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**Second Quarter 2005  
Groundwater Monitoring Report**

**Mash Petroleum Inc.**

**5725 Thornhill Drive  
Oakland, California**

**May 6, 2005**

**Project 2831**

**Prepared for  
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**Prepared by  
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## Certification

This report has been prepared by SOMA Environmental Engineering, Inc. on behalf of Mr. Mo Mashhoon, the property owner of 5725 Thornhill Drive, Oakland, California, to comply with the Alameda County Health Care Services Agency's and California Regional Water Quality Control Board's requirements for the Second Quarter 2005 groundwater monitoring event.



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## TABLE OF CONTENTS

Certification .....	i
TABLE OF CONTENTS .....	ii
List of Tables .....	iii
List of Figures .....	iii
List of Appendices .....	iii
1.0 INTRODUCTION .....	1
2.0 RESULTS .....	2
2.1 Field Measurements .....	2
2.2 Laboratory Analyses .....	3
3.0 CONCLUSIONS & RECOMMENDATIONS .....	5
4.0 REPORT LIMITATIONS .....	5

### **List of Tables**

- Table 1: SOMA Historical Groundwater Elevation Data & Analytical Results (Hydrocarbons, BTEX, & MtBE)
- Table 2: Groundwater Analytical Results: Gasoline Oxygenates & Lead Scavengers

### **List of Figures**

- Figure 1: Site vicinity map.
- Figure 2: Site map showing locations of monitoring wells, soil borings, creekbed survey points, decommissioned UST backfill wells, and previously drilled soil borings.
- Figure 3: Groundwater elevation contour map in feet. April 2005.
- Figure 4: Contour map of TPH-g concentrations in groundwater. April 2005.
- Figure 5: Contour Map of TPH-d concentrations in groundwater. April 2005.
- Figure 6: Contour Map of TPH-mo concentrations in groundwater. April 2005.
- Figure 7: Map of Benzene concentrations in groundwater. April 2005.
- Figure 8: Contour Map of MtBE concentrations in groundwater. (EPA Method 8260B). April 2005.

### **List of Appendices**

- Appendix A: SOMA's Groundwater Monitoring Procedures
- Appendix B: Field Measurements of the Physical and Chemical Properties of the Groundwater Samples Collected During the Second Quarter 2005
- Appendix C: Chain of Custody Form and Laboratory Report for the Second Quarter 2005 Monitoring Event

## 1.0 INTRODUCTION

This report has been prepared by SOMA Environmental Engineering, Inc. (SOMA) on behalf of Mr. Mo Mashoon, the property owner of 5725 Thornhill Drive, Oakland, California ("the Site" as shown in Figure 1). The Site is currently an active ARCO station that is located in an area consisting primarily of commercial and residential land uses.

This report summarizes the results of the Second Quarter 2005 groundwater monitoring event conducted at the Site on April 12, 2005. Included in this report are the results of the physical and chemical properties measured in the field for each groundwater sample. The physical and chemical properties consisted of measurements of pH, temperature, and electrical conductivity (EC). Also included in this report are the results of the laboratory analyses for each groundwater sample, which was analyzed for:

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

The groundwater monitoring activities for this quarter were performed in accordance with the general guidelines of the California Regional Water Quality Control Board (CRWQCB) and the Alameda County Health Care Services Agency (ACHCSA).

Appendix A details the groundwater monitoring procedures used during the Second Quarter 2005 monitoring event.

### 1.1 Previous Activities

In November 1998, Penn Environmental removed a 550-gallon steel underground waste oil tank (WOT) from the Site. Soil samples collected from the WOT excavation contained up to 1,100,000 µg/Kg of TPH-g, 2,700,000 µg/Kg of TPH-d, and 4,200,000 µg/Kg of TPH-Mo.

On February 4, 1999, Penn Environmental over-excavated the contaminated soil surrounding the former WOT. Aqua Science Engineers, Inc., (ASE) collected confirmation soil samples from two sidewalls of the excavation. The only compound detected in one of these two soil samples was MtBE at 40 µg/Kg.

In July 1999, ASE drilled borehole BH-A in the vicinity of the former WOT. On September 6, 2000, ASE drilled soil boreholes BH-B and BH-C. On October 23, 2000, ASE drilled soil boreholes BH-D and BH-E. ASE also collected water samples from Temescal Creek. No hydrocarbons were detected in the water sample collected from Temescal Creek. Figure 2 shows the locations of the borings.

On March 1 and 2, 2004, SOMA oversaw the advancement of nine temporary well boreholes, HP-1 through HP-7, HP-9 and HP-10 by Gregg Drilling & Testing (Gregg). Due to the excessive traffic hazards and the disruption of local traffic flow posed by advancing HP-8 in the middle of the street, this borehole was not drilled. Groundwater samples were collected following the completion of each temporary well borehole. The locations of the boreholes are shown in Figure 2.

During the Site's investigation activities, Gregg decommissioned the three existing on-site wells installed inside the UST cavity, under the supervision of SOMA. On March 12, 2004, Woodward Drilling installed three monitoring wells: SOMA-1, SOMA-2 and SOMA-3. On March 19, 2004, licensed surveyors from Kier & Wright surveyed the casing elevations of the monitoring wells and water level elevations along Temescal Creek. Kier & Wright performed a horizontal and vertical survey on the wells in accordance with the requirements set forth by the State for the GeoTracker database. On April 7, 2004, Gregg developed the recently installed monitoring wells. Figure 2 shows the locations of the monitoring wells.

The results of the March 2004 investigation and details of the well installations are presented in SOMA's report "Soil and Groundwater Investigation and Monitoring Well Installation Report at 5725 Thornhill Drive, Oakland, California", dated April 16, 2004.

## **2.0 RESULTS**

The following sections provide the results of the field measurements and laboratory analyses for the April 12, 2005 groundwater monitoring event.

### **2.1 Field Measurements**

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Table 1 presents the calculated groundwater elevations, as well as the depth to groundwater in each monitoring well. As shown in Table 1, the depth to groundwater ranged from 4.72 feet in SOMA-1 to 6.28 feet in SOMA-2. The corresponding groundwater elevations ranged from 566.90 feet in SOMA-3 to 571.75 feet in SOMA-1.

A contour map of the groundwater elevations for the Second Quarter 2005 monitoring event is presented in Figure 3. As Figure 3 illustrates, groundwater flows southwesterly across the Site, with an average gradient of 0.063 feet/foot.

Since the previous monitoring event (First Quarter 2005), the groundwater elevations have decreased across the Site. The variations in the groundwater elevations can be attributed to seasonal climatological conditions.

The field notes in Appendix B show the detailed measurements of the physical and chemical parameters of the groundwater for each well during the Second Quarter 2005 monitoring event.

## 2.2 Laboratory Analyses

Table 1 presents the results of the laboratory analyses for hydrocarbons, BTEX, and MtBE for the groundwater samples collected during the Second Quarter 2005 monitoring event. Previous site investigation data is also shown in Table 1 to depict the Site's overall conditions for hydrocarbons and MtBE.

As shown in Table 1, during the Second Quarter 2005 monitoring event, TPH-g was below the laboratory reporting limit in wells SOMA-1 and SOMA-3 and was detected at 5,960 ug/L in well SOMA-2.

Figure 4 displays the contour map of TPH-g concentrations in the groundwater. TPH-g concentrations analyzed from previous hydropunch data are also included in Figure 4. This better illustrates the overall influence of the southwesterly groundwater flow direction from the UST cavity and pump islands to the off-site regions. The most impacted TPH-g region appears to be southwest of the pump islands.

As shown in Table 1, TPH-d was below the laboratory reporting limit in wells SOMA-1 and SOMA-3. TPH-d was detected in well SOMA-2 at 1,200 ug/L. The TPH-d result in well SOMA-2 may be misrepresented due to lighter hydrocarbons that were present during the analytical testing. The diesel analytical result also did not match that of a standard diesel pattern. The

laboratory designated these variations by using an "L" flag for the presence of lighter hydrocarbons and a "Y" flag for the variation in the diesel pattern. The laboratory report is included in Appendix C; refer to this appendix for further

clarification. Figure 5 displays the contour map of TPH-d concentrations in the groundwater as analyzed for the Second Quarter 2005 monitoring event. TPH-d concentrations analyzed from previous hydropunch data are also included in Figure 5. This better illustrates the overall influence of the southwesterly groundwater flow direction from the UST cavity and pump islands to the off-site regions. Similar to the TPH-g plume, the most impacted region appears to be southwest of the pump islands.

As shown in Table 1, during the Second Quarter 2005 monitoring event, TPH-mo was below the laboratory reporting limit throughout the Site. Figure 6 displays the contour map of TPH-mo concentrations in the groundwater. TPH-mo concentrations analyzed from previous hydropunch data are also included in Figure 6. This better illustrates the overall influence of the southwesterly groundwater flow direction from the UST cavity and pump islands to the off-site regions. The most impacted TPH-mo region appears to be northwest of the pump islands. The TPH-mo plume does not appear to have impacted the off-site regions to the extent as the TPH-g and TPH-d plumes have.

As shown in Table 1, during the Second Quarter 2005 monitoring event, all BTEX analytes were below the laboratory reporting limit in wells SOMA-1 and SOMA-3. In well SOMA-2, only low BTEX analytes were detected, and toluene was below the laboratory reporting limit. Figure 7 displays the map of benzene concentrations in the groundwater. This figure better illustrates that groundwater has been impacted to a lesser extent by benzene than by other hydrocarbons.

As shown in Table 1, during the Second Quarter 2005 monitoring event, MtBE was detected in all of the groundwater samples collected during the Second Quarter 2005 monitoring event. During the Second Quarter 2005 monitoring event, MtBE was detected at a maximum level southwest of the pump islands, in well SOMA-2 at 241 ug/L. Figure 8 displays the contour map of MtBE concentrations in the groundwater using EPA Method 8260B. MtBE concentrations analyzed from previous hydropunch data are also included in Figure 8. This better illustrates the overall influence of the southwesterly groundwater flow direction from the UST cavity and pump islands to the off-site regions. The most impacted MtBE region appears to be southwest of the pump islands.

Table 2 presents the analytical results for gasoline oxygenates and lead scavengers. As shown in Table 2, with the exception of trace concentrations of TBA and TAME in SOMA-2, all gasoline oxygenate and lead scavenger constituents were below the laboratory reporting limit in the groundwater samples collected during the Second Quarter 2005 monitoring event.

Appendix C contains the laboratory report and COC form from the Second Quarter 2005 monitoring event.



### 3.0 CONCLUSIONS & RECOMMENDATIONS

The findings of the Second Quarter 2005 groundwater monitoring event can be summarized as follows:

- The groundwater flow direction is southwesterly across the Site, at a gradient of approximately 0.063 feet/feet.
- In general, the most impacted well appears to be SOMA-2, which is the most downgradient well.
- Based on previous site investigations, both hydrocarbon and MtBE plumes have migrated southwesterly off-site with the flow of groundwater. SOMA is planning to conduct an extensive investigation to further determine the extent of the off-site contamination and degree of hydraulic connection between water-bearing zones and Temescal Creek. Depending upon the results of the investigation, more groundwater monitoring wells may be installed.

### 4.0 REPORT LIMITATIONS

This report is the summary of work done by SOMA, including observations and descriptions of the Site's conditions. It includes the analytical results produced by Pacific Analytical Laboratory in Alameda, California and Curtis and Tompkins, Ltd, in Berkeley, California 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.

