



Brunsing Associates, Inc.

20514

January 8, 2004

Project No. 29

Mr. Barney Chan  
Hazardous Materials Specialist  
Alameda County  
Health Care Services Agency

Alameda County  
JAN 12 2004  
Environmental Health

**Response To November 6, 2003 Letter**  
**1735 24<sup>th</sup> Street**  
**Oakland, California**

Dear Mr. Chan,

This letter summarizes our telephone conversation of December 1, 2003 regarding your letter dated November 6, 2003. This letter also provides a response to the technical comments presented in your letter.

*Response to Comment 1—*

Brunsing Associates, Inc. (BAI) had the surveying you requested in your May 2003 letter performed by Phelps Land Surveyors (Phelps) in June 2003. The resulting elevations are presented in a letter report from Phelps, which is provided as an attachment to this letter and are currently in the Geotracker system. This information was also provided in Appendix E of the June 2003 Groundwater Monitoring Report, dated July 29, 2003.

*Response to Comment 2—*

As we discussed, sieve analyses have not been performed for the site, however based on the boring logs the soil is primarily a mixture of silts and clays with occasional organic matter and peat. This description appeared to best correspond to the description of clayey silts listed on page 9 of the Oakland Urban Land Redevelopment (URL) Program Guidance document, dated January 1, 2000. The boring logs were included in our July 29, 2003 report. In order to perform a definitive analysis as required by the City of Oakland ULR document, oh BAI proposes that 3 soil samples be collected concurrently with the confirmation borings proposed below in response to comment 4. Please note that if the data indicates that the soils are not clayey silts, this will only impact the results of the

soil analytical data compared to the Oakland Tier 2 SSTLs for Clayey Silts, and that the soil analytical data were based on samples collected prior to the initiation of soil vapor extraction at the site. A change in soil type would have no impact on the risk based analysis of groundwater since the groundwater monitoring results were less than the Tier 1 RBSLs, which are independent of soil type.

*Response to Comment 3—*

Your letter requests that a plot of concentration versus time for the various contaminant concentrations and a mathematical interpretation should be provided in order to evaluate the decrease of TPH as gasoline and BTEX. After a review of the analytical data, it appears that the "sudden" decrease in concentration that you note refers primarily to vapor recovery well VRW-4. In the June 2003 groundwater monitoring report, BAI did not provide a plot of contaminant concentration versus time and a mathematical interpretation because there were only two recent data points available, one from May 15, 2002 and one from June 5, 2003. There was a third data point from November 4, 1993, however this was collected prior to remediation activities. Time versus concentration plots for selected wells are included in the attached November 2003 groundwater monitoring report.

*Response to Comment 4—*

Based on our telephone conversation, we will submit a soil sampling workplan that will provide the locations of verification soil sampling focusing on soils that had elevated petroleum hydrocarbon concentrations prior to remediation. The workplan will also propose sieve analyses on three soil samples to evaluate the soil types. ✓

*Response to Comment 5—*

You requested that an utilities/preferential pathway and sensitive receptor survey be performed for both on and off-site. In our telephone conversation, you specified that this survey should include a search within a 1,000-foot radius of the site for wells and utilities, and that the search for municipal wells should be performed within a ¼-mile radius of the site.

*Response to Comment 6—*

BAI included the residual total petroleum hydrocarbons as gasoline screening levels using the SFRWQCB document, *Screening for Environmental Concerns at*



Mr. Barney Chan

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*Sites with Contaminated Soil and Groundwater, July 2003*, in the November 2003 groundwater monitoring report, per your request.

The November 2003 groundwater monitoring field activities were performed on November 19, 2003. Your November 6, 2003 letter requested a deadline for submittal of the groundwater monitoring report of December 8, 2003. Analytical data was not available until Thursday, December 4, 2003. BAI requested and was verbally granted that the December 8, 2003 groundwater monitoring report submission date be extended. The November 2003 groundwater monitoring report is submitted concurrently with this letter, and includes: plots of concentrations verses time for the groundwater monitoring well MW-2 and the VRW series wells and their interpretation, and comparison with the SFRWQCB screening levels for total petroleum hydrocarbons as gasoline.

BAI's office was closed during the holiday season, thus BAI requests an extension until January 30, 2004 to complete the soil sampling/soil characterization workplan and the sensitive receptor survey. If you have any questions or comments regarding this letter or the proposed submission date for the workplan and sensitive receptor report, please do not hesitate to contact either Diana Dickerson or myself at (707) 838-3027. We look forward to continuing to work together on this site in the future.

Sincerely,



Michelle Floyd Frederick  
Project Engineer

cc: Ms. Normita Callison

Attachments





632 PETALUMA AVENUE, SEBASTOPOL, CALIFORNIA 95472 / (707) 829-0400 / FAX (707) 829-0401

June 23, 2003

Michelle Frederick  
 Brunsing Associates, Inc.  
 P.O. Box 588  
 Windsor, California 95492

Alameda County  
 JAN 12 2004  
 Environmental Health

Re: Monitoring Well Locations --  
 1735 24th Street / Oakland

Dear Michelle:

Below are the elevations of the monitoring wells and vapor recovery wells located at the above-referenced site. An elevation was taken on the North side of the PVC pipes (either 2" or 4", depending on which well), and one was taken on the Northerly rim of the Christy box or manhole (ditto).

For reference, we tied the Southeast and Southwest corners of the main shop building, which is at the back of sidewalk on 24th Street.

The locations of the wells are shown on the enclosed plat, and per your request VRW-1 is referenced to the Southeast corner of the main shop building.

<u>Monitoring well</u>	<u>Elevation of 2" / 4" PVC pipe NAVD 88 Datum</u>	<u>North Rim Christy Box / Manhole NAVD 88 Datum</u>
MW-1 = 2"	11.47	11.78
MW-2 = 4"	10.80	11.25
MW-3 = 2"	11.76	12.13
MW-4 = 2"	11.69	11.96
MW-5 = 2"	11.54	12.00
MW-6 = 2"	8.82	9.36
MW-7 = 2"	7.72	8.01
VRW-1 = 4"	11.18	11.85
VRW-2 = 4"	11.08	12.02
VRW-3 = 4"	11.62	11.90
VRW-4 = 4"	11.33	12.08
VRW-5 = 4"	11.56	12.15
VRW-6 = 4"	11.43	12.08
VRW-7 = 4"	11.70	12.27
VRW-8 = 4"	11.62	12.23
VRW-9 = 4"	11.87	12.33

-2-  
(Brunsing Monitoring Wells continued)

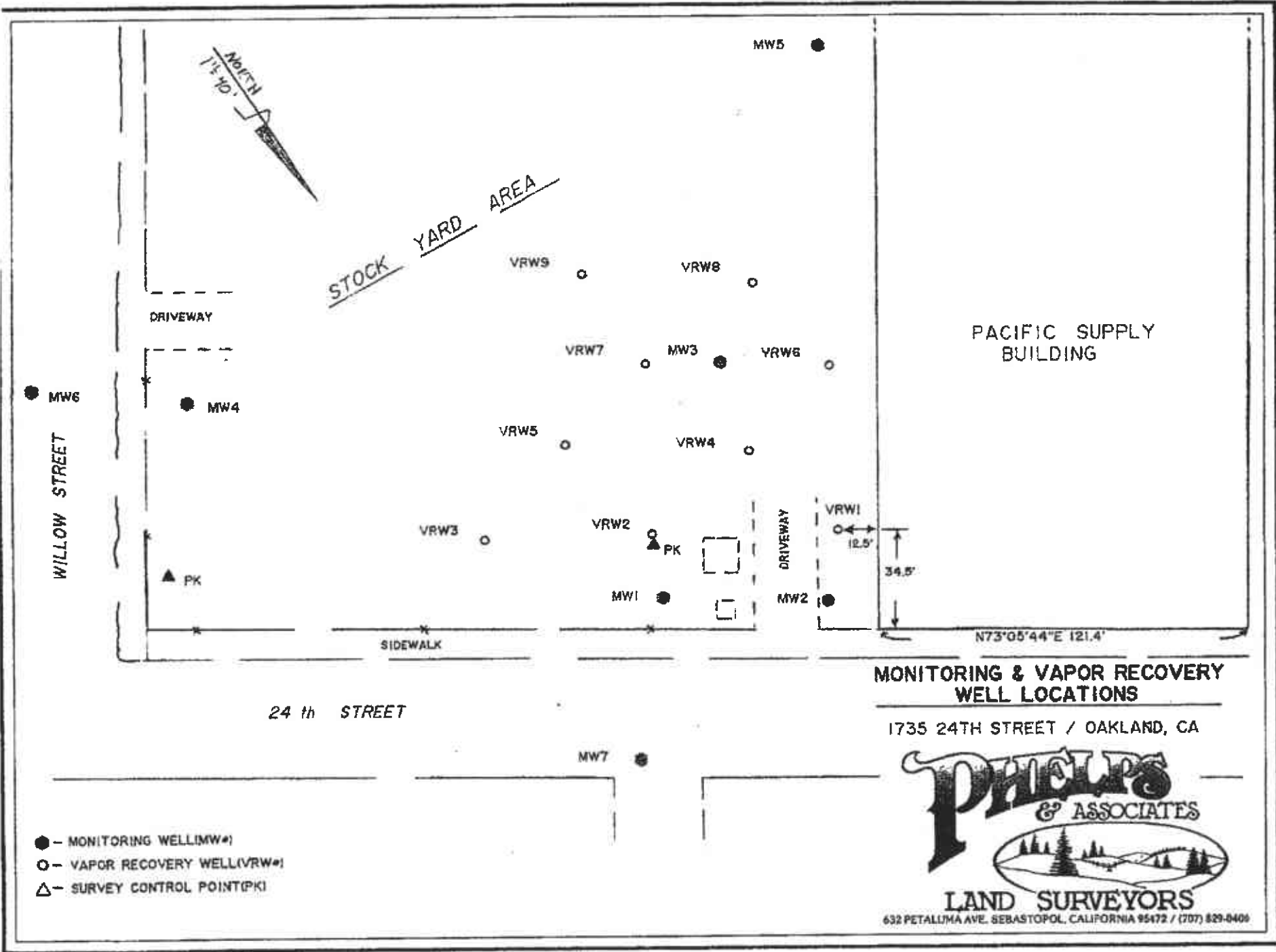
<u>MONITORING</u> <u>well</u>	<u>Latitude</u>	<u>Longitude</u>
MW-1	37.819811	-122.291635
MW-2	37.819893	-122.291795
MW-3	37.819653	-122.291839
MW-4	37.819425	-122.291297
MW-5	37.819451	-122.292134
MW-6	37.819340	-122.291155
MW-7	37.819929	-122.291510
VRW-1	37.819843	-122.291849
VRW-2	37.819756	-122.291666
VRW-3	37.819677	-122.291499
VRW-4	37.819735	-122.291813
VRW-5	37.819642	-122.291636
VRW-6	37.819707	-122.291944
VRW-7	37.819617	-122.291766
VRW-8	37.819605	-122.291919
VRW-9	37.819515	-122.291758

GPS reference points: 941 4777 B TIDAL (PID AE5211)  
PORT 1 (PID HT0654)  
Horizontal datum: CA SPC Zone 3, NAD 83  
Vertical datum: NAVD 88

GPS date and time: 06-20-2003 / 10:54AM  
Type of GPS unit: RTK Topcon TPS Odyssey

Sincerely,  
Phelps & Associates, Inc.

