethane-d4	90	77-129
Toluene-d8	96	80-120
Bromofluorobenzene	111	80-123

ND = Not Detected
RL = Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline Oxygenates by GC/MS

Lab #:	170022	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Sampled:	01/15/04
Units:	ug/L	Received:	01/15/04

Field ID:	MW-5	Diln Fac:	6.250
Type:	SAMPLE	Batch#:	87753
Lab ID:	170022-005	Analyzed:	01/19/04

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	63
MTBE	1,100	3.1
Isopropyl Ether (DIPE)	ND	3.1
Ethyl tert-Butyl Ether (ETBE)	ND	3.1
Methyl tert-Amyl Ether (TAME)	300	3.1
1,2-Dichloroethane	ND	3.1
1,2-Dibromoethane	ND	3.1
Ethanol	ND	6,300

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-121
1,2-Dichloroethane-d4	93	77-129
Toluene-d8	97	80-120
Bromofluorobenzene	100	80-123

Type:	BLANK	Batch#:	87720
Lab ID:	QC238106	Analyzed:	01/16/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-121
1,2-Dichloroethane-d4	106	77-129
Toluene-d8	101	80-120
Bromofluorobenzene	117	80-123

ND = Not Detected
RL = Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline Oxygenates by GC/MS

Lab #:	170022	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Sampled:	01/15/04
Units:	ug/L	Received:	01/15/04

Type:	BLANK	Batch#:	87753
Lab ID:	QC238230	Analyzed:	01/19/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-121
1,2-Dichloroethane-d4	99	77-129
Toluene-d8	98	80-120
Bromofluorobenzene	111	80-123

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline Oxygenates by GC/MS

Lab #:	170022	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC238104	Batch#:	87720
Matrix:	Water	Analyzed:	01/16/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)		NA		
MTBE	50.00	52.60	105	69-124
Isopropyl Ether (DIPE)		NA		
Ethyl tert-Butyl Ether (ETBE)		NA		
Methyl tert-Amyl Ether (TAME)		NA		

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-121
1,2-Dichloroethane-d4	107	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	102	80-123

NA= Not Analyzed

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Gasoline Oxygenates by GC/MS

Lab #:	170022	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC238105	Batch#:	87720
Matrix:	Water	Analyzed:	01/16/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	250.0	325.2	130	70-130
MTBE	50.00	61.03	122	69-124
Isopropyl Ether (DIPE)	50.00	59.14	118	70-130
Ethyl tert-Butyl Ether (ETBE)	50.00	59.43	119	70-130
Methyl tert-Amyl Ether (TAME)	50.00	51.29	103	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-121
1,2-Dichloroethane-d4	104	77-129
Toluene-d8	96	80-120
Bromofluorobenzene	115	80-123

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Gasoline Oxygenates by GC/MS

Lab #:	170022	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	87753
Units:	ug/L	Analyzed:	01/19/04
Diln Fac:	1.000		

Type: BS Lab ID: QC238226

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)		NA		
MTBE	50.00	48.53	97	69-124
Isopropyl Ether (DIPE)		NA		
Ethyl tert-Butyl Ether (ETBE)		NA		
Methyl tert-Amyl Ether (TAME)		NA		

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-121
1,2-Dichloroethane-d4	94	77-129
Toluene-d8	96	80-120
Bromofluorobenzene	98	80-123

Type: BSD Lab ID: QC238227

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)		NA				
MTBE	50.00	52.91	106	69-124	9	20
Isopropyl Ether (DIPE)		NA				
Ethyl tert-Butyl Ether (ETBE)		NA				
Methyl tert-Amyl Ether (TAME)		NA				

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-121
1,2-Dichloroethane-d4	96	77-129
Toluene-d8	96	80-120
Bromofluorobenzene	102	80-123

NA= Not Analyzed
RPD= Relative Percent Difference

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Gasoline Oxygenates by GC/MS

Lab #:	170022	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	87753
Units:	ug/L	Analyzed:	01/19/04
Dil'n Fac:	1.000		

Type: BS Lab ID: QC238228

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	250.0	269.1	108	70-130
MTBE	50.00	52.10	104	69-124
Isopropyl Ether (DIPE)	50.00	51.07	102	70-130
Ethyl tert-Butyl Ether (ETBE)	50.00	51.22	102	70-130
Methyl tert-Amyl Ether (TAME)	50.00	47.54	95	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-121
1,2-Dichloroethane-d4	96	77-129
Toluene-d8	97	80-120
Bromofluorobenzene	108	80-123

Type: BSD Lab ID: QC238229

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	250.0	280.8	112	70-130	4	20
MTBE	50.00	55.02	110	69-124	5	20
Isopropyl Ether (DIPE)	50.00	52.91	106	70-130	4	20
Ethyl tert-Butyl Ether (ETBE)	50.00	52.72	105	70-130	3	20
Methyl tert-Amyl Ether (TAME)	50.00	48.27	97	70-130	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-121
1,2-Dichloroethane-d4	97	77-129
Toluene-d8	98	80-120
Bromofluorobenzene	113	80-123

RPD= Relative Percent Difference

10.0

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Gasoline Oxygenates by GC/MS

Lab #:	170022	Location:	15101 Freedom Avenue
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	87720
MSS Lab ID:	170031-001	Sampled:	01/14/04
Matrix:	Water	Received:	01/15/04
Units:	ug/L	Analyzed:	01/16/04
Diln Fac:	1.000		

Type: MS Lab ID: QC238107

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.1300	50.00	53.59	107	67-127

Surrogate	%REC	Limits
Dibromofluoromethane	112	80-121
1,2-Dichloroethane-d4	109	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	102	80-123

Type: MSD Lab ID: QC238108

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	50.00	54.19	108	67-127	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-121
1,2-Dichloroethane-d4	105	77-129
Toluene-d8	98	80-120
Bromofluorobenzene	100	80-123

RPD= Relative Percent Difference

8.0