# 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	Apr-04	576.47	5.75	570.72	63	<50	<300	<0.5	<0.5	<0.5	<0.5	7.7
	Jul-04	576.47	6.21	570.26	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	9.1
	Oct-04	576.47	5.76	570.71	<50	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	6.4
	Jan-05	576.47	3.73	572.74	<50	200 HY	900	<0.5	<0.5	<0.5	<0.5	4.7
	<b>Apr-05</b>	<b>576.47</b>	<b>4.72</b>	<b>571.75</b>	<b>&lt;200</b>	<b>&lt;50</b>	<b>&lt;300</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;1.0</b>	<b>7.49</b>
SOMA-2	Apr-04	575.50	7.40	568.10	1,900	690 LY	<300	<0.5	<0.5	5.2	9.9	1,900
	Jul-04	575.50	7.92	567.58	1,500	710 LY	<300	8.9 C	<0.5	1.5 C	2.9 C	740
	Oct-04	575.50	7.62	567.88	955	790 LY	<1.0	<2.5	<2.5	<2.5	< 5	785
	Jan-05	575.50	5.70	569.80	3,700	2100 LY	380	3.7	<2.0	3.5	102	310
	<b>Apr-05</b>	<b>575.50</b>	<b>6.28</b>	<b>569.22</b>	<b>5,960</b>	<b>1200 LY</b>	<b>&lt;300</b>	<b>1.19</b>	<b>&lt;0.5</b>	<b>20.6</b>	<b>25</b>	<b>241</b>
SOMA-3	Apr-04	575.92	7.14	568.78	190	120 Y	<300	<0.5	<0.5	<0.5	<0.5	5.1
	Jul-04	575.92	7.95	567.97	130	120 LY	<300	<0.5	<0.5	<0.5	<0.5	9.1
	Oct-04	575.92	7.60	568.32	57	280 LY	<1.0	<0.5	<0.5	<0.5	<2	11.3
	Jan-05	572.92	5.45	567.47	140	210 Y	<300	<0.5	<0.5	<0.5	<0.5	5.8
	<b>Apr-05</b>	<b>572.92</b>	<b>6.02</b>	<b>566.90</b>	<b>&lt;200</b>	<b>&lt;50</b>	<b>&lt;300</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;1.0</b>	<b>4.53</b>
<b>Previous Site Investigation</b>												
BH-A	Jul-99	NM	NM	NM	1,700	10,000	4,700	NA	NA	NA	NA	NA
BH-B	Sep-00	NM	NM	NM	12,000	11,000	11,000	NA	NA	NA	NA	4,300
BH-C	Sep-00	NM	NM	NM	7,300	25,000	620	NA	NA	NA	NA	5,300
BH-D	Sep-00	NM	NM	NM	13,000	110,000	18,000	NA	NA	NA	NA	16,000
BH-E	Sep-00	NM	NM	NM	NA	NA	NA	NA	NA	NA	NA	730
HP-1	Mar-04	NM	NM	NM	4,200	5,900	11,000	NI	NI	NI	NI	11
HP-2	Mar-04	NM	NM	NM	360	10,000	58,000	NI	NI	NI	NI	20
HP-3	Mar-04	NM	NM	NM	<50	3,500	3,500	NI	NI	NI	NI	<0.5
HP-4	Mar-04	NM	NM	NM	<50	740	6,300	NI	NI	NI	NI	<0.5
HP-5	Mar-04	NM	NM	NM	6,700	3,600	650	NI	NI	NI	NI	33
HP-6	Mar-04	NM	NM	NM	250	370	730	NI	NI	NI	NI	8
HP-7	Mar-04	NM	NM	NM	<50	1,600	1,400	NI	NI	NI	NI	<0.5
HP-9	Mar-04	NM	NM	NM	<50	160	1,700	NI	NI	NI	NI	440
HP-10	Mar-04	NM	NM	NM	9,700	21,000	5,700	NI	NI	NI	NI	1,100

**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)
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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.
- NA: Not Analyzed or Data Not Available
- NI: Not Inputted, only lab data for hydrocarbons and MtBE is shown in this table.
- Y: Sample exhibits chromatographic pattern which did not resemble standard.

The Second Quarter 2004 was the first time SOMA monitored the site.

Boring BH-A was drilled by Aqua Science Engineers (ASE) in July 1999, Borings BH-B & BH-C, and BH-D & BH-E drilled by ASE in September 2000 and October 2000, respectively.

Hydropunches HP-1 to HP-7, HP-9, HP-10 drilled by SOMA in March 2004.

The boring and hydropunch data is shown in this table to further illustrate the overall site conditions.

**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	Apr-04	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<1000
	Jul-04	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<1000
	Oct-04	<2.5	<0.5	<0.5	<2	<0.5	<0.5	<1.0
	Jan-05	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<1,000
	Apr-05	<2.5	<0.5	<0.5	<2.0	<0.5	<0.5	<1000
SOMA-2	Apr-04	<100	<5.0	<5.0	19.0	<5.0	<5.0	<10000
	Jul-04	<33	<1.7	<1.7	9.8	<1.7	<1.7	<3300
	Oct-04	36.3	<2.5	<2.5	12.85	<0.5	<0.5	<1.0
	Jan-05	67	<2.0	<2.0	6.7	<2.0	<2.0	<4,000
	Apr-05	71	<0.5	<0.5	3.29	<0.5	<0.5	<1000
SOMA-3	Apr-04	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<1000
	Jul-04	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<1000
	Oct-04	<2.5	<0.5	<0.5	<2	<0.5	<0.5	<1.0
	Jan-05	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<1,000
	Apr-05	<2.5	<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.

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

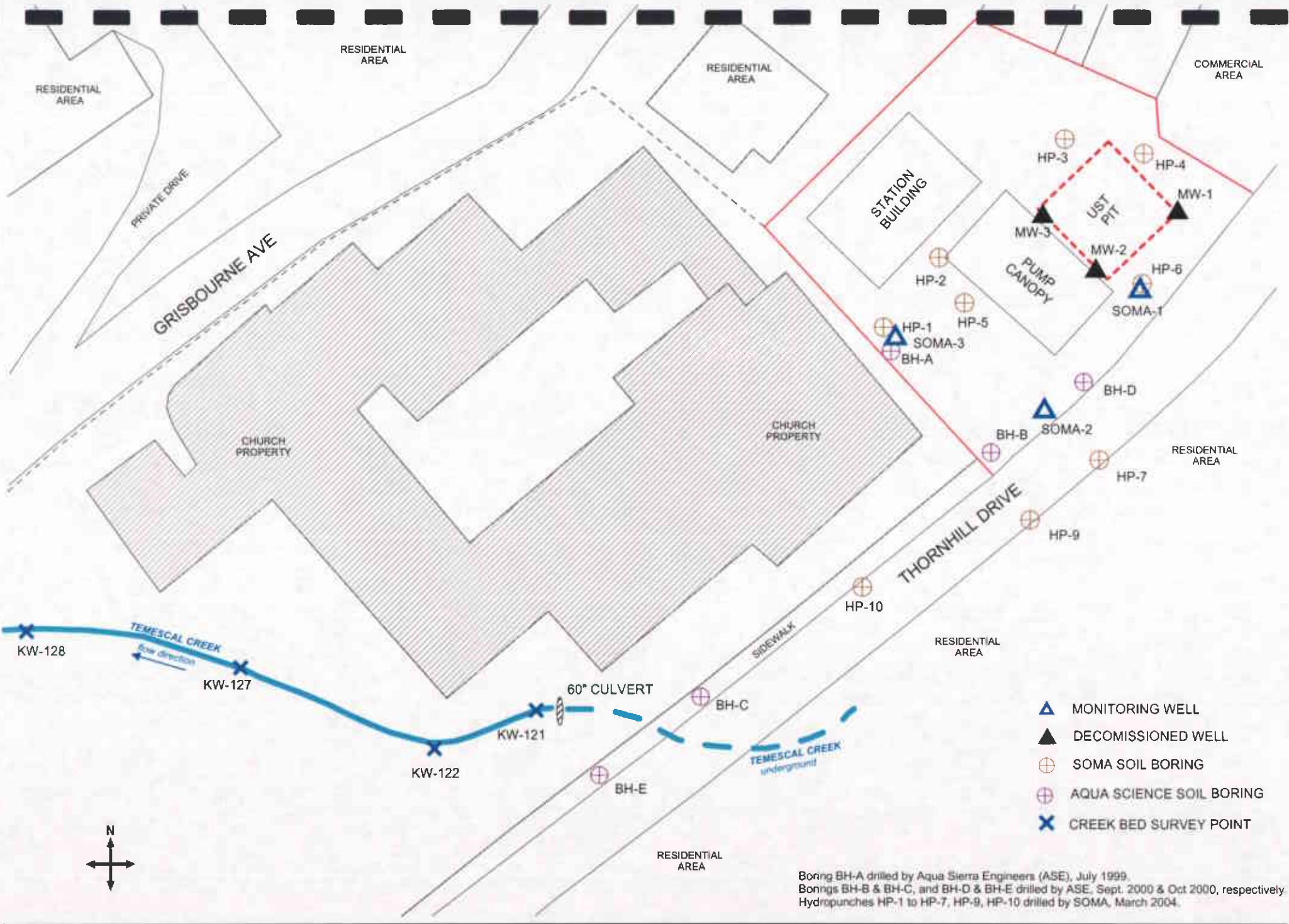
# Figures








approximate scale in feet

0 100 200

Figure 1: Site vicinity map.



-  MONITORING WELL
-  DECOMMISSIONED WELL
-  SOMA SOIL BORING
-  AQUA SCIENCE SOIL BORING
-  CREEK BED SURVEY POINT

Boring BH-A drilled by Aqua Sierra Engineers (ASE), July 1999.  
 Borings BH-B & BH-C, and BH-D & BH-E drilled by ASE, Sept. 2000 & Oct 2000, respectively  
 Hydropunches HP-1 to HP-7, HP-9, HP-10 drilled by SOMA, March 2004.

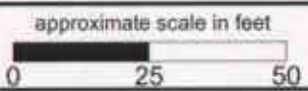


Figure 2: Site map showing locations of monitoring wells, soil borings, creekbed survey points, decommissioned UST backfill wells, and previously drilled soil borings.