Fred M. Phelps  
Fred M. Phelps



**MONITORING & VAPOR RECOVERY WELL LOCATIONS**

1735 24TH STREET / OAKLAND, CA



632 PETALUMA AVE. SEBASTOPOL, CALIFORNIA 95472 / (707) 829-0409



**Brunsing Associates, Inc.**

January 8, 2004

Project No. 029.022

Mr. Barney Chan  
Alameda County Health Care Services Agency  
Environmental Protection  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Alameda County  
MAR 16 2004  
Environmental Health

**Groundwater Monitoring Report**  
**November 2003**  
**Pacific Supply Company**  
**1735 24th Street**  
**Oakland, California**

RD 514

Dear Mr. Chan:

This correspondence has been prepared by Brunsing Associates, Inc. (BAI) to provide you with a report summarizing the fieldwork completed at the above-referenced site on November 19, 2003, and the laboratory analyses of the groundwater samples collected. The fieldwork was completed in accordance with your correspondence dated November 6, 2003. This report also compares the results of the current groundwater monitoring event with the "Oakland Urban Land Redevelopment Program: Guidance Document", which provides Risk Based Corrective Action Levels (RBCAs) for qualifying sites in Oakland, and with the total petroleum hydrocarbon (TPH) as gasoline environmental screening level (ESL) listed in the San Francisco Regional Water Quality Control Board's (SFRWQCB) document, "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater," as requested in your November 6, 2003 letter.

### **Site Background**

In May 1987, efforts were initiated to abandon a 1,000-gallon underground gasoline storage tank at Pacific Supply Company's West Oakland Site. Soil and associated vapor samples from exploratory boreholes at the site were analyzed by gas chromatography carried out by CHIPS Environmental Consultants and Anatec Laboratories (Plate 2). The results indicated that soil in the vicinity of the tank was contaminated with gasoline and raised the possibility that gasoline may have reached groundwater below the site.



Brunsing Associates, Inc.

Re 514

January 8, 2004

Project No. 029.022

Mr. Barney Chan  
Alameda County Health Care Services Agency  
Environmental Protection  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**Groundwater Monitoring Report**  
**November 2003**  
**Pacific Supply Company**  
**1735 24th Street**  
**Oakland, California**

Alameda County  
JAN 12 2004  
Environmental Health

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During subsequent removal of the tank by Erikson Industrial Services, substantial deterioration of the tank body was documented. Gasoline odors were also detected during tank removal operations.

In order to assess the extent of soil and groundwater quality beneath and immediately adjacent to the Pacific Supply Company site and the potential for migration of contaminants from off-site sources, BAI carried out a two-phase soil and groundwater investigation. Monitoring wells MW-1 through MW-5 (Plate 2) were constructed in September 1988 as the first phase of a soil and groundwater investigation. Monitoring wells MW-6 and MW-7 were constructed on December 19, 1989 during Phase II of the same investigation. The construction and sampling of these wells are also documented in BAI's Report of Findings, dated March 23, 1990. The results of the Phase I and II investigations indicated that light petroleum hydrocarbons had migrated beyond the immediate vicinity of the former UST; however, it was concluded that hydrocarbons in the soil and groundwater had not extended beyond the limits of the property.

The Pacific Supply Company initiated quarterly groundwater monitoring at the request of the Alameda County Health Care Services Agency (ACHCSA) in May 1992. Initially, only on-site wells were monitored for total petroleum (TPH) as gasoline, benzene, toluene, ethylbenzene and xylenes (BTEX), and lead. Later, the five on-site and the two off-site wells were monitored quarterly.

A vapor extraction pilot study was performed in June 1992 to determine the feasibility of using vapor extraction technology as an in-situ corrective action to remove volatile petroleum hydrocarbons from the shallow subsurface soils. A two-inch diameter vapor extraction well (VEW-1) was installed at the location indicated on Plate 2 to an approximate depth of eight feet below ground surface (bgs). The results of the 4-day pilot study indicated that the lithology at the site permitted the flow of air through the soils at a sufficient rate so as to volatilize hydrocarbon constituents in the soil. The radius of influence was determined in the field by measuring the relative pressure at several probe locations positioned at various radial distances away from the extraction well. The results indicated that the estimated radius of influence from a two-inch diameter extraction well was approximately 30 feet at a relatively low pressure of less than 50 inches of water, as discussed in BAI's report titled "Vapor Extraction Remedial Design Report and Specification," dated May 24, 1993.

In response to an ACHCSA December 1992 request, BAI also performed an investigation to delineate the zero line of contamination. Ten soil borings were drilled as part of this investigation (B-1 through B-10) to a depth of approximately seven to ten feet bgs (Plate 2). From each boring, one soil sample was retained from a depth of approximately seven to eight feet bgs for analytical testing of TPH as gasoline and



BTEX. Further discussions of the zero line investigation are provided in BAI's report titled "Vapor Extraction Remedial Design Report and Specification," dated May 24, 1993.

Vapor recovery wells VRW-1 through VRW-9 were constructed in August 1993 as part of a vapor recovery system. During installation of the extraction wells, soil samples were collected for chemical analysis in the borings at the depth where first groundwater occurred, at approximately seven feet bgs. Installations of these wells were documented in a February 7, 1994 report. A vapor extraction system was installed in the fall of 1993 as an interim remedial action. The system began operation on December 26, 1993. The system consisted of an internal combustion engine with a spray aeration tank for treatment of groundwater, and an activated carbon treatment polishing step prior to groundwater discharge. The internal combustion unit and spray aeration unit was manufactured by Remediation Service International (RSI), under the trade name Spray Aeration Vapor Extraction (SAVE) system.

On June 28, 1996, the treatment system was shut down with the concurrence of Pacific Supply Company. Prior to shut down, the system had destroyed an estimated 6,550 pounds of petroleum hydrocarbons since start of operations on December 26, 1993. After shut down, the water in the water tank was treated and discharged to the sanitary sewer under the existing permit and the inside of the tank was cleaned on July 15, 1996.

The permit with the Bay Area Air Quality Management District (BAAQMD) expired on September 1, 1996, and was not renewed. The water discharge permit was discontinued on July 31, 1996. The total volume of water discharged to the sanitary sewer was 151,089 gallons. In December 1996, the shut down and decommissioning of the system was authorized by Jennifer Eberle of the Alameda County Department of Health Services.

Groundwater monitoring continued following the shut down of the vapor extraction system. In August 2000, BAI supervised the drilling of 3 soil borings in 24th Street, on the north side of the Pacific Supply Company building in a downgradient direction from the former UST location. Grab groundwater samples were collected to evaluate whether off-site migration of hydrocarbon contamination in groundwater was occurring. One of the three groundwater samples was reported to contain low levels of TPH as gasoline, BTEX, and petroleum oxygenates. The results of the field investigation are presented in BAI's "Groundwater Investigation and Monitoring Report," dated December 14, 2000.

Table 1 presents a summary of groundwater analytical data and groundwater elevations for the monitoring wells, Oakland Tier 1 Risk Based Screening Levels



(RBSLs) for inhalation of indoor air vapors at a commercial/industrial site for BTEX, and the ESL for TPH as gasoline based on Table B of the SFRWQCB's document, "Screening for Environmental Concerns with Contaminated Soils and Groundwater." Table 2 presents the groundwater concentrations and groundwater elevations for vapor recovery wells, and includes groundwater elevations and the Oakland Tier 1 RBSLs for inhalation of indoor air vapors at a commercial/industrial site, and the ESL for TPH as gasoline based on Table B of the SFRWQCB's document, "Screening for Environmental Concerns with Contaminated Soils and Groundwater." Plate 2 presents a site map that includes the historical boring and sampling locations. Groundwater elevations and flow direction for November 2003 are provided on Plate 3. Appendix A presents the monitoring well sampling protocol and field reports. Appendix B presents the analytical laboratory report for this sampling period. Concentration verses time for TPH and BTEX components in the VRW series wells and monitoring well MW-2 are presented in Appendix C.

### **Scope of Work**

The scope of work performed for this sampling event included collecting groundwater samples for laboratory analysis from monitoring wells MW-1 through MW-3, and vapor extraction wells VRW-1 through VRW-9. The groundwater sampling was completed on November 19, 2003. Prior to sampling, groundwater levels were also measured in all wells. The purpose of the sampling work was to further evaluate the effectiveness of the vapor extraction and remediation that was performed at the site between December 1993 and June 1996.

### **Groundwater Flow Direction**

Groundwater elevations and flow directions are presented on Plate 3. The groundwater flow direction was predominately to the west with is highest elevation observed in monitoring well MW-1. The groundwater elevation measured in well VRW-4 was slightly higher than the adjacent wells indicating a local flow direction in this area to the north. The groundwater gradient was approximately 0.003 foot per foot, using data from wells MW-1, MW-3, and VRW-3.



### Groundwater Sampling and Analytical Results

Groundwater samples for laboratory analysis were collected from selected wells on November 19, 2003. Groundwater sampling was performed in accordance with the sampling protocol presented in Appendix A. Alpha Analytical Laboratories, Inc., a state-certified analytical laboratory, analyzed the groundwater samples for TPH as gasoline by EPA Test Method 8015, and BTEX, petroleum oxygenates and lead scavengers by EPA Test Method 8260 (EPA 8260). A copy of the laboratory analytical report for this sampling event is presented in Appendix B.

Table 1 presents a summary of groundwater analytical results for the monitoring well sampling events at the site. The results of the November 2003 groundwater analyses for monitoring wells MW-1 through MW-3 are included in the summary.

The groundwater sample collected from monitoring well MW-1 was reported to contain no detectable TPH as gasoline, BTEX, petroleum oxygenates or lead scavengers. The sample from monitoring well MW-2 was reported to contain TPH as gasoline at 3.7 milligrams per liter (mg/l), benzene at 9.7 micrograms per liter ( $\mu\text{g/l}$ ), and xylenes at 7.5  $\mu\text{g/l}$ ; no other petroleum constituents were detected above the reporting limit in monitoring well MW-2. The groundwater sample collected from monitoring well MW-3 contained 0.16 mg/l of TPH as gasoline, but contained no other petroleum constituents above the laboratory reporting limits.

Table 2 presents a summary of the available groundwater analytical results for vapor recovery wells VRW-1 through VRW-9 (Plate 2). For well VRW-1, the November 2003 sample contained TPH as gasoline at a concentration of 1.2 mg/l, benzene at 19  $\mu\text{g/l}$  and xylenes at 6.3  $\mu\text{g/l}$ . The groundwater sample collected from well VRW-2 during November 2003 reportedly contained TPH as gasoline at 1.3 mg/l, benzene at 51  $\mu\text{g/l}$ , and xylenes at 4.0  $\mu\text{g/l}$ . The VRW-3 sample contained 0.16 mg/l of TPH as gasoline, 1.7  $\mu\text{g/l}$  of benzene, and 2.7  $\mu\text{g/l}$  of xylenes. The groundwater sample collected from vapor recovery well VRW-4 contained 1.7 mg/l of TPH as gasoline, 210  $\mu\text{g/l}$  of benzene, 2.4  $\mu\text{g/l}$  of toluene, and 36  $\mu\text{g/l}$  of xylenes. TPH as gasoline, benzene, ethylbenzene, and xylenes were reported in the groundwater sample from well VWR-5 at concentrations of 2.9 mg/l, 250  $\mu\text{g/l}$ , 24  $\mu\text{g/l}$ , and 41  $\mu\text{g/l}$ , respectively. For well VRW-6, the November 2003 sample was reported to contain 0.21 mg/l of TPH as gasoline, 13  $\mu\text{g/l}$  of benzene, 1.0  $\mu\text{g/l}$  of ethylbenzene, 2.5  $\mu\text{g/l}$  of xylenes. The groundwater sample collected from well VRW-7 during November 2003 contained 1.1 mg/l of TPH as gasoline, 14  $\mu\text{g/l}$  of benzene, 1.7  $\mu\text{g/l}$  of ethylbenzene, and 5.6  $\mu\text{g/l}$  of xylenes. For well VRW-8, the November 2003 sample reportedly contained 3.6 mg/l of TPH as gasoline, 36  $\mu\text{g/l}$  of benzene, and 4.3  $\mu\text{g/l}$  of xylenes. The groundwater sample



collected from vapor recovery well VRW-9 was reported to contain TPH as gasoline at a concentration of 0.86 mg/l and xylenes at 5.50 µg/l.