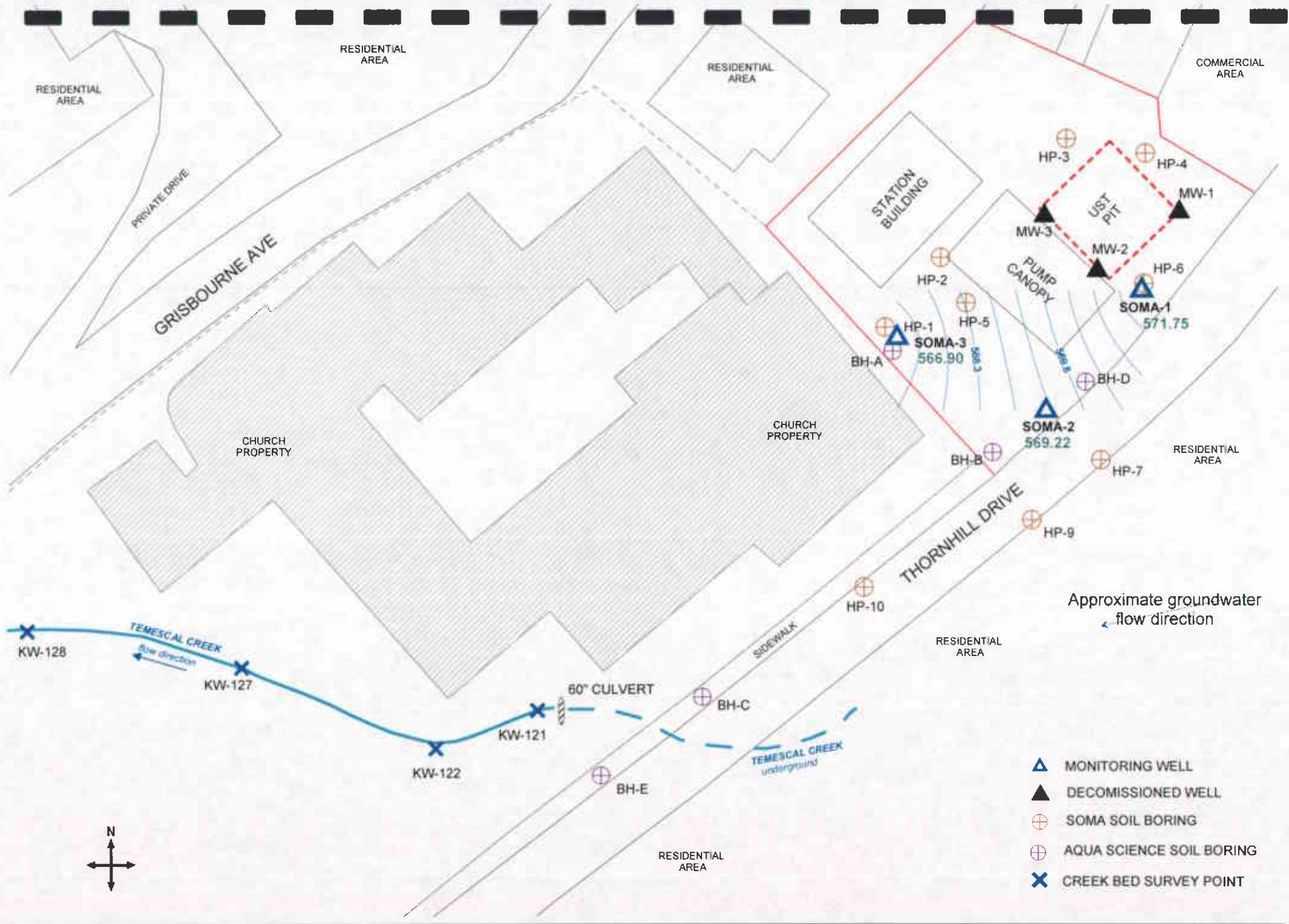


Figure 3: Groundwater elevation contour map in feet. April 2005.

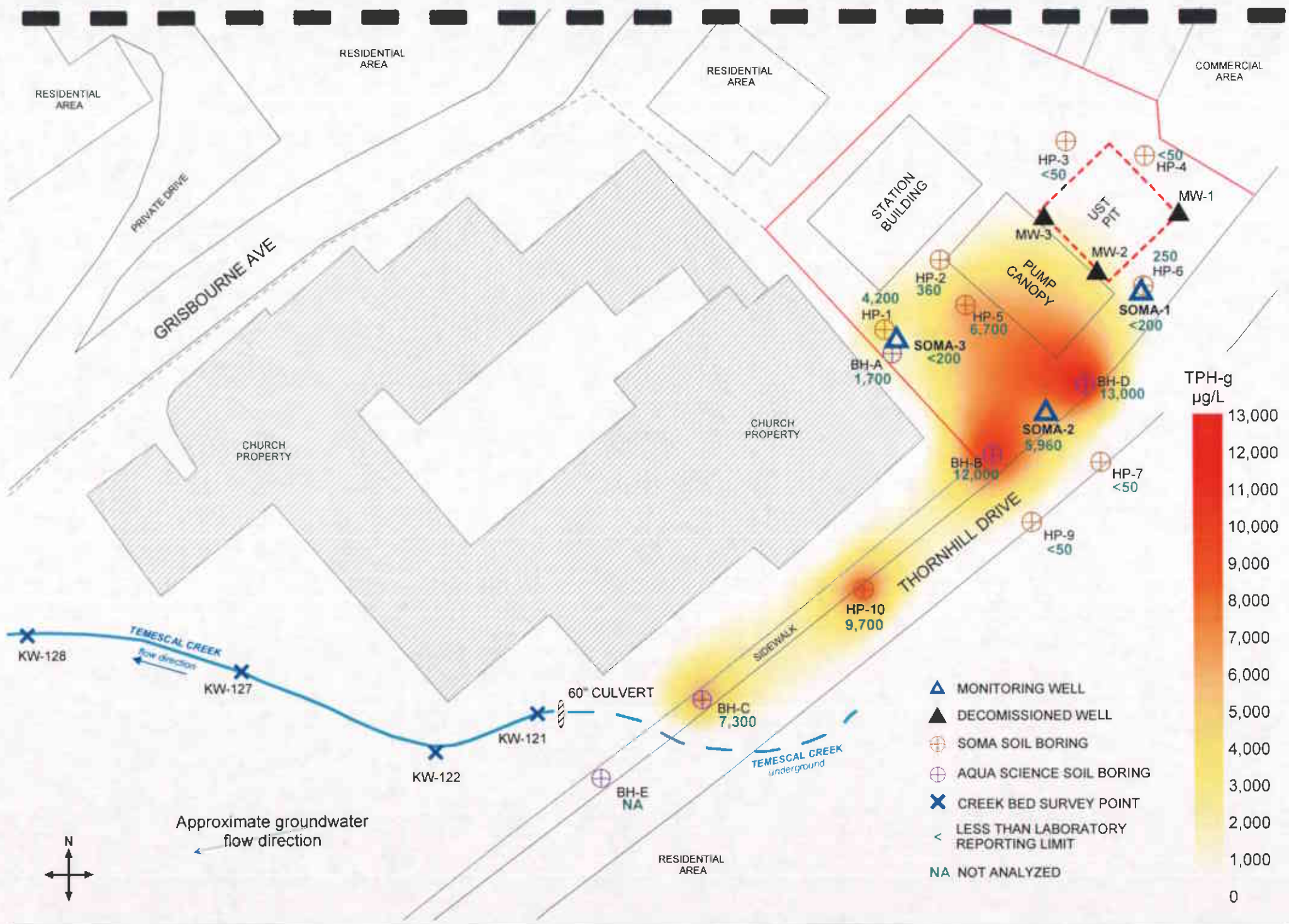


Figure 4: Contour map of TPH-g concentrations in groundwater. April 2005.

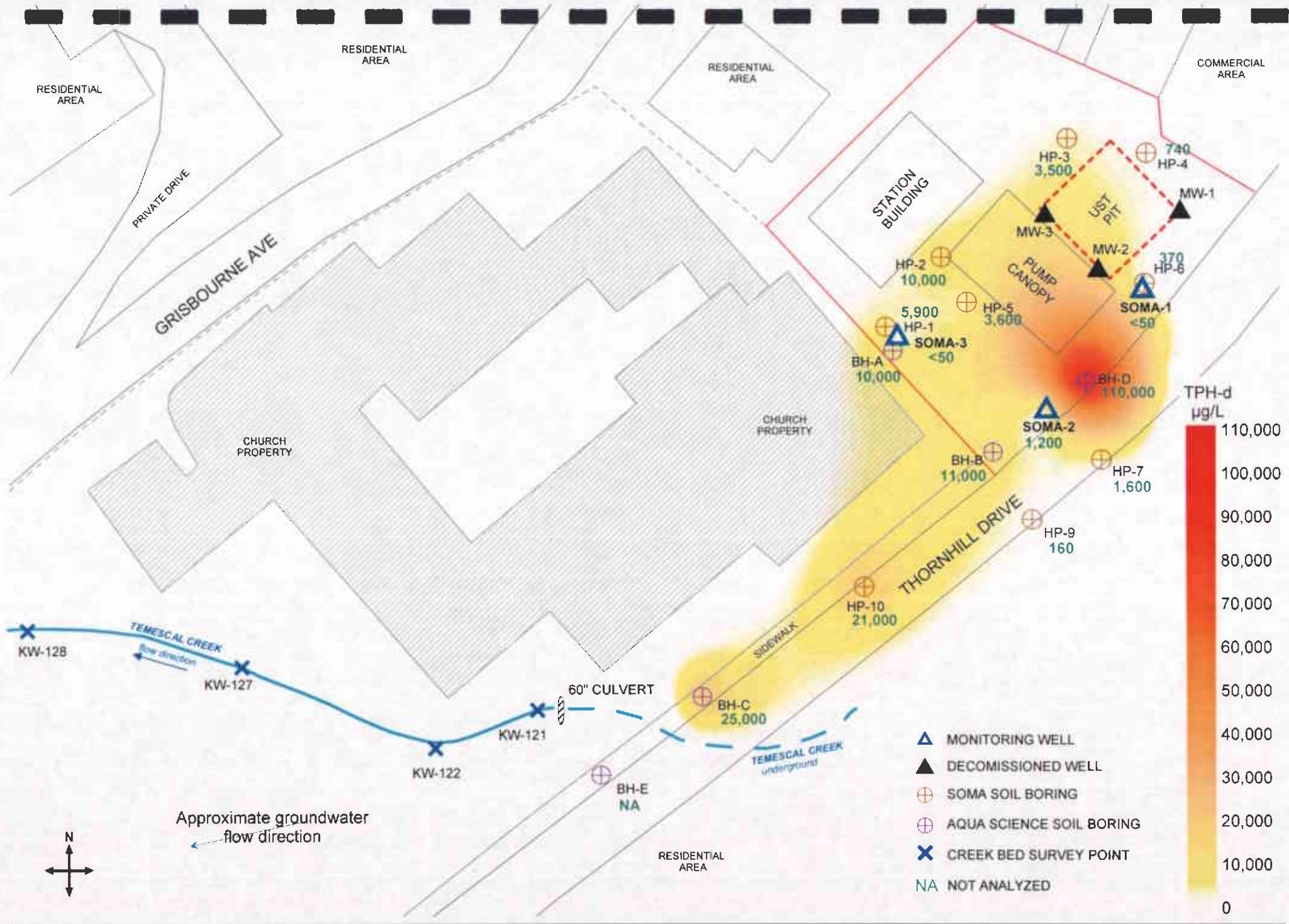
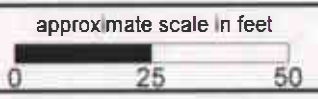


Figure 5: Contour map of TPH-d concentrations in groundwater. April 2005.