### Discussion of Groundwater Analytical Results

The samples collected from monitoring well MW-1 in June 2003 and November 2003 reportedly contained no petroleum hydrocarbon constituents in the groundwater above the laboratory reporting limits. The groundwater sample collected from monitoring well MW-2 in November 2003 showed an increase in TPH as gasoline concentrations, but a decrease in the BTEX concentrations. Concentration of TPH as gasoline, and BTEX verses time plots are presented in Appendix C for well MW-2. The TPH as gasoline verses time plot shows that concentrations in this well have been in the range of approximately 2 to 4 mg/l since April 1992. The concentrations of BTEX components verses time in well MW-2 shows a general decreasing trend of benzene that has on occasions shown a significant increase in concentrations, generally during spring but appears to have stabilized at approximately 20 to 50 µg/l. The laboratory analytical results for the groundwater sample collected in November 2003 from monitoring well MW-3 reported the first detection of TPH as gasoline (0.16 mg/l) since January 1997, however no BTEX components were reported. Generally, groundwater samples collected from wells MW-1 and MW-3 have reported concentrations below the laboratory reporting limits or low levels of petroleum constituents; thus no concentration verses time plots were created.

During the recent monitoring events, vapor recovery wells in general have shown higher groundwater concentrations of petroleum constituents than the monitoring wells. This may be a result of the differences in screening intervals between the vapor recovery wells and the monitoring wells (the vapor recovery wells are generally screened shallower than the monitoring wells), and/or due to the SVE remediation activities that pulled contamination toward the vapor recovery wells.

Only a limited quantity of groundwater monitoring data exists for the vapor recovery wells. Vapor recovery wells VRW-2 through VRW-9 have been sampled on four occasions, whereas, vapor recovery well VRW-1 has been sampled only three times. Concentration verse time plots for TPH and BTEX components in the VRW series wells are presented in Appendix C.

A review of the BTEX concentration verses time plots show generally decreasing trends in wells VRW-1, VRW-2, VRW-3, VRW-4, VRW-8, and VRW-9. The groundwater sample collected from vapor recovery well VRW-5 contained a significant increase in benzene concentration in November 2003. Benzene concentrations in wells VRW-6 and VRW-7 increased in May 2002 but have had decreased since May 2002. A review of the



Mr. Barney Chan  
January 8, 2004  
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TPH as gasoline concentration verses time plots for the VRW wells show generally decreasing trends with slightly increased November 2003 concentrations in wells VRW-1, VRW-2, and VRW-3. A review of the TPH as gasoline concentration verses time plot for well VRW-4 shows a generally decreasing trend since May 2002, while well VRW-9 shows an increasing trend but at low concentrations (less than 1.0 mg/l). The trend in well VRW-5 shows stable concentrations through June 2003 generally below 1.0 mg/l, and an increase during the November 2003 monitoring event. The plots for wells VRW-6, VRW-7, and VRW-8 indicate fluctuating TPH as gasoline concentrations, with the last two concentrations being less than the maximum reported concentration for each well.

### Conclusion

As discussed in BAI's January 8, 2004 correspondence, BAI will be submitting a soil sampling workplan that will include the collection of samples for soil type analyses. An utilities/preferential pathway and sensitive receptor survey will also be performed.

If you should have any questions regarding this report, please contact Michelle Floyd Frederick or Diana Dickerson at (707) 838-3027.

Sincerely,



Michelle Floyd Frederick  
Project Engineer



Diana M. Dickerson, R.G., R.E.A.  
Principal Geologist



cc: Ms. Normita Callison, Pacific Coast Building Supply



## LIST OF ATTACHMENTS

### TABLES

- Table 1. Summary of Groundwater Analytical Data for Monitoring Wells  
Table 2. Summary of Groundwater Analytical Data for Vapor Extraction Wells

### PLATES

- Plate 1. Vicinity Map  
Plate 2. Site Map  
Plate 3. Groundwater Elevations, November 19, 2003

### APPENDICES

- Appendix A. Monitoring Well Sampling Protocol and Field Reports  
Appendix B. Analytical Laboratory Report  
Appendix C. Concentration versus Time Plots



**TABLE 1. SUMMARY OF GROUNDWATER ANALYTICAL DATA FOR MONITORING WELLS**  
Pacific Supply Company, 1735 24th Street, Oakland, California

Well Name	Sampling Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Lead (mg/L)	MTBE (ug/L)
MW-1	10/14/1988	7.99	0.88	1.1	1.1	ND	-	ND	-	-
MW-1	12/29/1989	7.74	1.13	ND	ND	ND	ND	ND	ND (1)	-
MW-1	5/28/1992	7.81	1.06	ND	ND	ND	ND	ND	0.003(2)	-
MW-1	9/3/1992	7.90	0.97	ND	ND	ND	ND	ND	0.12 (2)	-
MW-1	11/24/1992	7.90	0.97	ND	ND	ND	ND	ND	0.017 (2)	-
MW-1	3/9/1993	7.38	1.49	ND	ND	ND	ND	ND	ND (1)	-
MW-1	7/21/1993	7.68	1.19	ND	ND	ND	ND	ND	ND (1)	-
MW-1	11/3/1993	7.83	1.04	ND	ND	ND	ND	ND	ND (1)	-
MW-1	2/1/1994	7.30	1.57	ND	ND	ND	ND	ND	ND (1)	-
MW-1	6/2/1994	7.43	1.44	ND	ND	ND	ND	ND	ND (1)	-
MW-1	9/1/1994	7.70	1.17	ND	ND	ND	ND	ND	ND (1)	-
MW-1	12/13/1994	6.90	1.97	ND	ND	ND	ND	ND	-	-
MW-1	3/7/1995	7.30	1.57	0.06	3.8	ND	ND	ND	-	-
MW-1	6/9/1995	7.87	1.00	0.09	12	0.8	0.5	1.3	-	-
MW-1	9/21/1995	7.67	1.20	ND	4.1	ND	ND	ND	-	-
MW-1	12/18/1995	7.15	1.72	ND	ND	ND	ND	ND	-	-
MW-1	2/29/1996	6.74	2.13	0.09	1.4	0.5	ND	0.8	-	-
MW-1	7/15/1996	7.76	1.11	-	-	-	-	-	-	-
MW-1	1/7/1997	6.80	2.07	0.06	0.6	<0.5	<0.5	<0.5	-	-
MW-1	7/12/1997	7.67	1.20	-	-	-	-	-	-	-
MW-1	1/26/1998	6.93	1.94	<0.05	<0.5	<0.5	<0.5	1.1	-	-
MW-1	7/3/1998	7.51	1.36	-	-	-	-	-	-	-
MW-1	1/13/1999	7.63	1.24	<0.05	<0.5	<0.5	<0.5	<0.5	-	-
MW-1	9/27/1999	7.77	1.10	-	-	-	-	-	-	-
MW-1	1/28/2000	6.85	2.02	<0.05	<0.5	<0.5	<0.5	<0.5	-	<5.0
MW-1	5/16/2002	7.45	1.42	0.35	<0.5	<0.5	<0.5	<0.5	-	<1.0
MW-1	6/10/2003	7.32	4.15	<0.05	<0.5	<0.5	<0.5	<0.5	-	-
MW-1	11/19/2003	7.30	4.17	<0.050	<0.30	<0.30	<0.50	<0.50	-	-
<b>Oakland Tier 1 RBSLs</b>					<b>1,800</b>	<b>&gt;Sol</b>	<b>&gt;Sol</b>	<b>&gt;Sol</b>	<b>NA</b>	<b>&gt;Sol</b>
<b>SFRWQCE ESLS Table B-Groundwater (4)</b>					<b>0.5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>





**TABLE 1. SUMMARY OF GROUNDWATER ANALYTICAL DATA FOR MONITORING WELLS**  
Pacific Supply Company, 1735 24th Street, Oakland, California

Well Name	Sampling Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Lead (mg/L)	MTBE (ug/L)
MW-2	10/14/1988	7.29	0.85	11	23	20	-	16	-	-
MW-2	12/29/1989	6.87	1.27	4	200	6.7	ND	ND	0.22 (1)	-
MW-2	5/28/1992	6.92	1.22	8.9	550	48	ND	13	ND (2)	-
MW-2	9/3/1992	7.26	0.88	2.1	760	6.2	1.8	5.1	0.006 (2)	-
MW-2	11/24/1992	7.28	0.86	4.2	370	15	3.4	9.5	ND (2)	-
MW-2	3/9/1993	6.73	1.41	4.3	280	14	3.7	7.1	ND (1)	-
MW-2	7/21/1993	7.02	1.12	3.4	250	9.6	2.5	11	ND(1)	-
MW-2	11/4/1993	7.22	0.92	2.5	230	7.8	2.1	9.9	ND(1)	-
MW-2	2/1/1994	6.93	1.21	3.4	240	17	ND	15	ND(1)	-
MW-2	6/2/1994	6.86	1.28	3.0	150	9.8	3.0	10	ND(1)	-
MW-2	9/1/1994	7.10	1.04	2.1	120	9.8	2.0	9.6	ND(1)	-
MW-2	12/13/1994	6.58	1.56	2.0	200	10	2.7	11	-	-
MW-2	3/7/1995	6.69	1.45	3.0	500	15	5.8	16	-	-
MW-2	6/9/1995	7.00	1.14	2.1	300	14	5.8	13	-	-
MW-2	9/21/1995	6.91	1.23	1.6	120	9.6	ND	15	-	-
MW-2	12/18/1995	6.73	1.41	2.8	120	16	5.2	19	-	-
MW-2	2/29/1996	6.36	1.78	1.7	170	15	2.9	17	-	-
MW-2	7/15/1996	7.11	1.03	2.8	160	22	3.5	17	-	-
MW-2	1/7/1997	6.40	1.74	3.0	350	25	8.1	24	-	-
MW-2	7/12/1997	6.98	1.16	2.1	55	11	<2.5	18	-	-
MW-2	1/26/1998	6.45	1.69	1.8	310	29	5.0	15	-	-
MW-2	7/3/1998	6.91	1.23	1.9	85	9.3	1.8	17	-	-
MW-2	1/13/1999	7.07	1.07	2.1	48	33	2.0	16	-	-
MW-2	9/27/1999	7.22	0.92	1.5	20	6.8	2.6	11	-	-
MW-2	1/28/2000	6.61	1.53	1.3	22	6.4	1.5	11	-	<5.0
MW-2	5/17/2002	6.95	1.19	3.3	25.4	<5.0	<5.0	<5.0	-	<10
MW-2	6/10/2003	6.71	4.09	1.6	52	2.3	32	9.1	-	-
MW-2	11/19/2003	6.95	3.85	3.7	9.7	<1.1	<1.1	7.5	-	-
<b>Oakland Tier 1 RBSLs</b>					<b>1500</b>	<b>&gt;Sol</b>	<b>&gt;Sol</b>	<b>&gt;Sol</b>	<b>NA</b>	<b>&gt;Sol</b>
<b>SFRWQCB ESLs Table B-Groundwater (4)</b>				<b>0.5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>



**TABLE 1. SUMMARY OF GROUNDWATER ANALYTICAL DATA FOR MONITORING WELLS**  
Pacific Supply Company, 1735 24th Street, Oakland, California

Well Name	Sampling Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Lead (mg/L)	MTBE (µg/L)
MW-3	10/14/1988	8.25	0.88	3.4	ND	ND	-	2.8	-	-
MW-3	12/29/1989	7.79	1.34	ND	ND	ND	ND	ND	0.205 (1)	-
MW-3	5/28/1992	7.83	1.30	ND	0.8	0.5	ND	ND	0.016 (2)	-
MW-3	9/3/1992	8.22	0.91	ND	ND	ND	ND	ND	0.033 (2)	-
MW-3	11/24/1992	8.29	0.84	ND	ND	ND	ND	ND	0.011 (2)	-
MW-3	3/9/1993	7.30	1.83	0.1	1.8	ND	ND	ND	ND(1)	-
MW-3	7/21/1993	7.87	1.26	ND	ND	ND	ND	ND	ND(1)	-
MW-3	11/4/1993	8.23	0.90	0.07	0.6	0.5	ND	ND	ND(1)	-
MW-3	2/1/1994	7.56	1.57	ND	ND	ND	ND	ND	ND(1)	-
MW-3	6/2/1994	7.46	1.67	0.06	ND	ND	ND	ND	ND(1)	-
MW-3	9/1/1994	7.83	1.30	0.07	1.7	0.9	ND	ND	ND(1)	-
MW-3	12/13/1994	7.07	2.06	0.06	1.4	ND	ND	ND	-	-
MW-3	3/8/1995	7.27	1.86	0.06	1.5	ND	ND	ND	-	-
MW-3	6/9/1995	7.79	1.34	0.10	5.7	ND	ND	ND	-	-
MW-3	9/21/1995	7.87	1.26	ND	1.5	ND	ND	ND	-	-
MW-3	12/18/1995	7.30	1.83	ND	1.3	ND	ND	ND	-	-
MW-3	2/29/1996	6.84	2.29	ND	2.1	0.6	ND	0.7	-	-
MW-3	7/15/1996	7.79	1.34	-	-	-	-	-	-	-
MW-3	1/7/1997	6.62	2.51	0.05	1.0	<0.5	<0.5	<0.5	-	-
MW-3	7/12/1997	7.83	1.30	-	-	-	-	-	-	-
MW-3	1/26/1998	6.60	2.53	<0.05	0.8	<0.5	<0.5	<0.5	-	-
MW-3	7/3/1998	7.48	1.65	-	-	-	-	-	-	-
MW-3	1/13/1999	7.63	1.50	<0.05	<0.5	<0.5	<0.5	<0.5	-	-
MW-3	9/27/1999	7.94	1.19	-	-	-	-	-	-	-
MW-3	1/28/2000	7.12	2.01	<0.05	<0.5	<0.5	<0.5	<0.5	-	<5.0
MW-3	6/5/2003	7.53	4.23	<0.05	<0.5	<0.5	<0.5	<0.5	-	-
MW-3	11/19/2003	7.83	3.93	0.16	<0.54	<0.54	<0.55	<1.6	-	-
<b>Oakland Tier 1 RBSLs</b>					<b>1,800</b>	<b>&gt;Sol</b>	<b>&gt;Sol</b>	<b>&gt;Sol</b>	<b>NA</b>	<b>&gt;Sol</b>
<b>SFRWQCB ESLs Table B-Groundwater (4)</b>					<b>0.5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>



**TABLE 1. SUMMARY OF GROUNDWATER ANALYTICAL DATA FOR MONITORING WELLS**  
 Pacific Supply Company, 1735 24th Street, Oakland, California

Well Name	Sampling Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Lead (mg/L)	MTBE (ug/L)
MW-4	10/14/1988	8.33	0.74	4.6	1.2	ND	-	2.2	-	-
MW-4	12/29/1989	8.08	0.99	0.5	0.7	ND	ND	ND	ND (1)	-
MW-4	5/28/1992	8.19	0.88	0.27	8.8	1	ND	3.2	0.030 (2)	-
MW-4	9/3/1992	8.37	0.70	0.20	4.5	4.4	ND	1.9	0.022 (2)	-
MW-4	11/24/1992	8.28	0.79	0.14	3.2	3.2	ND	1.0	0.005 (2)	-
MW-4	3/9/1993	7.98	1.09	0.47	10	ND	ND	2.5	ND (1)	-
MW-4	7/21/1993	8.17	0.90	0.28	4.4	5.9	ND	ND	ND(1)	-
MW-4	11/4/1993	8.14	0.93	0.08	1.3	1.6	ND	ND	ND(1)	-
MW-4	2/1/1994	7.79	1.28	0.08	ND	ND	ND	ND	ND(1)	-
MW-4	6/2/1994	7.53	1.54	0.30	3.1	2.9	ND	0.8	ND(1)	-
MW-4	9/1/1994	7.69	1.38	0.12	1.6	ND	ND	ND	ND(1)	-
MW-4	12/13/1994	6.70	2.37	ND	ND	ND	ND	ND	-	-
MW-4	3/8/1995	6.83	2.24	0.09	ND	ND	ND	ND	-	-
MW-4	6/9/1995	7.66	1.41	0.19	ND	ND	ND	ND	-	-
MW-4	9/21/1995	7.93	1.14	0.09	ND	ND	ND	ND	-	-
MW-4	12/18/1995	6.98	2.09	-	-	-	-	-	-	-
MW-4	2/29/1996	6.54	2.53	0.14	1.6	1.0	ND	0.6	-	-
MW-4	7/15/1996	7.74	1.33	-	-	-	-	-	-	-
MW-4	1/7/1997	6.46	2.61	0.09	1.0	0.5	<0.5	<0.5	-	-
MW-4	7/12/1997	7.82	1.25	-	-	-	-	-	-	-
MW-4	1/26/1998	6.67	2.40	0.09	1.1	0.8	<0.5	<0.5	-	-
MW-4	7/3/1998	7.45	1.62	-	-	-	-	-	-	-
MW-4	1/13/1999	7.51	1.56	0.12	1.1	0.62	<0.5	0.57	-	-
MW-4	9/27/1999	7.88	1.19	-	-	-	-	-	-	-
MW-4	1/28/2000	6.73	2.34	0.072	<0.5	<0.5	<0.5	<0.5	-	<5.0
<b>Oakland Tier 1 RBSLs</b>					<b>1,800</b>	<b>&gt;Sol</b>	<b>&gt;Sol</b>	<b>&gt;Sol</b>	<b>NA</b>	<b>&gt;Sol</b>
<b>SFRWQCB ESLs Table B-Groundwater (4)</b>					<b>0.5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>



**TABLE 1. SUMMARY OF GROUNDWATER ANALYTICAL DATA FOR MONITORING WELLS**  
Pacific Supply Company, 1735 24th Street, Oakland, California

Well Name	Sampling Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Lead (mg/L)	MTBE (µg/L)
MW-5	10/14/1988	8.04	0.89	3.2	ND	ND	-	ND	-	-
MW-5	12/29/1989	7.40	1.53	ND	ND	ND	ND	ND	ND (1)	-
MW-5	5/28/1992	7.53	1.40	ND	ND	ND	ND	ND	0.008 (2)	-
MW-5	9/3/1992	8.02	0.91	ND	ND	ND	ND	ND	0.034 (2)	-
MW-5	11/24/1992	7.75	1.18	ND	ND	ND	ND	ND	0.011 (2)	-
MW-5	3/9/1993	6.91	2.02	ND	ND	ND	ND	ND	ND (1)	-
MW-5	7/21/1993	7.57	1.36	ND	ND	ND	ND	ND	ND(1)	-
MW-5	11/4/1993	7.77	1.16	ND	ND	ND	ND	ND	ND(1)	-
MW-5	2/1/1994	7.05	1.88	ND	ND	ND	ND	ND	ND(1)	-
MW-5	6/2/1994	7.18	1.75	ND	ND	ND	ND	ND	ND(1)	-
MW-5	9/1/1994	7.53	1.40	ND	ND	ND	ND	ND	-	-
MW-5	3/8/1995	6.67	2.26	ND	ND	ND	ND	ND	-	-
MW-5	6/9/1995	7.33	1.60	ND	ND	ND	ND	ND	-	-
MW-5	9/21/1995	7.67	1.26	ND	ND	ND	ND	ND	-	-
MW-5	12/18/1995	6.62	2.31	-	-	-	-	-	-	-
MW-5	2/29/1996	6.16	2.77	ND	ND	ND	ND	ND	-	-
MW-5	7/15/1996	7.47	1.46	-	-	-	-	-	-	-
MW-5	1/7/1997	6.11	2.82	<0.05	<0.5	<0.5	<0.5	<0.5	-	-
MW-5	7/12/1997	7.61	1.32	-	-	-	-	-	-	-
MW-5	1/26/1998	6.17	2.76	<0.05	<0.5	<0.5	<0.5	<0.5	-	-
MW-5	7/3/1998	7.23	1.70	-	-	-	-	-	-	-
MW-5	1/13/1999	7.27	1.66	<0.05	<0.5	<0.5	<0.5	<0.5	-	-
MW-5	9/27/1999	7.76	1.17	-	-	-	-	-	-	-
MW-5	1/28/2000	6.43	2.50	<0.05	<0.5	<0.5	<0.5	<0.5	-	<5.0
<b>Oakland Tier 1 RBSLs</b>					<b>1,800</b>	<b>&gt;Sol</b>	<b>&gt;Sol</b>	<b>&gt;Sol</b>	<b>NA</b>	<b>&gt;Sol</b>
<b>SFRWQCB ESLs Table B-Groundwater (3)</b>				<b>0.5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>



**TABLE 1. SUMMARY OF GROUNDWATER ANALYTICAL DATA FOR MONITORING WELLS**  
 Pacific Supply Company, 1735 24th Street, Oakland, California

Well Name	Sampling Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Lead (mg/L)	MTBE (µg/L)
MW-6	12/29/1989	5.02	1.11	1.1	5.4	4.5	ND	ND	ND (1)	-
MW-6	3/9/1993	5.10	1.03	2.3	2.3	2.8	ND	3.1	ND (1)	-
MW-6	7/21/1993	5.23	0.90	0.59	ND	7.6	ND	ND	ND(1)	-
MW-6	11/4/1993	5.25	0.88	1.5	ND	1.2	ND	0.7	ND(1)	-
MW-6	2/1/1994	5.05	1.08	1.9	2.5	3.9	1.6	1.1	ND(1)	-
MW-6	6/2/1994	4.49	1.64	1.3	ND	1	ND	ND	ND(1)	-
MW-6	9/1/1994	4.53	1.60	2.2	ND	1.7	ND	ND	ND(1)	-
MW-6	12/13/1994	4.27	1.86	0.66 (3)	ND	ND	ND	ND	-	-
MW-6	3/8/1995	3.37	2.76	1.0 (3)	ND	ND	ND	ND	-	-
MW-6	6/9/1995	4.40	1.73	1.5	ND	3.3	ND	ND	-	-
MW-6	9/21/1995	4.69	1.44	0.28	ND	ND	ND	ND	-	-
MW-6	12/18/1995	4.42	1.71	-	-	-	-	-	-	-
<b>Oakland Tier I RBSLs</b>					1,800	>Sol	>Sol	>Sol	NA	>Sol
<b>SPRWQCB ESLs Table B-Groundwater (4)</b>				0.5	-	-	-	-	-	-