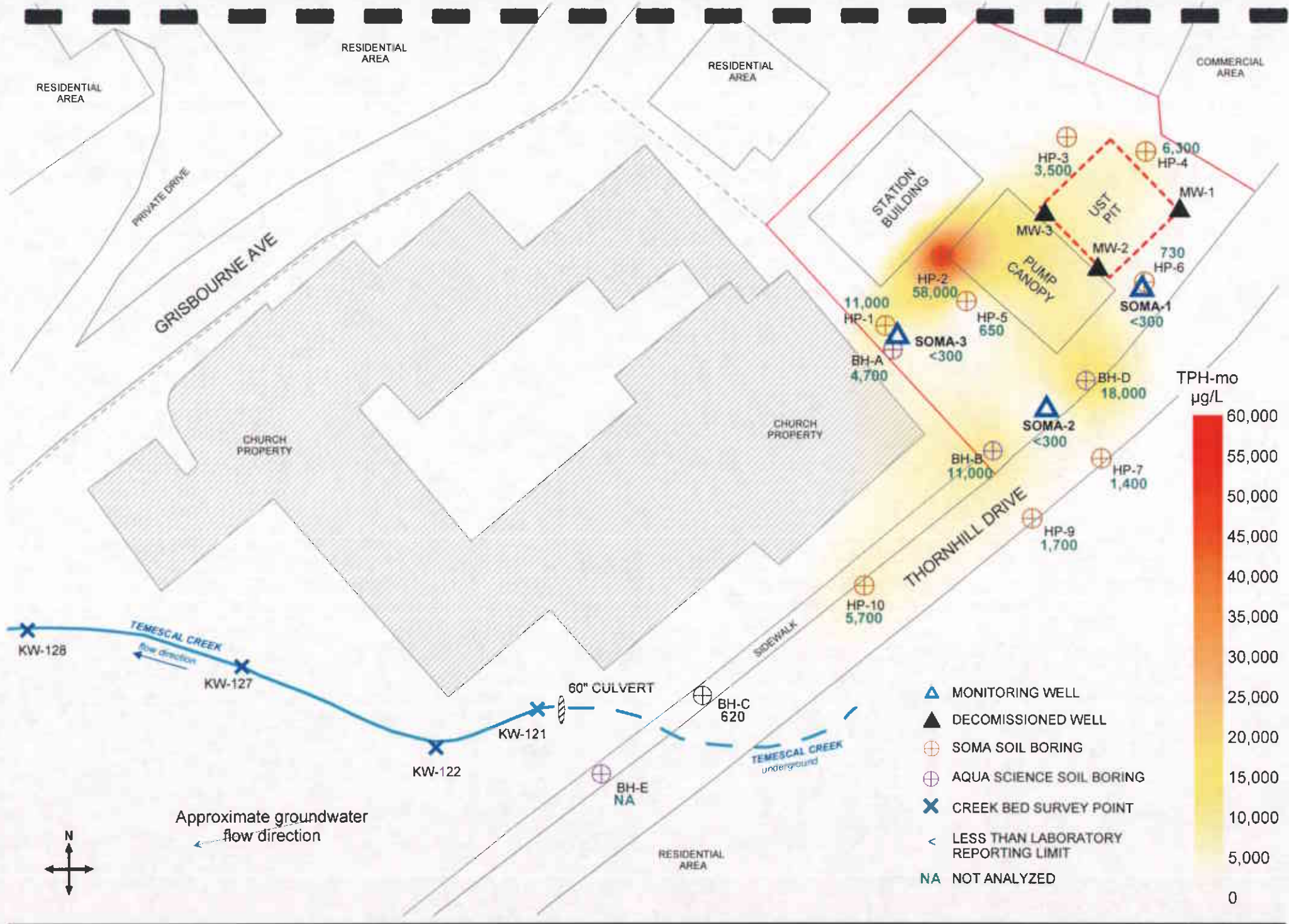


Figure 6: Contour map of TPH-mo concentrations in groundwater. April 2005.

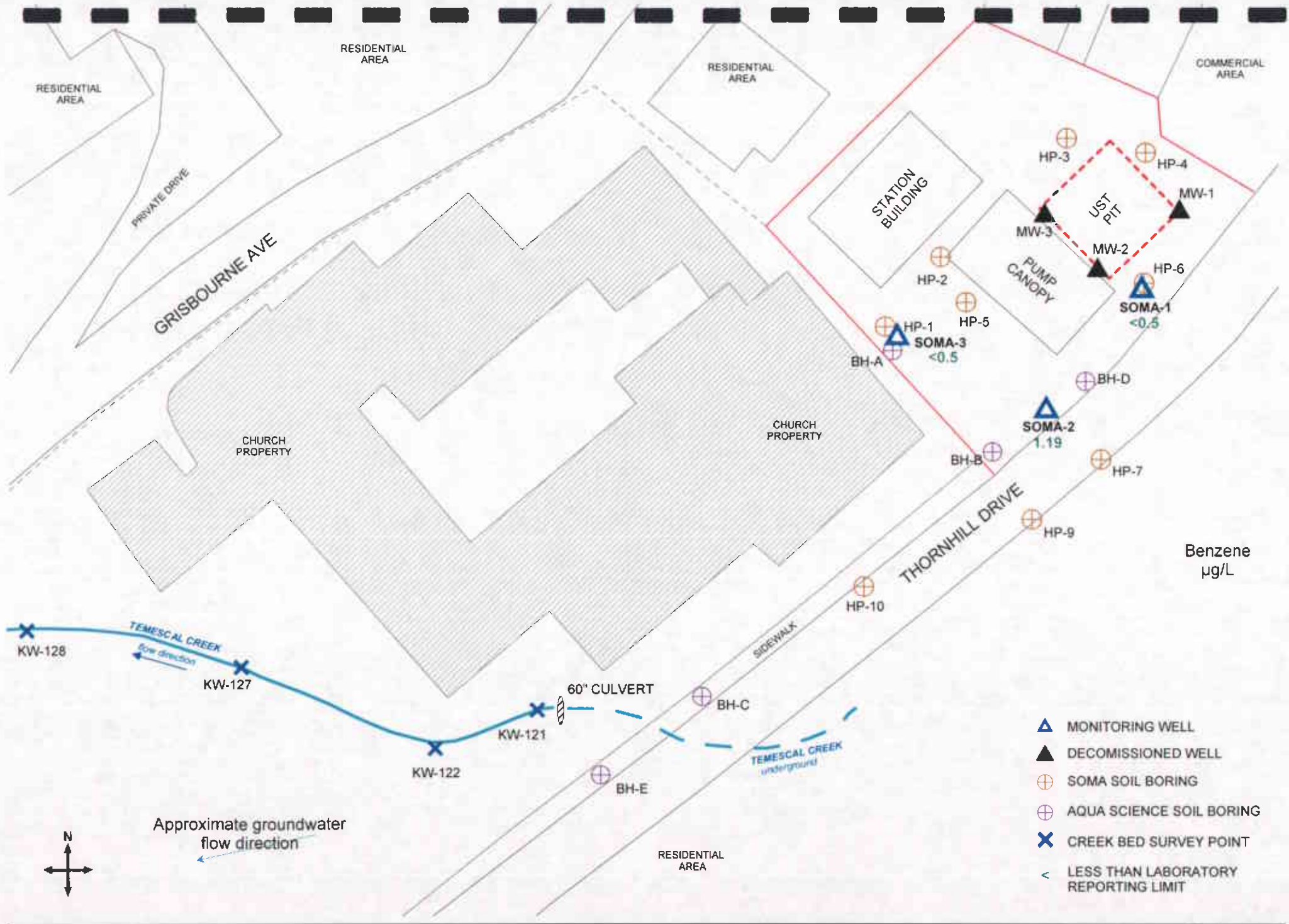


Figure 7: Map of Benzene concentrations in groundwater, April 2005.

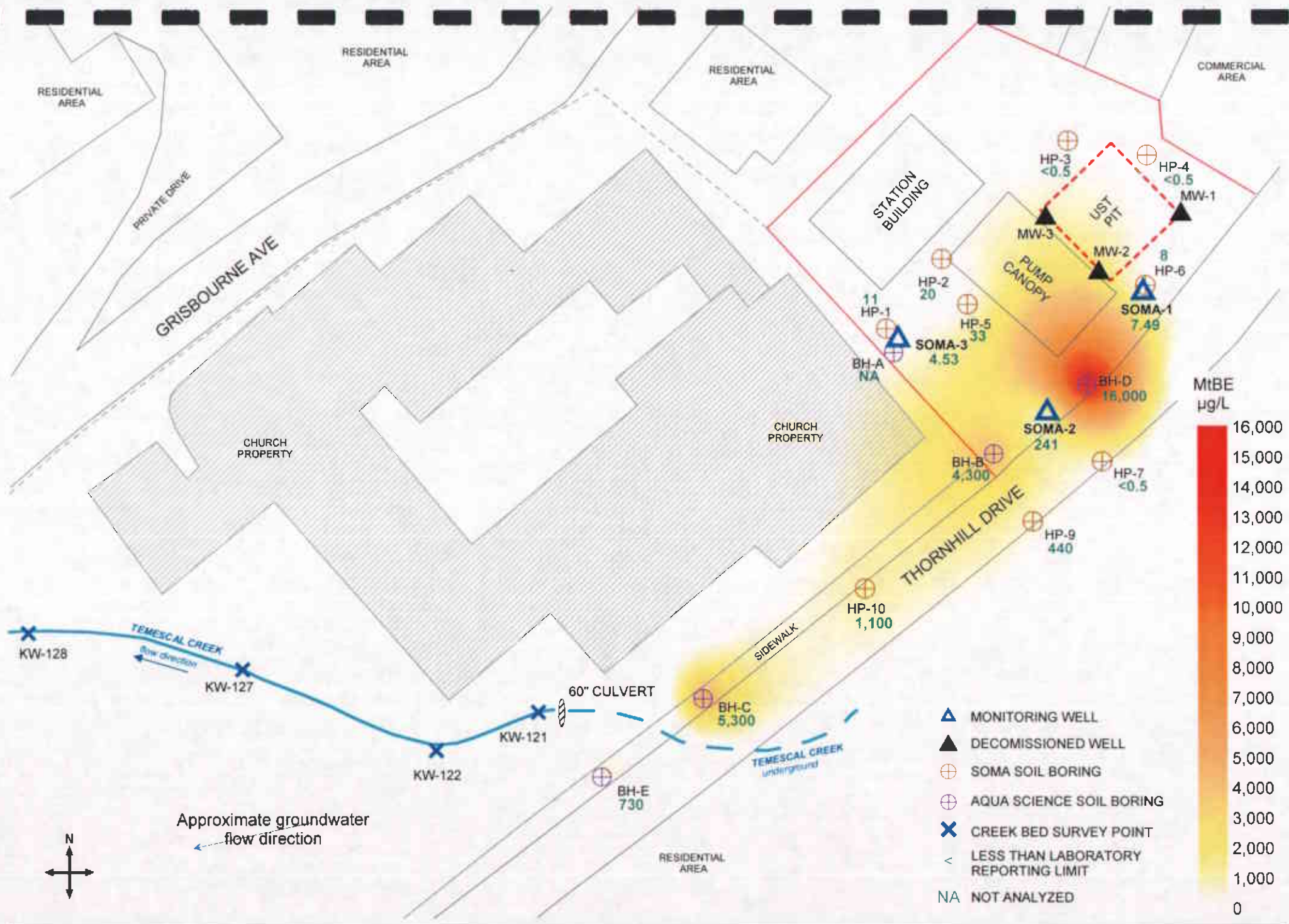
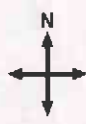
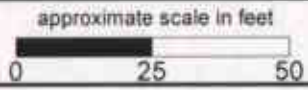


Figure 8: Contour map of MtBE concentrations in groundwater. (EPA Method 8260B). April 2005.