TABLE 1. SUMMARY OF GROUNDWATER ANALYTICAL DATA FOR MONITORING WELLS  
Pacific Supply Company, 1735 24th Street, Oakland, California

Well Name	Sampling Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Lead (mg/L)	MTBE (µg/L)
MW-7	12/29/1989	8.35	-3.32	ND	ND	ND	ND	ND	0.235 (1)	-
MW-7	3/9/1993	13.60	-8.57	ND	ND	ND	ND	ND	ND (1)	-
MW-7	7/21/1993	12.59	-7.56	ND	ND	ND	ND	ND	ND(1)	-
MW-7	11/4/1993	9.84	-4.81	ND	ND	ND	ND	ND	ND(1)	-
MW-7	2/1/1994	10.38	-5.35	ND	ND	ND	ND	ND	ND(1)	-
MW-7	6/2/1994	10.10	-5.07	ND	ND	ND	ND	ND	ND(1)	-
MW-7	9/1/1994	9.63	-4.60	ND	ND	ND	ND	ND	ND(1)	-
MW-7	12/13/1994	11.27	-6.24	ND	ND	ND	ND	ND	-	-
MW-7	3/7/1995	9.68	-4.65	ND	ND	ND	ND	ND	-	-
MW-7	6/9/1995	9.37	-4.34	ND	ND	ND	ND	ND	-	-
MW-7	9/21/1995	9.43	-4.40	ND	ND	ND	ND	ND	-	-
MW-7	12/18/1995	13.28	-8.25	-	-	-	-	-	-	-
MW-7	2/29/1996	11.70	-6.67	ND	ND	ND	ND	ND	-	-
MW-7	7/15/1996	11.12	-6.09	-	-	-	-	-	-	-
MW-7	1/7/1997	14.35	-9.32	<0.05	<0.5	<0.5	<0.5	<0.5	-	-
MW-7	7/12/1997	15.12	-10.09	-	-	-	-	-	-	-
MW-7	1/26/1998	15.28	-10.25	<0.05	<0.5	<0.5	<0.5	<0.5	-	-
MW-7	7/3/1998	14.10	-9.07	-	-	-	-	-	-	-
MW-7	1/13/1999	14.55	-9.52	<0.05	<0.5	<0.5	<0.5	<0.5	-	-
MW-7	9/27/1999	14.03	-9.00	-	-	-	-	-	-	-
MW-7	1/28/2000	10.91	-5.88	<0.05	<0.5	<0.5	<0.5	<0.5	-	<5.0
<b>Oakland Tier I RBSLs</b>					<b>1,800</b>	<b>&gt;Sol</b>	<b>&gt;Sol</b>	<b>&gt;Sol</b>	<b>NA</b>	<b>&gt;Sol</b>
<b>SFRWQCB ESLs Table B-Groundwater (4)</b>					<b>0.5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

MTBE = methyl tertiary butyl ether. TPH = total petroleum hydrocarbons.

(1)=Organic Lead, (2)=Total Lead, and (3)=chromatographic peak array does not match gasoline standard.

ND = not detected at laboratory reporting limit. <= less than given laboratory reporting limit.

µg/L = micrograms per liter. mg/L = milligrams per liter. - = not analyzed.

MSL = mean seal level.

Groundwater elevations prior to 2003 based on the following well casing elevations in feet above MSL:

MW-1 (8.87'), MW-2 (8.14'), MW-3 (9.13'), MW-4 (9.07'), MW-5 (8.93'), MW-6 (6.13') and MW-7 (5.03').

Oakland RBSLs are based on a groundwater media for inhalation of indoor air vapors risk scenario at a commercial/industrial site.

(4) SFRWQCB ESLs are taken from Table B of the SFRWQCB document, *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater, July 2003*. Table B provides the ESLs for shallow soils where groundwater is not a current or potential source of drinking water.

The City of Oakland BTEX standards are provided in lieu of the SFRWQCB ESLs due to the location of the site.

New survey data was obtained on June 23, 2003 by Phelps and Associates Land Surveyors.

June 2003 water levels were measured on June 5, 2003.



TABLE 2. SUMMARY OF GROUNDWATER ANALYTICAL DATA FOR VAPOR EXTRACTION WELLS  
Pacific Supply Company, 1735 24th Street, Oakland, California

Sample ID	Sample Collection Date	Depth to Groundwater (feet)	Top of Casing Elevation (feet, MSL)	Groundwater Elevation (feet, MSL)	TPH as gasoline (mg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Other Oxygenates & Lead Scavengers (µg/l)
VRW-1	11/3/1993	-	-	-	3	1600	19	1.1	16	-	-
VRW-1	6/10/2003	7.31	11.18	3.87	0.44	5.9	<0.5	<0.5	1.9	-	-
VRW-1	11/19/2003	7.33	11.18	3.85	1.2	19	<0.54	<0.55	6.3	-	-
SFRWQCB ESUs Table B-Groundwater (1)					0.5	-	-	-	-	-	-
Oakland Tier 1 RBSUs-Inhalation of Indoor Air Vapors, Commercial/Industrial Site						1,800	>Sol	>Sol	>Sol	>Sol	
VRW-2	11/4/1993	-	-	-	7.2	3,300	600	2.4	870	-	-
VRW-2	5/17/2002	-	-	-	2.8	471	<10	<10	<10	<20	<10 to <20
VRW-2	6/9/2003	6.87	11.08	4.21	0.47	38	2.8	<1.0	<1.0	-	-
VRW-2	11/19/2003	7.00	11.08	4.08	1.3	51	<0.54	<0.55	4.0	-	-
SFRWQCB ESUs Table B-Groundwater (1)					0.5	-	-	-	-	-	-
Oakland Tier 1 RBSUs-Inhalation of Indoor Air Vapors, Commercial/Industrial Site						1,800	>Sol	>Sol	>Sol	>Sol	
VRW-3	11/4/1993	-	-	-	3.7	120	41	1.1	380	-	-
VRW-3	5/17/2002	-	-	-	0.42	10.9	<0.5	<0.5	1.07	<1.0	<0.50 to <1.0
VRW-3	6/9/2003	7.41	11.62	4.21	0.061	4.8	<0.5	<0.5	<0.5	-	-
VRW-3	11/19/2003	7.48	11.62	4.14	0.16	1.7	<0.54	<0.55	2.7	-	-
SFRWQCB ESUs Table B-Groundwater (1)					0.5	-	-	-	-	-	-
Oakland Tier 1 RBSUs-Inhalation of Indoor Air Vapors, Commercial/Industrial Site						1,800	>Sol	>Sol	>Sol	>Sol	
VRW-4	11/4/1993	-	-	-	9.0	4,400	900	5.4	990	-	-
VRW-4	5/15/2002	-	-	-	11	4,270	741	512	1,130	<50	<25 to <50
VRW-4	6/5/2003	7.01	11.33	4.32	2.2	1,200	100	12	89	-	-
VRW-4	11/19/2003	7.44	11.33	3.89	1.7	210	2.4	<2.2	36	-	-
SFRWQCB ESUs Table B-Groundwater (1)					0.5	-	-	-	-	-	-
Oakland Tier 1 RBSUs-Inhalation of Indoor Air Vapors, Commercial/Industrial Site						1,800	>Sol	>Sol	>Sol	>Sol	
VRW-5	11/4/1993	-	-	-	0.90	68	33	2.5	32	-	-
VRW-5	5/16/2002	-	-	-	0.87	44.3	<5.0	<5.0	<5.0	<10	<5.0 to <10
VRW-5	6/9/2003	7.33	11.56	4.23	0.93	90	<1.0	14	0.16	-	-
VRW-5	11/19/2003	7.53	11.56	4.03	2.9	250	<1.1	24	41	-	-
SFRWQCB ESUs Table B-Groundwater (1)					0.5	-	-	-	-	-	-
Oakland Tier 1 RBSUs-Inhalation of Indoor Air Vapors, Commercial/Industrial Site						1,800	>Sol	>Sol	>Sol	>Sol	
VRW-6	11/4/1993	-	-	-	0.41	6.6	1.0	ND	31	-	-
VRW-6	5/15/2002	-	-	-	0.73	178	4.58	1.41	6.10	<1.0	<0.50 to <1.0
VRW-6	6/6/2003	7.21	11.43	4.22	<0.05	<0.5	<0.5	<0.5	<0.5	-	-
VRW-6	11/19/2003	7.39	11.43	4.04	0.21	13	<0.54	1.0	2.5	-	-
SFRWQCB ESUs Table B-Groundwater (1)					0.5	-	-	-	-	-	-
Oakland Tier 1 RBSUs-Inhalation of Indoor Air Vapors, Commercial/Industrial Site						1,800	>Sol	>Sol	>Sol	>Sol	
VRW-7	11/4/1993	-	-	-	0.10	ND	ND	ND	ND	-	-
VRW-7	5/16/2002	-	-	-	1.6	28.9	0.980	<0.50	<0.50	<1.0	<0.50 to <1.0
VRW-7	6/6/2003	7.47	11.70	4.23	0.36	19	1.3	<0.5	2.2	-	-
VRW-7	11/19/2003	7.78	11.70	3.92	1.1	14	<0.54	1.7	5.6	-	-
SFRWQCB ESUs Table B-Groundwater (1)					0.5	-	-	-	-	-	-
Oakland Tier 1 RBSUs-Inhalation of Indoor Air Vapors, Commercial/Industrial Site						1,800	>Sol	>Sol	>Sol	>Sol	



TABLE 2. SUMMARY OF GROUNDWATER ANALYTICAL DATA FOR VAPOR EXTRACTION WELLS  
Pacific Supply Company, 1735 24th Street, Oakland, California

Sample ID	Sample Collection Date	Depth to Groundwater (feet)	Top of Casing Elevation (feet, MSL)	Groundwater Elevation (feet, MSL)	TPH as gasoline (mg/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	MTBE (ug/l)	Other Oxygenates & Lead Scavengers (ug/l)
VRW-8	11/4/1993	-	-	-	5.9	460	54	ND	53	-	-
VRW-8	5/16/2002	-	-	-	3.3	248	16.0	<10	<10	<20	<10 to <20
VRW-8	6/6/2003	7.42	11.62	4.20	1.8	70	10	11	6.1	-	-
VRW-8	11/19/2003	7.85	11.62	3.77	3.6	36	<2.7	<2.7	4.3	-	-
SFRWQCB ESLs Table B-Groundwater (1)					0.5	-	-	-	-	-	-
Oakland Tier 1 RBSLs-Inhalation of Indoor Air Vapors, Commercial/Industrial Site						1,800	>Sol	>Sol	>Sol	>Sol	
VRW-9	11/4/1993	-	-	-	0.47	36	18	ND	1.0	-	-
VRW-9	5/16/2002	-	-	-	0.080	0.990	2.00	<0.50	3.93	<1.0	<0.50 to <1.0
VRW-9	6/6/2003	7.67	11.87	4.20	0.58	10	4.4	4.9	<0.50	-	-
VRW-9	11/19/2003	8.01	11.87	3.86	0.86	<1.1	<1.1	<1.1	3.5	-	-
SFRWQCB ESLs Table B-Groundwater (1)					0.5	-	-	-	-	-	-
Oakland Tier 1 RBSLs-Inhalation of Indoor Air Vapors, Commercial/Industrial Site						1,800	>Sol	>Sol	>Sol	>Sol	

mg/l = milligrams per kilogram which is generally equivalent to parts per million (ppm).

ug/l = micrograms per kilogram which is generally equivalent to parts per billion (ppb).

Oakland RBSLs are based on a groundwater media for inhalation of indoor air vapors risk scenario at a commercial/industrial site.

There are no RBSLs for Total Petroleum Hydrocarbons.

(1) SFRWQCB ESLs are taken from Table B of the SFRWQCB document, Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater, July 2003. Table B provides the ESLs for shallow soils where groundwater is not a current or potential source of drinking water. The City of Oakland BTEX standards are provided in lieu of the SFRWQCB ESLs due to the location of the site.

na = not analyzed.

ND = not detected above laboratory reporting limits.

>Sol = RBSL exceeds solubility of chemical in water.







© 1999 Delorme Yarmouth, ME 04096 Source Data: USGS 700 ft Scale: 1 : 24,000 Detail: 13-0 Datum: NAD27



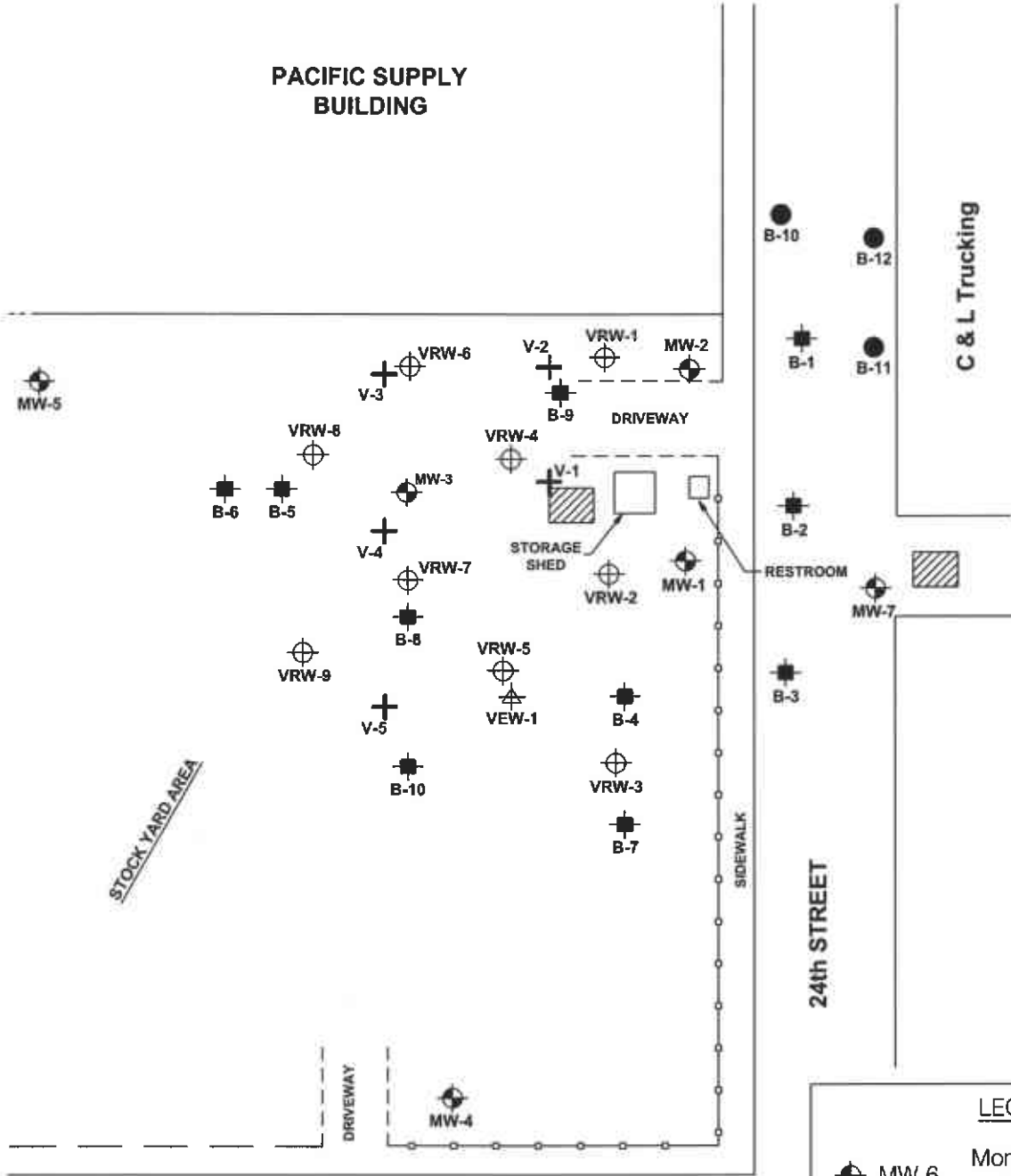
**Brunsing Associates, Inc.**  
 5803 Skylane Blvd., Suite A  
 Windsor, California 95492  
 Tel: (707) 838-3027

Job No.: 029.2  
 Appr.: *RMB*  
 Date: 1/8/04

**VICINITY MAP**  
**PACIFIC SUPPLY COMPANY**  
 Oakland, California

**PLATE**  
**1**

**PACIFIC SUPPLY BUILDING**










C & L Trucking

24th STREET

WILLOW STREET

STOCK YARD AREA

**LEGEND**

-  MW-6 Monitoring Well Location and Number
-  VRW-9 Vapor Recovery Well Location and Number
-  B-12 Soil Boring Location and Number (August 2000)
-  B-10 Soil Boring Location and Number (March 1993)
-  VEW-1 Vapor Extraction Well Location and Number
-  V-5 Soil Gas Sampling Location and Number
-  Former UST Locations

Yellow Cab



APPROXIMATE SCALE (FEET)



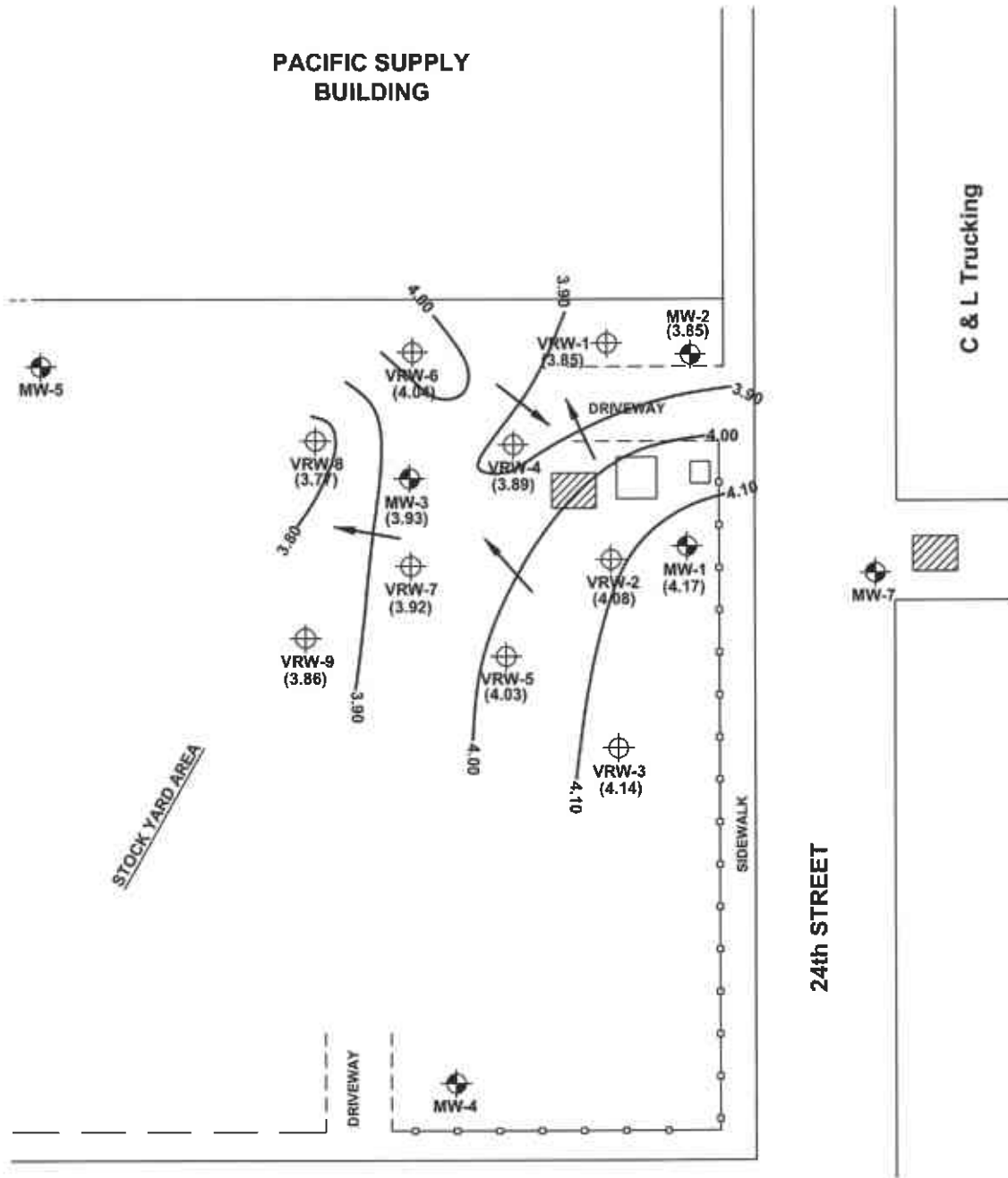
**Brunsing Associates, Inc.**  
 5803 Skylane Blvd., Suite A  
 Windsor, California 95492  
 Tel: (707) 838-3027

Job No.: 29  
 Appr.: *[Signature]*  
 Date: 7/24/03

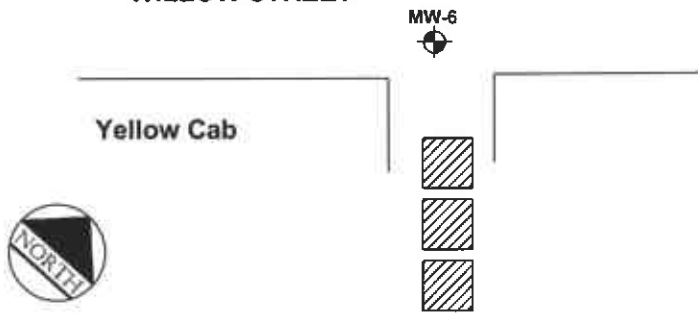
**SITE MAP**  
 PACIFIC SUPPLY COMPANY  
 1734 24th Street  
 Oakland, California

PLATE  
**2**

**PACIFIC SUPPLY BUILDING**



**WILLOW STREET**



**LEGEND**

- MW-6 (4.23) Monitoring Well Location and Number with Groundwater Elevation in feet above Mean Sea Level (MSL)
- VRW-9 (4.22) Vapor Recovery Well Location and Number with Groundwater Elevation in feet above MSL
- 4.2 Groundwater Contour Line in feet above MSL
- Groundwater Flow Direction
- Former UST Locations

APPROXIMATE SCALE (FEET)



**Brunsing Associates, Inc.**  
 5803 Skylane Blvd., Suite A  
 Windsor, California 95492  
 Tel: (707) 838-3027

Job No.: 29  
 Appr.: *[Signature]*  
 Date: 12/18/03

**GROUNDWATER ELEVATIONS**  
**NOVEMBER 19, 2003**  
**PACIFIC SUPPLY COMPANY**  
 1734 24th Street  
 Oakland, California

PLATE  
**3**

# APPENDIX A

## Monitoring Well Sampling Protocol and Field Reports



# Groundwater Sampling Protocol

## Monitoring Wells

Prior to purging a monitoring well, groundwater levels are measured with a Solinst electric depth measurement device, or an interface probe, in all wells that are to be measured. At sites where petroleum hydrocarbons are possible contaminants, the well is checked for floating product using a clear bailer, a steel tape with water/oil paste, or an interface probe, during the initial sampling round. If floating product is measured during the initial sampling round or noted during subsequent sampling rounds, floating product measurements are continued.