Approximate groundwater flow direction

Flow direction

# **APPENDIX A**

## **SOMA's Groundwater Monitoring Procedures**

## Field Activities

On April 12, 2005, SOMA's field crew conducted a groundwater monitoring event in accordance with the procedures and guidelines of the California Regional Water Quality Control Board and the Alameda County Health Care Services. During this groundwater monitoring event three on-site wells (SOMA-1, SOMA-2, and SOMA-3) were monitored.

The depth to groundwater in each monitoring well was measured from the top of the casing to the nearest 0.01 foot using an electric sounder. The top of the casing elevation data and the depth to groundwater in each monitoring well were used to calculate the groundwater elevation. The top of casing elevation was based on an elevation datum of 37 feet NAVD88.

Prior to the collection of 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, during purging, several samples were taken for field measurements of pH, temperature and EC. The field 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.

Appendix B details the field measurements taken during the monitoring event.

The purging of the wells continued until the parameters for pH, temperature and EC stabilized or three casing volumes were purged. A disposable polyethylene bailer was used to collect sufficient samples from each well for laboratory analyses. The groundwater sample was transferred to five 40-mL VOA vials and preserved with hydrochloric acid. The vials were then sealed to prevent the development of air bubbles within the headspace. The groundwater sample collected from each well was also transferred into two 1-liter amber non-preserved glass containers.

After the groundwater samples were collected they were placed on ice in an ice chest and maintained at 4°C. A chain of custody (COC) form was written for all the samples. After the sampling was complete, on April 12, 2005, SOMA's field crew delivered the groundwater samples along with the COC form to Pacific Analytical Laboratory in Alameda, California.



### Laboratory Analysis

Pacific Analytical Laboratory, a state certified laboratory, analyzed the groundwater samples for TPH-g, BTEX, MtBE, gasoline oxygenates, and lead scavengers. Samples for TPH-d and TPH-mo measurements were subcontracted through Curtis and Tompkins, Ltd in Berkeley, California.

TPH-g, BTEX, MtBE, gasoline oxygenates, and lead scavengers measurements were prepared using EPA Method 5030B and analyzed using EPA Method 8260B. TPH-d and TPH-mo measurements were prepared using EPA Method 3520C and analyzed using Method 8015B. Clean-up method EPA 3630C was used during the TPH-d and TPH-mo testing, to further ensure that the results were representative.

# **Appendix B**

Field Measurements of the Physical and Chemical  
Properties of the Groundwater Samples  
Collected During the Second Quarter 2005



ENVIRONMENTAL ENGINEERING, INC

Well No.: SOMA-1  
 Casing Diameter: 2 inches  
 Depth of Well: 27.85 feet  
 Top of Casing Elevation: 570.47 feet  
 Depth to Groundwater: 4.72 feet  
 Groundwater Elevation: 571.75 feet  
 Water Column Height: 23.13 feet  
 Purged Volume: 18 gallons

Project No.: 2831  
 Address: 5725 Thornhill Drive  
 Oakland, CA  
 Date: April 12, 2005  
 Sampler: John Lohman  
 Eric Jennings

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: No  Yes  Describe: \_\_\_\_\_

Sheen: No  Yes  Describe: \_\_\_\_\_

Odor: No  Yes  Describe: \_\_\_\_\_

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
11 <sup>14</sup> AM	START PURGING WELL			
11 <sup>17</sup>	6	6.86	17.1	790
11 <sup>20</sup>	12	6.71	16.6	720
11 <sup>23</sup>	18	6.70	16.6	720
11 <sup>26</sup>	SAMPLED			



ENVIRONMENTAL ENGINEERING, INC

Well No.: 40NA-2  
 Casing Diameter: 2 inches  
 Depth of Well: 28.00 feet  
 Top of Casing Elevation: 575.50 feet  
 Depth to Groundwater: 6.28 feet  
 Groundwater Elevation: 569.22 feet  
 Water Column Height: 21.72 feet  
 Purged Volume: 18 gallons

Project No.: 2831  
 Address: 5725 Thornhill Drive  
 Oakland, CA  
 Date: April 12, 2005  
 Sampler: John Lohman  
 Eric Jennings

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: No  Yes  Describe: SILTY -> CLEAR

Sheen: No  Yes  Describe: \_\_\_\_\_

Odor: No  Yes  Describe: SUBTLE SULFUR

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
11 <sup>45</sup> AM	START PURGING WELL			
11 <sup>46</sup>	6	7.00	17.5	910
11 <sup>49</sup>	12	7.01	18.6	900
11 <sup>52</sup>	18	6.95	18.6	920
11 <sup>55</sup>	SAMPLED			



ENVIRONMENTAL ENGINEERING, INC

Well No.: 40MA-3  
 Casing Diameter: 2 inches  
 Depth of Well: 27.80 feet  
 Top of Casing Elevation: 572.92 feet  
 Depth to Groundwater: 6.02 feet  
 Groundwater Elevation: 566.90 feet  
 Water Column Height: 21.78 feet  
 Purged Volume: 8 gallons

Project No.: 2831  
 Address: 5725 Thornhill Drive  
 Oakland, CA  
 Date: April 12, 2005  
 Sampler: John Lohman  
 Eric Jennings

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: No  Yes  Describe: \_\_\_\_\_

Sheen: No  Yes  Describe: \_\_\_\_\_

Odor: No  Yes  Describe: Slight PVC odor

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
12 <sup>00</sup> PM	START PURGING WELL			
12 <sup>01</sup>	6	7.32	16.6	1120
12 <sup>12</sup>	12	7.15	16.4	990
12 <sup>15</sup>	18	7.20	16.6	1090
12 <sup>19</sup>	SAMPLED			

# Appendix C

Chain of Custody Form and Laboratory Report  
for the  
Second Quarter 2005 Monitoring Event

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**PAL** Pacific Analytical Laboratory

851 West Midway Ave., Suite 201  
Alameda, CA 94501

Phone (510) 864-0364

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02 May 2005

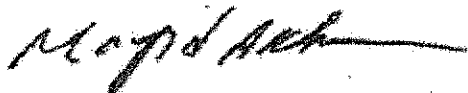
Joyce Bobek  
SOMA Environmental Engineering Inc.  
2680 Bishop Dr., Suite 203  
San Ramon, CA 94583

RE: Oakland-Thornhill

Work Order Number: 5040011

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,



---

Maïd Akhavan  
Laboratory Director

# 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# 5040011

Project No: 2831				Sampler: Eric Jennings / John Lohman				Analyses/Method					
Project Name: 5725 Thornhill, Oakland				Report To: Joyce Bobek				TPHg, BTEX, MIBE 02608 Gas Ox, Pb 5 (au) 8260B Ethano 1 TPHd 8015 TPHmd 3550/6m5					
Project P.O.: ---				Company: SOMA Environmental Engineering, Inc.									
Turnaround Time: Standard				Tel: 925-244-6600 Fax: 925-244-6601									
		Sampling Date/Time		Matrix			# of Containers	Preservatives				Field Notes	
Lab No.	Sample ID	Date	Time	Soil	Water	Waste		HCL	H <sub>2</sub> SO <sub>4</sub>	NONE	ICE		
	SOMA-1	4/12/05	11:25 AM		X		2 L Amber 5 VOAs	X		X	X	Grab Sample	
	SOMA-2	4/12/05	11:55 AM		X		2 L Amber 5 VOAs	X		X	X	Grab Sample	
	SOMA-3	4/12/05	12:19 PM		X		2 L Amber 5 VOAs	X		X	X	Grab Sample	
Sampler Remarks:				Relinquished by:				Date/Time:		Received by:		Date/Time:	
EDF OUTPUT Silica Gel cleanup method				<del>E. Jennings</del>				4/12/05 1:00 PM		J. Lohman		4-12-05 1:00	





SOMA Environmental Engineering Inc. 2680 Bishop Dr., Suite 203 San Ramon CA, 94583	Project: Oakland-Thornhill Project Number: 2831 Project Manager: Joyce Bobek	Reported: 02-May-05 11:38
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**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SOMA-1	5040011-01	Water	12-Apr-05 11:25	12-Apr-05 13:53
SOMA-2	5040011-02	Water	12-Apr-05 11:55	12-Apr-05 13:53
SOMA-3	5040011-03	Water	12-Apr-05 12:19	12-Apr-05 13:53



SOMA Environmental Engineering Inc. 2680 Bishop Dr., Suite 203 San Ramon CA, 94583	Project: Oakland-Thornhill Project Number: 2831 Project Manager: Joyce Bobek	Reported: 02-May-05 11:38
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**Volatile Organic Compounds by EPA Method 8260B**  
**Pacific Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SOMA-1 (5040011-01) Water</b> <b>Sampled: 12-Apr-05 11:25</b> <b>Received: 12-Apr-05 13:53</b>									
MTBE	7.49	0.500	ug/l	1	BD51401	12-Apr-05	14-Apr-05	EPA 8260B	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	2.50	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		85.0 %	70-130	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		122 %	70-130	"	"	"	"	"	
<i>Surrogate: Perdeuterotoluene</i>		98.8 %	70-130	"	"	"	"	"	
Gasoline (C6-C12)	ND	200	"	"	"	"	"	"	
Benzene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	1.00	"	"	"	"	"	"	
o-xylene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
<b>SOMA-2 (5040011-02) Water</b> <b>Sampled: 12-Apr-05 11:55</b> <b>Received: 12-Apr-05 13:53</b>									
MTBE	241	0.500	ug/l	1	BD51401	12-Apr-05	14-Apr-05	EPA 8260B	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	3.29	2.00	"	"	"	"	"	"	
TBA	71.0	2.50	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		100 %	70-130	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		118 %	70-130	"	"	"	"	"	
<i>Surrogate: Perdeuterotoluene</i>		107 %	70-130	"	"	"	"	"	
Gasoline (C6-C12)	5960	200	"	"	"	"	"	"	
Benzene	1.19	0.500	"	"	"	"	"	"	
Ethylbenzene	20.6	0.500	"	"	"	"	"	"	
m&p-Xylene	11.8	1.00	"	"	"	"	"	"	

Pacific Analytical Laboratory

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



SOMA Environmental Engineering Inc. 2680 Bishop Dr., Suite 203 San Ramon CA, 94583	Project: Oakland-Thornhill Project Number: 2831 Project Manager: Joyce Bobek	Reported: 02-May-05 11:38
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**Volatile Organic Compounds by EPA Method 8260B**

**Pacific Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SOMA-2 (5040011-02) Water    Sampled: 12-Apr-05 11:55    Received: 12-Apr-05 13:53</b>									
o-xylene	13.2	0.500	ug/l	1	BD51401	12-Apr-05	14-Apr-05	EPA 8260B	
Toluene	ND	0.500	"	"	"	"	"	"	
<b>SOMA-3 (5040011-03) Water    Sampled: 12-Apr-05 12:19    Received: 12-Apr-05 13:53</b>									
MTBE	4.53	0.500	ug/l	1	BD51401	12-Apr-05	14-Apr-05	EPA 8260B	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	ND	2.50	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.2 %	70-130		"	"	"	"	
Surrogate: Dibromofluoromethane		113 %	70-130		"	"	"	"	
Surrogate: Perdeuterotoluene		96.2 %	70-130		"	"	"	"	
Gasoline (C6-C12)	ND	200	"	"	"	"	"	"	
Benzene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	1.00	"	"	"	"	"	"	
o-xylene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	

PAL  
PAL

SOMA Environmental Engineering Inc. 2680 Bishop Dr., Suite 203 San Ramon CA, 94583	Project: Oakland-Thornhill Project Number: 2831 Project Manager: Joyce Bobek	Reported: 02-May-05 11:38
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**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
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**Batch BD51401 - EPA 5030 Water MS**