After the water level and floating product measurements are complete, the monitoring well is purged until a minimum of three casing volumes of water are removed, water is relatively clear of sediment, and pH, conductivity, and temperature measurements of the water become relatively stable. If the well is purged dry, groundwater samples are collected after the water level in the well recovers to at least 80 percent of the original water column measured in the well prior to sampling, or following a maximum recovery period of two hours. The well is purged using a factory-sealed, disposable, polyethylene bailer, a four-inch diameter submersible Grundfos pump, a two-inch diameter ES-40 purge pump, or a peristaltic pump. The purge water is stored on-site in clean, 55-gallon drums.

A groundwater sample is collected from each monitoring well following re-equilibration of the well after purging. The groundwater sample is collected using a factory-sealed disposable, polyethylene bailer with a sampling port, or a factory-sealed Teflon bailer. A factory provided attachment designed for use with volatile organic compounds (VOCs) is attached to the polyethylene bailer sampling port when collecting samples to be analyzed for VOCs. The groundwater sample is transferred from the bailer into sample container(s) that are obtained directly from the analytical laboratory.

The sample container(s) is labelled with a self-adhesive tag. The following information is included on the tag:

- Project number
- Sample number
- Date and time sample is collected
- Initials of sample collector(s).

Individual log sheets are maintained throughout the sampling operations. The following information is recorded:



- Sample number
- Date and time well sampled and purged
- Sampling location
- Types of sampling equipment used
- Name of sampler(s)
- Volume of water purged.

Following collection of the groundwater sample, the sample is immediately stored on blue ice in an appropriate container. A chain-of-custody form is completed with the following information:

- Date the sample was collected
- Sample number and the number of containers
- Analyses required
- Remarks including preservatives added and any special conditions.

The original copy of the chain-of-custody form accompanies the sample containers to a California-certified laboratory. A copy is retained by BAI and placed in company files.

Sampling equipment including thermometers, pH electrodes, and conductivity probes are cleaned both before and after their use at the site. The following cleaning procedures are used:

- Scrub with a potable water and detergent solution or other solutions deemed appropriate using a hard bristle brush
- Rinse with potable water
- Double-rinse with organic-free or deionized water

Package and seal equipment in plastic bags or other appropriate containers to prevent contact with solvents, dust, or other contaminants.

In addition, the pumps are cleaned by pumping a potable water and detergent solution and deionized water through the system. Cleaning solutions are contained on-site in clean 55-gallon drums.



## Domestic and Irrigation Wells

Groundwater samples collected from domestic or irrigation wells are collected from the spigot that is the closest to the well. Prior to collecting the sample, the spigot is allowed to flow for at least 5 minutes to purge the well. The sample is then collected directly into laboratory-supplied containers, sealed, labeled, and stored on blue ice in an appropriate container, as described above. A chain-of-custody form is completed and submitted with the samples to the analytical laboratory.



## FIELD REPORT

JOB NO: 29.016 PROJECT: PACIFIC SUPPLY  
INITIAL: EC/SWH SUBJECT: GROUNDWATER SAMPLING  
DATE: 11/18/03 PROJECT PHASE NUMBER: 04  
VEHICLE USED: Dodge Dakota

PAGE 1 OF 1

TOTAL MILEAGE:

TIME	DESCRIPTION OF WORK AND CONVERSATION RECORD
10:00	<p>Arrived at site, set up for Groundwater Sampling Measured Two Rounds of DTW of wells Mh-1 + 2 + 3, URW-1-2-3-4-5-6-7-8 Stored Purge Water in Drums Located in The Compound Area 3-7<sup>th</sup> Empty Drums outside</p>
	<p>Sampled All wells.</p>
	<p>Measured Last DTW</p>
	<p>Closed All Wells + Monuments</p>
	<p>Decomposed Sampling Equipment</p>
	<p>Loaded Equipment</p>
17:20	<p>Departed Site</p>





**BRUNSG ASSOCIATES, INC.**  
**ENVIRONMENTAL DIVISION**  
**WELL SAMPLING**

SHEET OF

PROJECT: PACIFIC SUPPLY

PROJECT NUMBER: 29.016

WELL # MW-1

PRECIP. IN LAST 5 DAYS: None WIND calm

DATE: 11/19/03

STARTING TIME: 11:09

FINISHING TIME: 12:52

INITIALS:

**CALCULATION OF PURGE VOLUME**

2" WELL DEPTH:  - D.T.W.  = H2O COLUMN:  X 0.5 =

4" WELL DEPTH:  - D.T.W.  = H2O COLUMN:  X 2.0 =

THEREFORE TOTAL PURGE GALLONS EQUALS

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**FIELD MEASUREMENTS**

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
1240	1	7.56	1340	19.7	LT. BROWN, CLEAR, NO ODP
1243	3	6.92	1680	20	SAME
1246	4	6.96	252	20	SAME

**SAMPLING:**

SAMPLE ANALYSIS:

SAMPLE TIME:  DID WELL GO DRY?

**WATER LEVELS:**

**NOTES:**

TIME	D.T.W.	
1121	7.30	
1252	7.75	

**BRUNSG ASSOCIATES, INC.  
ENVIRONMENTAL DIVISION**

**WELL SAMPLING**

SHEET OF

PROJECT: PACIFIC SUPPLY

PROJECT NUMBER: 29.016

WELL # MW-2    PRECIP. IN LAST 5 DAYS: None    WIND CALM    DATE: 11/19/03

STARTING TIME: 10:59    FINISHING TIME: 12:35    INITIALS:

**CALCULATION OF PURGE VOLUME**

2" WELL    DEPTH:  - D.T.W.     = H2O COLUMN:     X 0.5 =

4" WELL    DEPTH:  - D.T.W.     = H2O COLUMN:     X 2.0 =

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THEREFORE TOTAL PURGE GALLONS EQUALS

**FIELD MEASUREMENTS**

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
12:10	1	<del>697</del> 692	369	20.6	Brown, organic odor
12:15	13	692	333	20.5	SAME
12:20	26	687	283	20.5	SAME

SAMPLING:    SAMPLE ANALYSIS:    TPH-GAS    BTEX

SAMPLE TIME:     DID WELL GO DRY?

**WATER LEVELS:**

**NOTES:**

TIME	D.T.W.
11:07	6.95
12:35	6.98

**BRUNSG ASSOCIATES, INC.  
ENVIRONMENTAL DIVISION  
WELL SAMPLING**

SHEET OF

PROJECT: PACIFIC SUPPLY

PROJECT NUMBER: 29.016

WELL # MW-3

PRECIP. IN LAST 5 DAYS: none

WIND Calm

DATE: 11/19/03

STARTING TIME: 13:57 FINISHING TIME: 14:40

INITIALS:

**CALCULATION OF PURGE VOLUME**

2" WELL DEPTH: 16.00 - D.T.W. 7.33 = H2O COLUMN: 8.67 X 0.5 = 4.23

4" WELL DEPTH: [ ] - D.T.W. [ ] = H2O COLUMN: [ ] X 2.0 = [ ]

THEREFORE TOTAL PURGE GALLONS EQUALS 5

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**FIELD MEASUREMENTS**

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
1430	1	7.03	617	24.0	Clear brown/gpn. organic odor
1433	2.5	7.04	617	24.1	same
1435	5	7.12	621	24.0	same

SAMPLING:

SAMPLE ANALYSIS: TPH-GAS [ ] BTEX [ ] [ ] [ ]

SAMPLE TIME: 1438 DID WELL GO DRY? no

WATER LEVELS:

NOTES:

TIME	D.T.W.	
<del>1430</del>	<del>16.00</del>	
1440	8.51	

**BRUNING ASSOCIATES, INC.  
ENVIRONMENTAL DIVISION  
WELL SAMPLING**

SHEET OF

PROJECT: PACIFIC SUPPLY

PROJECT NUMBER: 29.016

WELL # VRW-1

PRECIP. IN LAST 5 DAYS: none

WIND CALM

DATE: 11/19/03

STARTING TIME: 10:57

FINISHING TIME: 11:13

INITIALS:

**CALCULATION OF PURGE VOLUME**

2" WELL DEPTH:  - D.T.W.  = H2O COLUMN:  X 0.5 =

4" WELL DEPTH:  - D.T.W.  = H2O COLUMN:  X 2.0 =

THEREFORE TOTAL PURGE GALLONS EQUALS

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**FIELD MEASUREMENTS**

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
11:45	1	6.70	492	21.2	Black, organic odor
11:50	13	6.85	565	21.4	Same
11:55	25	6.72	925	20.6	Same

SAMPLING:

SAMPLE ANALYSIS:

TPH, GAS, BTEX

SAMPLE TIME:

DID WELL GO DRY?

WATER LEVELS:

NOTES:

TIME	D.T.W.	
11:05	7.39'	
11:13	12:05	

**BRUNSG ASSOCIATES, INC.**  
**ENVIRONMENTAL DIVISION**  
**WELL SAMPLING**

SHEET OF

PROJECT: PACIFIC SUPPLY

PROJECT NUMBER: 29.016

WELL # VEW-2

PRECIP. IN LAST 5 DAYS: NONE

WIND CALM

DATE: 11/19/03

STARTING TIME: 11:11

FINISHING TIME: 13:08

INITIALS:

**CALCULATION OF PURGE VOLUME**

2" WELL DEPTH:  - D.T.W.  = H2O COLUMN:  X 0.5 =

4" WELL DEPTH:  - D.T.W.  = H2O COLUMN:  X 2.0 =

THEREFORE TOTAL PURGE GALLONS EQUALS

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**FIELD MEASUREMENTS**

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
1256	1	6.93	363 m	22.4	cloudy dx. blue. <del>cloudy</del> , organic odor
1300	13	7.05	1952 m	22.1	SAME
1304	26	6.97	315 m	22.8	SAME

**SAMPLING:**

SAMPLE ANALYSIS:

SAMPLE TIME:

DID WELL GO DRY?