**Blank (BD51401-BLK1)**

Prepared & Analyzed: 14-Apr-05

Surrogate: 4-Bromofluorobenzene	42.7		ug/l	50.0		85.4	70-130			
Surrogate: Dibromofluoromethane	62.4		"	50.0		125	70-130			
Surrogate: Perdeuterotoluene	48.1		"	50.0		96.2	70-130			
MTBE	ND	0.500	"							
DIPE	ND	0.500	"							
ETBE	ND	0.500	"							
TAME	ND	2.00	"							
Gasoline (C6-C12)	ND	200	"							
TBA	ND	2.50	"							
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-Xylenc	ND	1.00	"							
o-xylene	ND	0.500	"							
Toluene	ND	0.500	"							

**LCS (BD51401-BS1)**

Prepared: 14-Apr-05 Analyzed: 15-Apr-05

Surrogate: 4-Bromofluorobenzene	50.9		ug/l	50.0		102	70-130			
Surrogate: Dibromofluoromethane	56.2		"	50.0		112	70-130			
Surrogate: Perdeuterotoluene	44.6		"	50.0		89.2	70-130			
MTBE	111	0.500	"	100		111	70-130			
DIPE	113	0.500	"	100		113	70-130			
ETBE	96.4	0.500	"	100		96.4	70-130			
TAME	86.6	2.00	"	100		86.6	70-130			
TBA	542	2.50	"	500		108	70-130			
Gasoline (C6-C12)	2040	200	"	2000		102	70-130			
Benzene	103	0.500	"	100		103	70-130			
Ethylbenzene	124	0.500	"	100		124	70-130			
m&p-Xylene	73.1	1.00	"	100		73.1	70-130			
o-xylene	118	0.500	"	100		118	70-130			
Toluene	101	0.500	"	100		101	70-130			

Pacific Analytical Laboratory

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



SOMA Environmental Engineering Inc. 2680 Bishop Dr., Suite 203 San Ramon CA, 94583	Project: Oakland-Thornhill Project Number: 2831 Project Manager: Joyce Bobek	Reported: 02-May-05 11:38
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**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
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**Batch BD51401 - EPA 5030 Water MS**

**LCS Dup (BD51401-BSD1)** Prepared: 14-Apr-05 Analyzed: 19-Apr-05

Surrogate: 4-Bromofluorobenzene	51.4		ug/l	50.0		103	70-130			
Surrogate: Dibromofluoromethane	56.4		"	50.0		113	70-130			
Surrogate: Perdeuterotoluene	44.0		"	50.0		88.0	70-130			
MTBE	113	0.500	"	100		113	70-130	1.79	20	
DIPE	113	0.500	"	100		113	70-130	0.00	20	
ETBE	97.4	0.500	"	100		97.4	70-130	1.03	20	
TAME	90.2	2.00	"	100		90.2	70-130	4.07	20	
TBA	647	2.50	"	500		129	70-130	17.7	20	
Gasoline (C6-C12)	1850	200	"	2000		92.5	70-130	9.77	20	
Benzene	103	0.500	"	100		103	70-130	0.00	20	
Ethylbenzene	101	0.500	"	100		101	70-130	20.4	20	QR-02
m&p-Xylene	127	1.00	"	100		127	70-130	53.9	20	QR-02
o-xylene	126	0.500	"	100		126	70-130	6.56	20	
Toluene	103	0.500	"	100		103	70-130	1.96	20	

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

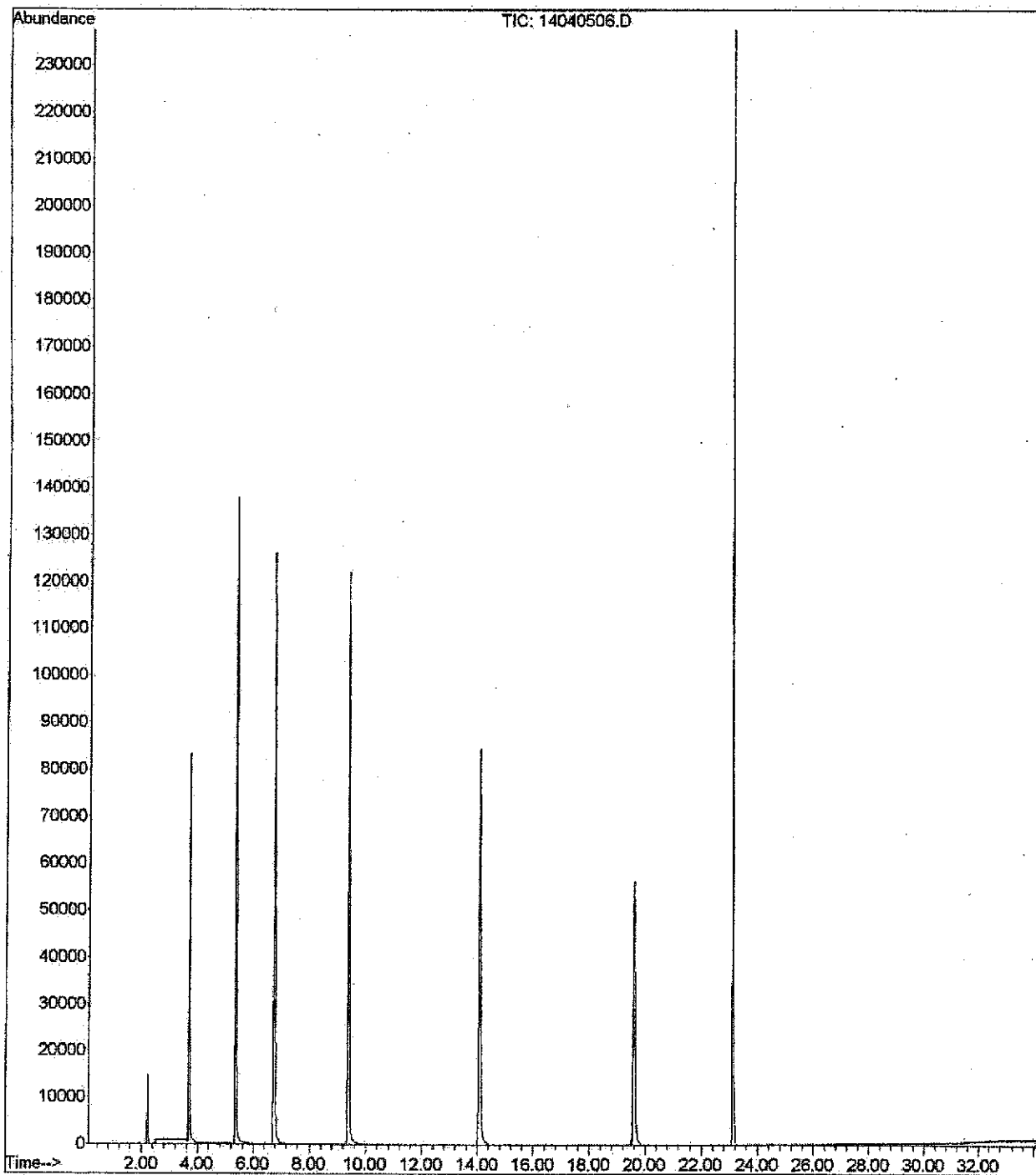
Project: Oakland-Thornhill  
Project Number: 2831  
Project Manager: Joyce Bobek

Reported:  
02-May-05 11:38

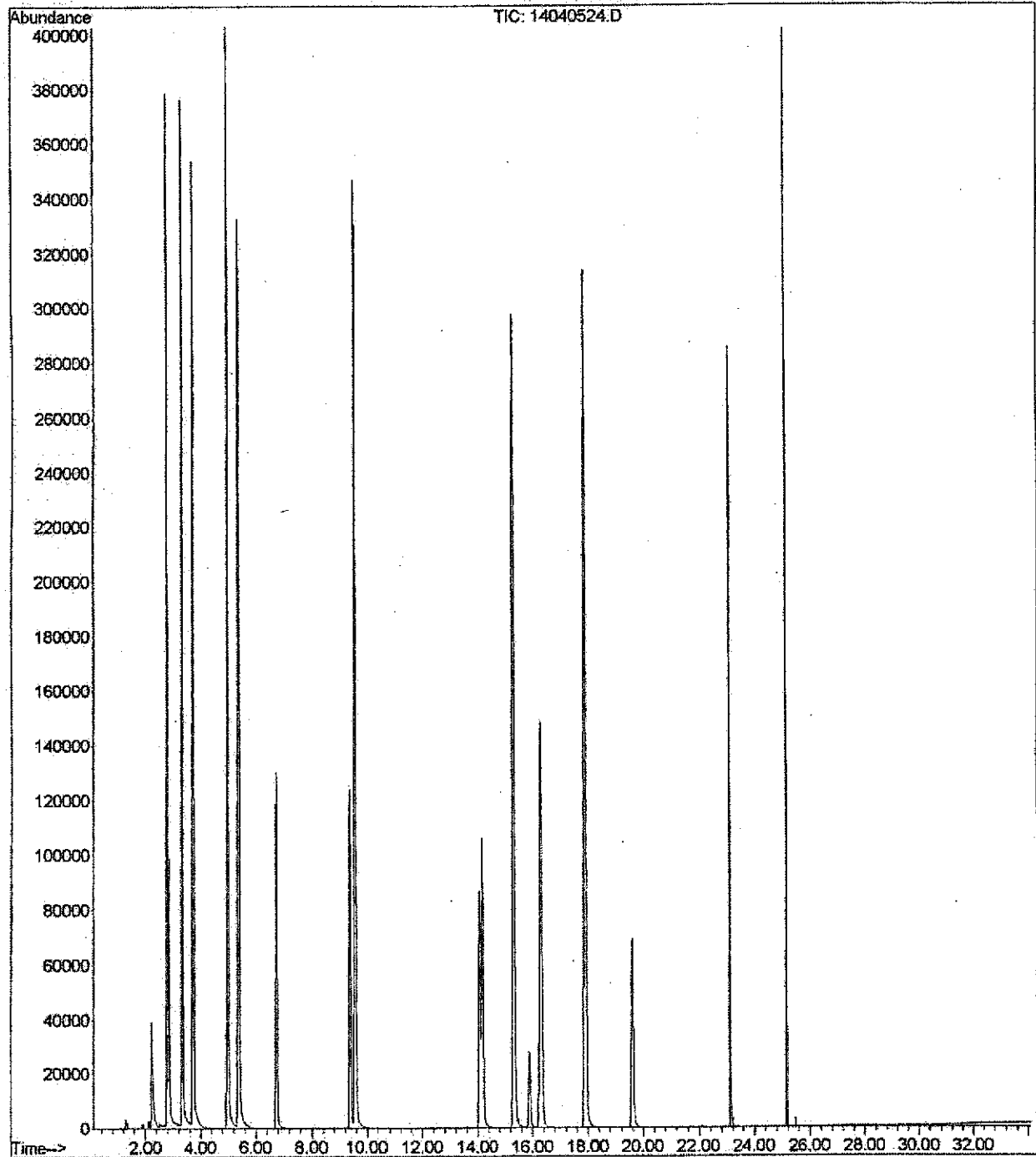
### Notes and Definitions

- 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.
- 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\2005-Apr-14-1453.b\14040506.D  
Operator :  
Acquired : 14 Apr 2005 6:53 pm using AcqMethod VOCOXY.M  
Instrument : PAL GCMS  
Sample Name: BD51401-BLK1  
Misc Info :  
Vial Number: 6

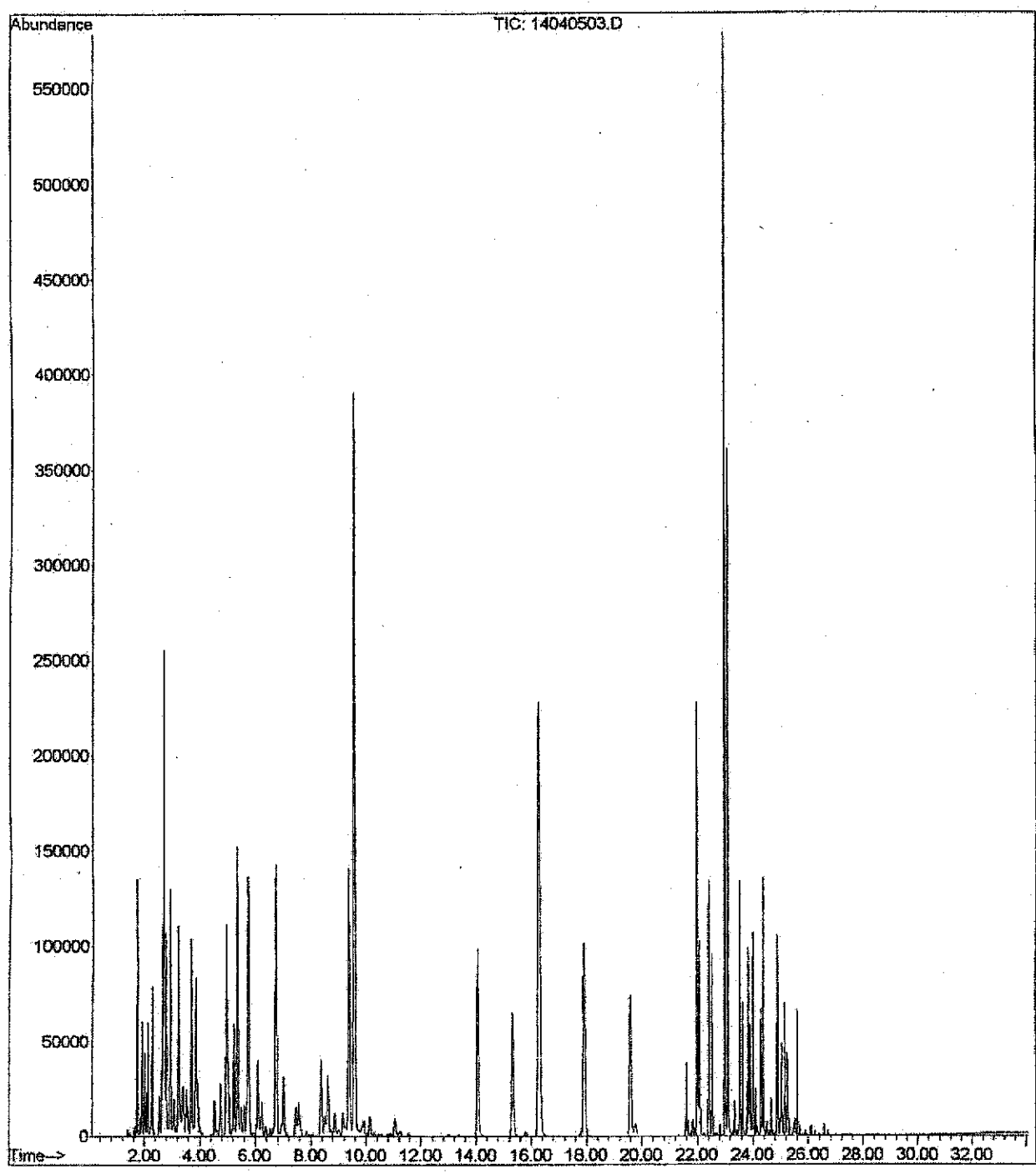


File :C:\MSDCHEM\1\DATA\2005-Apr-14-1453.b\14040524.D  
Operator :  
Acquired : 15 Apr 2005 8:05 am using AcqMethod VOCOXY.M  
Instrument : PAL GCMS  
Sample Name: BD51401-BS1@btex  
Misc Info :  
Vial Number: 24





File :C:\MSDCHEM\1\DATA\2005-Apr-14-1453.b\14040503.D  
Operator :  
Acquired : 14 Apr 2005 4:39 pm using AcqMethod VOCOXY.M  
Instrument : PAL GCMS  
Sample Name: BD51401-BS1@gas  
Misc Info :  
Vial Number: 3





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:

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

Date: 27-APR-05

Lab Job Number: 178844

Project ID: STANDARD

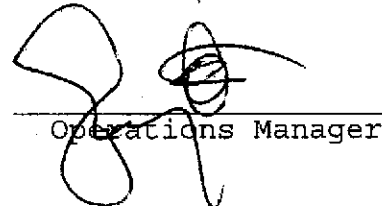
Location:

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

This package may be reproduced only in its entirety.

## CASE NARRATIVE

Laboratory number: 178844  
Client: Pacific Analytical Laboratory  
Request Date: 04/12/05  
Samples Received: 04/12/05

This hardcopy data package contains sample and QC results for three water samples, requested for the above referenced project on 04/12/05. The samples were received on ice and intact.

TPH-Extractables by GC (EPA 8015B):

Diesel C10-C24 was detected above the RL in the method blank for batch 101192; this analyte was either not detected in samples at or above the RL, or detected at a level at least ten times that of the blank. No other analytical problems were encountered.

178844

# 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# 5040011

Project No: 2831				Sampler: Eric Jennings / John Lohman								Analyses/Method			
Project Name: 5725 Thornhill, Oakland				Report To: Joyce Bobek								<del>TPH, BTEX, MBE, PCBs</del> <del>Gas Ox, for 3000-8000</del> <del>Ethanol</del> TPHND 8015 TPHMO 3550/6015			
Project P.O.: ---				Company: SOMA Environmental Engineering, Inc.											
Turnaround Time: Standard				Tel: 925-244-6600 Fax: 925-244-6601											
		Sampling Date/Time		Matrix			# of Containers	Preservatives							
Lab No.	Sample ID	Date	Time	Soil	Water	Waste		HCL	H <sub>2</sub> SO <sub>4</sub>	NONE	ICE	Field Notes			
-1	SOMA-1	4/12/05	10:25 AM		X		2 L Amber 5 VOAs	X		X	X	Grab Sample			
-2	SOMA-2	4/12/05	11:55 AM		X		2 L Amber 5 VOAs	X		X	X	Grab Sample			
-3	SOMA-3	4/12/05	12:19 PM		X		2 L Amber 5 VOAs	X		X	X	Grab Sample			
Sampler Remarks:				Relinquished by:				Date/Time:		Received by:		Date/Time:			
EDF OUTPUT Silica Gel cleanup method				E. Finn				4/12/05 1:00 PM		J. Finn		4-12-05 1:00			
				Eric Jennings				4/12/05 4:30 PM		Javanna Curtis		4/12/05 4:30			

REC'D intact; on ice



## Total Extractable Hydrocarbons

Lab #:	178844	Prep:	EPA 3520C
Client:	Pacific Analytical Laboratory	Analysis:	EPA 8015B
Project#:	STANDARD		
Matrix:	Water	Sampled:	04/12/05
Units:	ug/L	Received:	04/12/05
Diln Fac:	1.000	Prepared:	04/14/05
Batch#:	101192		

Field ID:	SOMA-1	Analyzed:	04/17/05
Type:	SAMPLE	Cleanup Method:	EPA 3630C
Lab ID:	178844-001		

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	115	55-143

Field ID:	SOMA-2	Analyzed:	04/17/05
Type:	SAMPLE	Cleanup Method:	EPA 3630C
Lab ID:	178844-002		

Analyte	Result	RL
Diesel C10-C24	1,200 L Y	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	111	55-143

Field ID:	SOMA-3	Analyzed:	04/17/05
Type:	SAMPLE	Cleanup Method:	EPA 3630C
Lab ID:	178844-003		

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	121	55-143

Type:	BLANK	Analyzed:	04/18/05
Lab ID:	QC290563	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24	56	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	107	55-143

L= Lighter hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected  
 RL= Reporting Limit

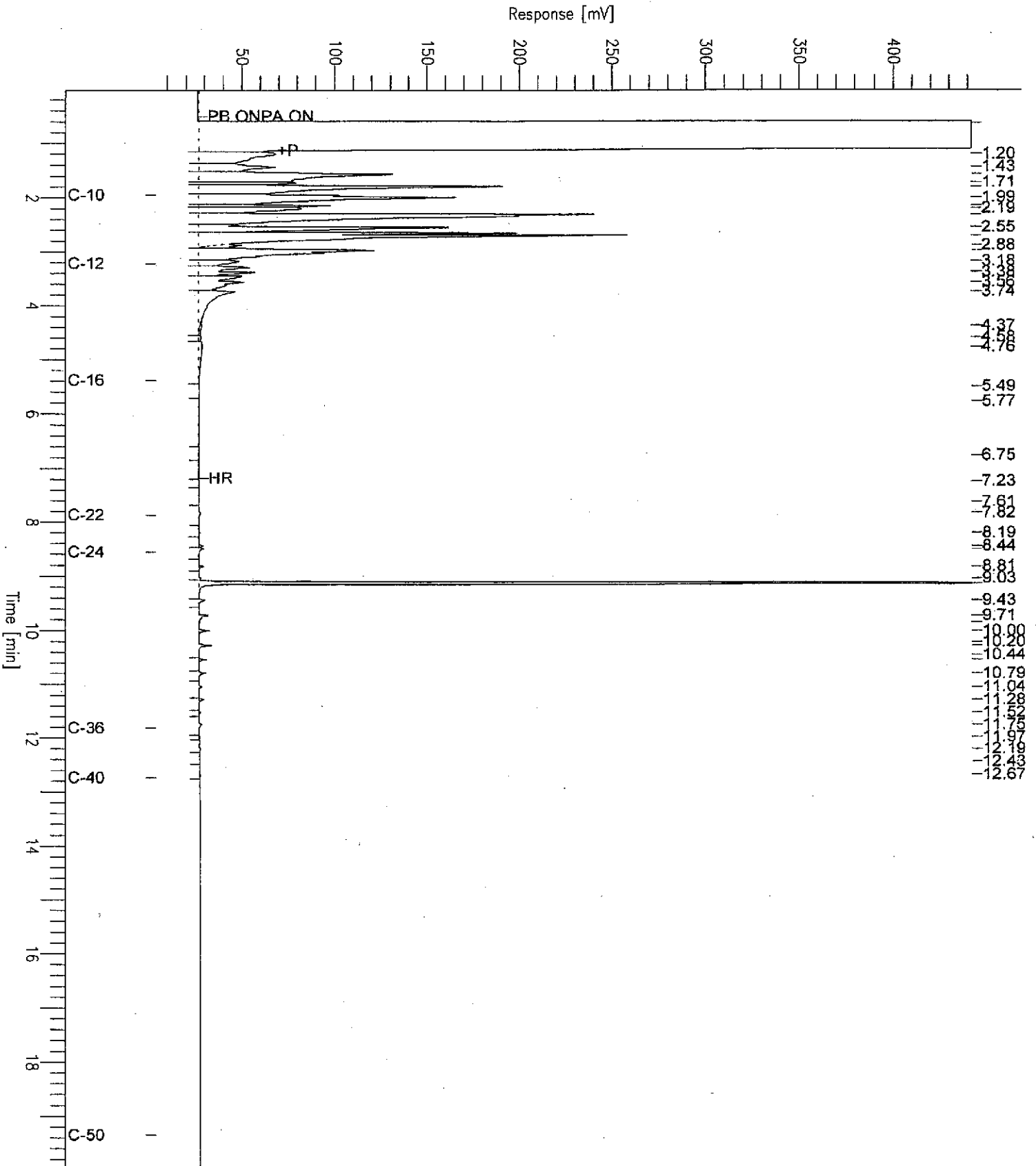
Page 1 of 1

# Chromatogram

Sample Name : 178844-002sg,101192  
 FileName : G:\GC15\CHB\106B038.RAW  
 Method : BTEH094S.MTH  
 Start Time : 0.01 min  
 Scale Factor: 0.0

End Time : 19.99 min  
 Plot Offset: 4 mV

Sample #: 101192  
 Date : 4/18/05 08:27 AM  
 Time of Injection: 4/17/05 02:53 PM  
 Low Point : 3.80 mV  
 High Point : 442.15 mV  
 Plot Scale: 438.3 mV



# Chromatogram

Sample Name : ccv,S167,ds1  
FileName : G:\GC11\CHA\109A003.RAW  
Method : ATEH109S.MTH  
Start Time : 0.01 min  
Scale Factor: 0.0

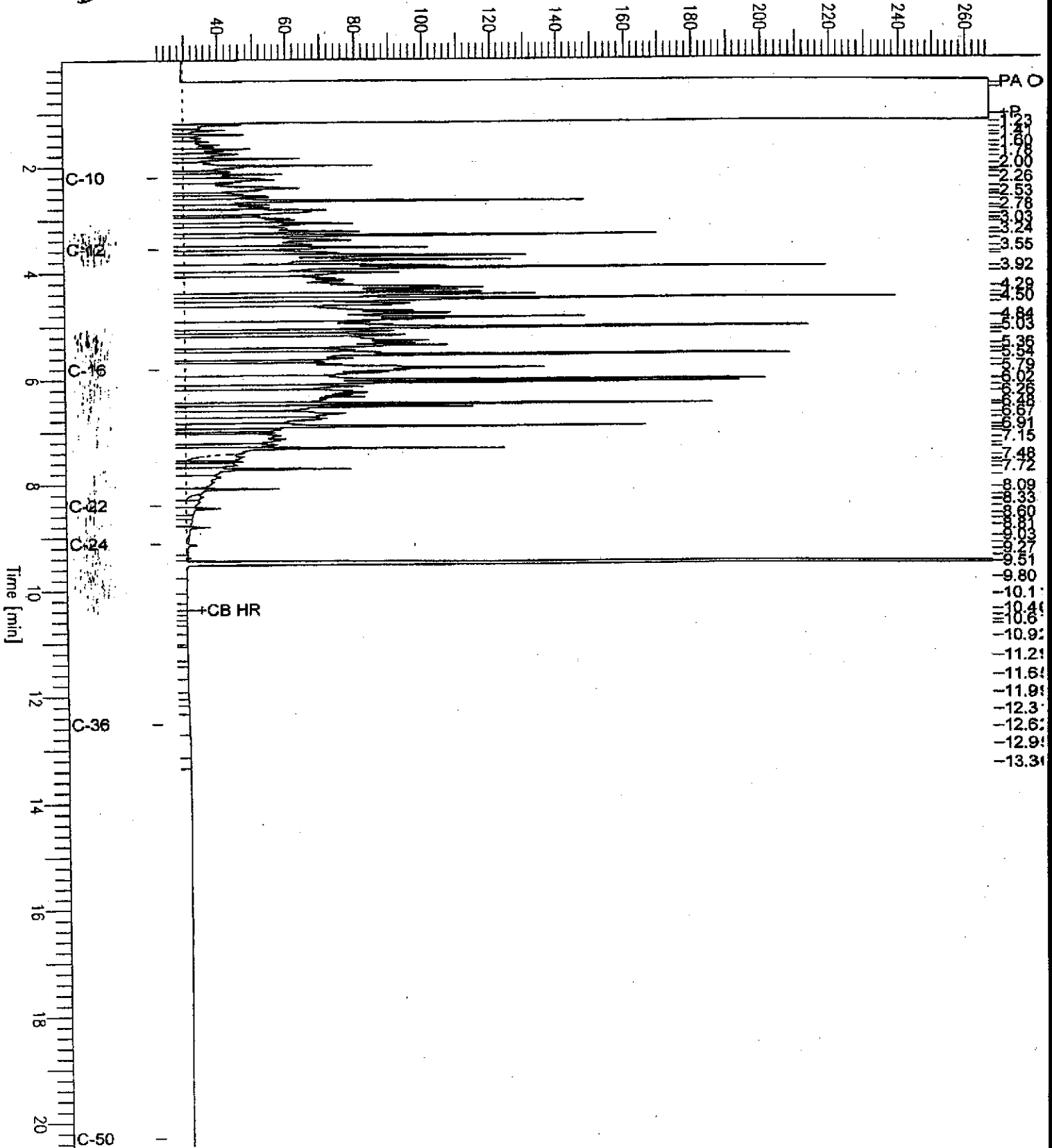
End Time : 20.45 min  
Plot Offset: 22 mV

Sample #: 500mg/L  
Date : 4/19/05 01:56 PM  
Time of Injection: 4/19/05 01:23 PM  
Low Point : 21.98 mV  
Plot Scale: 244.9 mV

Page 1 of 1  
High Point : 266.85 mV

Diesel

Response [mV]



# Chromatogram

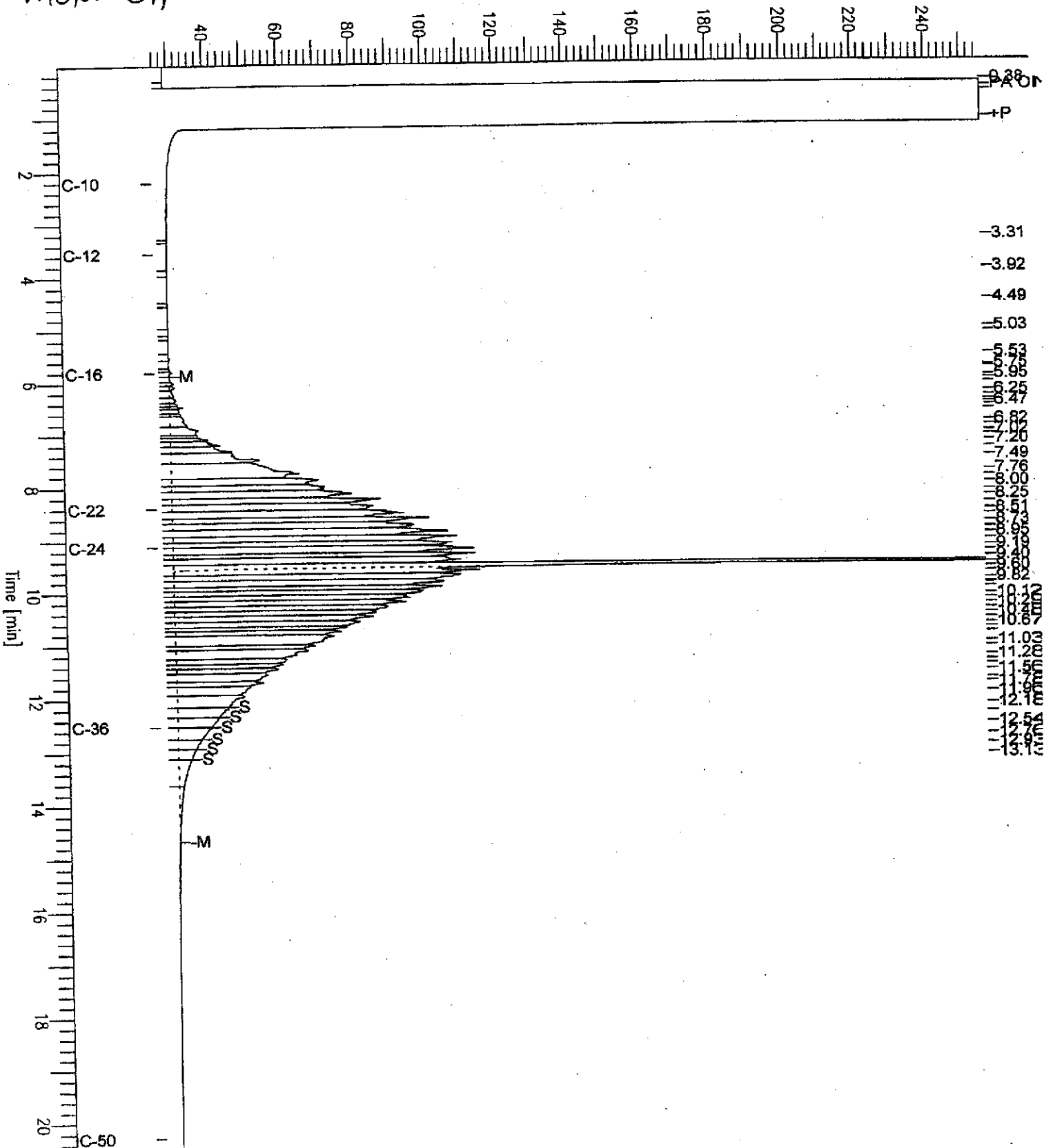
Sample Name : ccv,S294.mo  
 FileName : G:\GC11\CHA\109A004.RAW  
 Method : ATEH109S.MTH  
 Start Time : 0.01 min  
 Scale Factor: 0.0

End Time : 20.43 min  
 Plot Offset: 26 mV

Page 1 of 1  
 Date : 4/19/05 02:18 PM  
 Time of Injection: 4/19/05 01:52 PM  
 Low Point : 25.67 mV  
 High Point : 255.54 mV  
 Plot Scale: 229.9 mV

*Motor Oil*

Response [mV]





Batch QC Report

**Total Extractable Hydrocarbons**

Lab #:	178844	Prep:	EPA 3520C
Client:	Pacific Analytical Laboratory	Analysis:	EPA 8015B
Project#:	STANDARD		
Matrix:	Water	Batch#:	101192
Units:	ug/L	Prepared:	04/14/05
Diln Fac:	1.000	Analyzed:	04/17/05

Type: BS Cleanup Method: EPA 3630C  
 Lab ID: QC290564

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	3,330	133	50-133

Surrogate	%REC	Limits
Hexacosane	143	55-143

Type: BSD Cleanup Method: EPA 3630C  
 Lab ID: QC290565

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,652	106	50-133	23	40

Surrogate	%REC	Limits
Hexacosane	119	55-143

RO 317



**ENVIRONMENTAL ENGINEERING, INC**  
2680 Bishop Drive • Suite 203 • San Ramon, CA 94583  
TEL (925) 244-6600 • FAX (925) 244-6601

May 6, 2005

Mr. Don Hwang  
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 Don:

Enclosed for your review is a copy of SOMA's "Second Quarter 2005 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

Enclosure

cc: Mr. Mo Mashhoon