**WATER LEVELS:**

**NOTES:**

TIME	D.T.W.	
1125	7.00	
1308	8.19	

**BRUNSON ASSOCIATES, INC.**  
**ENVIRONMENTAL DIVISION**  
**WELL SAMPLING**

SHEET OF

PROJECT: PACIFIC SUPPLY

PROJECT NUMBER: 29.016

WELL # VEW-3    PRECIP. IN LAST 5 DAYS: NO    WIND NO

DATE: 11/17/03

STARTING TIME: 14:04    FINISHING TIME: 16:53

INITIALS: *SL*

**CALCULATION OF PURGE VOLUME**

2" WELL    DEPTH:  - D.T.W.  = H2O COLUMN:  X 0.5 =

4" WELL    DEPTH:  - D.T.W.  = H2O COLUMN:  X 2.0 =

THEREFORE TOTAL PURGE GALLONS EQUALS

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**FIELD MEASUREMENTS**

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
16:25	1	6.79	1797 u	22.0	
16:33	13	6.79	416 u	21.3	
16:38	25	7.01	5.57 m	20.1	

SAMPLING:

SAMPLE ANALYSIS:

SAMPLE TIME:

DID WELL GO DRY?

WATER LEVELS:

NOTES:

TIME	D.T.W.	NOTES
16:53	16:49	

**BRUNSON ASSOCIATES, INC.  
ENVIRONMENTAL DIVISION**

**WELL SAMPLING**

SHEET OF

PROJECT: PACIFIC SUPPLY

PROJECT NUMBER: 29,016

WELL # VRW-4

PRECIP. IN LAST 5 DAYS: None

WIND CALM

DATE: 11/19/03

STARTING TIME: 11:14

FINISHING TIME: 13:40

INITIALS:

**CALCULATION OF PURGE VOLUME**

2" WELL DEPTH:  - D.T.W.  = H2O COLUMN:  X 0.5 =

4" WELL DEPTH:  - D.T.W.  = H2O COLUMN:  X 2.0 =

THEREFORE TOTAL PURGE GALLONS EQUALS

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**FIELD MEASUREMENTS**

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	6RW/ OBSERVATIONS
1318	1	6.82	1598 $\mu$	23.7	CLOUDY, BRN. ORGANIC ODO, SILTY
1325	12	6.81	397	23.2	SAME
1335	25	7.15	716	21.7	SAME, MORE SILT / SEDIMENT

SAMPLING:

SAMPLE ANALYSIS:  TPH-GAS  BTEX

SAMPLE TIME:  DID WELL GO DRY?

WATER LEVELS:

NOTES:

TIME	D.T.W.	
1125	7.44	
1340	16.98	



**BRUNSG ASSOCIATES, INC.**  
**ENVIRONMENTAL DIVISION**  
**WELL SAMPLING**

SHEET      OF

PROJECT: PACIFIC SUPPLY

PROJECT NUMBER: 29.016

WELL # vew-5

PRECIP. IN LAST 5 DAYS: NO

WIND NO

DATE: 11/19/03

STARTING TIME: 14:02

FINISHING TIME: 16:25

INITIALS: *g*

**CALCULATION OF PURGE VOLUME**

2" WELL    DEPTH:  - D.T.W.     = H2O COLUMN:  X 0.5 =

4" WELL    DEPTH:  - D.T.W.     = H2O COLUMN:  X 2.0 =

THEREFORE TOTAL PURGE GALLONS EQUALS

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**FIELD MEASUREMENTS**

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
16:03	1	6.77	315	20.7	Black, organic odor
16:08	13	6.83	318	21.0	SAME
16:14	25	6.81	382	21.1	SAME

**SAMPLING:**

SAMPLE ANALYSIS:

SAMPLE TIME:

DID WELL GO DRY?

**WATER LEVELS:**

NOTES:

TIME	D.T.W.	
16:25	7.68	

**BRUNSG ASSOCIATES, INC.  
ENVIRONMENTAL DIVISION  
WELL SAMPLING**

SHEET      OF

PROJECT: PACIFIC SUPPLY

PROJECT NUMBER: 29.016

WELL # VFW-6

PRECIP. IN LAST 5 DAYS: NONE      WIND CALM

DATE: 11/19/05

STARTING TIME: 13:57      FINISHING TIME: 15:08

INITIALS:

**CALCULATION OF PURGE VOLUME**

2" WELL    DEPTH:  - D.T.W.     = H2O COLUMN:     X 0.5 =

4" WELL    DEPTH:  - D.T.W.     = H2O COLUMN:     X 2.0 =

THEREFORE TOTAL PURGE GALLONS EQUALS

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**FIELD MEASUREMENTS**

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
1441	1	6.66	789	21.8	DR. CLEAR, ORGANIC ODOR, SHEEN
1446	13	6.72	478	21.1	SAME
1407	25	7.13	633	20.3	BLACK, TURBID, SHEEN, ORGANIC ODOR

**SAMPLING:**

SAMPLE ANALYSIS:

SAMPLE TIME:       DID WELL GO DRY?

**WATER LEVELS:**

**NOTES:**

TIME	D.T.W.
1508	18.11

**BRUNSG ASSOCIATES, INC.**  
**ENVIRONMENTAL DIVISION**  
**WELL SAMPLING**

SHEET OF

PROJECT: PACIFIC SUPPLY

PROJECT NUMBER: 29-016

WELL # V2W-7

PRECIP. IN LAST 5 DAYS: NONE

WIND calm

DATE: 11/19/03

STARTING TIME: 13:45

FINISHING TIME: 14:30

INITIALS:

**CALCULATION OF PURGE VOLUME**

2" WELL DEPTH:  - D.T.W.  = H2O COLUMN:  X 0.5 =

4" WELL DEPTH:  - D.T.W.  = H2O COLUMN:  X 2.0 =

THEREFORE TOTAL PURGE GALLONS EQUALS

G  
A  
L  
L  
O  
N  
S

**FIELD MEASUREMENTS**

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
1415	1	6.82	428	24	TURBID, BLACK, STRONG HC ODOOR, SAME
1419	13	6.95	198	22.9	SAME
1422	25	7.04	947	22.1	SAME

SAMPLING:

SAMPLE ANALYSIS:

SAMPLE TIME:  DID WELL GO DRY?

WATER LEVELS:

NOTES:

TIME	D.T.W.	
1430	1454	

**BRUNSGING ASSOCIATES, INC.**  
**ENVIRONMENTAL DIVISION**  
**WELL SAMPLING**

SHEET OF

PROJECT: PACIFIC SUPPLY

PROJECT NUMBER: 29.016

WELL # VRW-8    PRECIP. IN LAST 5 DAYS: NONE    WIND NONE

DATE: 11/19/03

STARTING TIME: 13:56    FINISHING TIME: 15:50

INITIALS: *Jr*

**CALCULATION OF PURGE VOLUME**

2" WELL    DEPTH:  - D.T.W.     = H2O COLUMN:  X 0.5 =

4" WELL    DEPTH:  - D.T.W.     = H2O COLUMN:  X 2.0 =

THEREFORE TOTAL PURGE GALLONS EQUALS

G  
A  
L  
L  
O  
N  
S

**FIELD MEASUREMENTS**

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
15:30	1	6.22	436	20.9	Black green, organic odor
15:35	12	6.88	376	20.9	Same
15:40	24	6.93	362	21.0	Same

SAMPLING:    SAMPLE ANALYSIS:               

SAMPLE TIME:     DID WELL GO DRY?   

**WATER LEVELS:**

**NOTES:**

TIME	D.T.W.	
15:50	7.90	

**BRUNSGING ASSOCIATES, INC.  
ENVIRONMENTAL DIVISION**

**WELL SAMPLING**

SHEET OF

PROJECT: PACIFIC SUPPLY

PROJECT NUMBER: 29.016

WELL # VRW-9

PRECIP. IN LAST 5 DAYS: NONE WIND CALM

DATE: 11/19/03

STARTING TIME: 13:59

FINISHING TIME: 15:25

INITIALS:

**CALCULATION OF PURGE VOLUME**

2" WELL DEPTH:  - D.T.W.  = H2O COLUMN:  X 0.5 =

4" WELL DEPTH:  - D.T.W.  = H2O COLUMN:  X 2.0 =

THEREFORE TOTAL PURGE GALLONS EQUALS

G  
A  
L  
L  
O  
N  
S

**FIELD MEASUREMENTS**

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
15:05	1	7.16	463	23.3	Green Black, organic odor
15:10	12	7.21	450	23.5	Same
15:15	24	7.16	418	23.4	Same

**SAMPLING:**

SAMPLE ANALYSIS:

TPH, GAS

BTEX

SAMPLE TIME:

DID WELL GO DRY?

**WATER LEVELS:**

NOTES:

TIME	D.T.W.
15:25	8.12

# APPENDIX B

## Analytical Laboratory Report





*Alpha*

FILE COPY

W29

Alpha Analytical Laboratories Inc.

208 Mason St. Ukiah, California 95482

e-mail: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com) • Phone: (707) 468-0401 • Fax: (707) 468-5267

03 December 2003

Brunsing Associates, Inc  
Attn: Michelle Floyd Frederick  
P.O. Box 588  
Windsor, CA 95492  
RE: Pacific Supply  
Work Order: A311436

Enclosed are the results of analyses for samples received by the laboratory on 11/20/03 11:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Melanie B. Neece*

Melanie B. Neece For Sheri L. Speaks  
Project Manager



# Alpha

Alpha Analytical Laboratories Inc.

208 Mason St. Ukiah, California 95482

e-mail: clientservices@alpha-labs.com • Phone: (707) 468-0401 • Fax: (707) 468-5267

## CHEMICAL EXAMINATION REPORT

Page 1 of 9

Brunsing Associates, Inc  
P.O. Box 588  
Windsor, CA 95492  
Attn: Michelle Floyd Frederick

Report Date: 12/03/03 15:39  
Project No: 29.016  
Project ID: Pacific Supply

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A311436	11/20/2003 11:10	BRUNS	! Global ID

## ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	A311436-01	Water	11/19/03 12:48	11/20/03 11:10
MW-2	A311436-02	Water	11/19/03 12:25	11/20/03 11:10
MW-3	A311436-03	Water	11/19/03 14:38	11/20/03 11:10
VRW-1	A311436-04	Water	11/19/03 12:00	11/20/03 11:10
VRW-2	A311436-05	Water	11/19/03 13:05	11/20/03 11:10
VRW-3	A311436-06	Water	11/19/03 16:44	11/20/03 11:10
VRW-4	A311436-07	Water	11/19/03 13:37	11/20/03 11:10
VRW-5	A311436-08	Water	11/19/03 16:25	11/20/03 11:10
VRW-6	A311436-09	Water	11/19/03 15:02	11/20/03 11:10
VRW-7	A311436-10	Water	11/19/03 14:25	11/20/03 11:10
VRW-8	A311436-11	Water	11/19/03 15:45	11/20/03 11:10
VRW-9	A311436-12	Water	11/19/03 15:20	11/20/03 11:10

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.

Melanie B. Neece For Sheri L. Speaks  
Project Manager

12/3/2003





Alpha Analytical Laboratories Inc.

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**CHEMICAL EXAMINATION REPORT**

Page 2 of 9

Brunsing Associates, Inc  
P.O. Box 588  
Windsor, CA 95492  
Attn: Michelle Floyd Frederick

Report Date: 12/03/03 15:39  
Project No: 29.016  
Project ID: Pacific Supply

Order Number: A311436      Receipt Date/Time: 11/20/2003 11:10      Client Code: BRUNS      Client PO/Reference: ! Global ID

**Alpha Analytical Laboratories, Inc.**

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
<b>MW-1 (A311436-01)</b>		<b>Sample Type: Water</b>			<b>Sampled: 11/19/03 12:48</b>		
<b>TPH as Gasoline by GCFID/5030 and BTEX by 8020/5030</b>							
TPH as Gasoline	8015GRO/8020	AK32607	11/24/03	11/25/03	1	ND ug/l	50
Benzene	"	"	"	"	"	ND "	0.30
Toluene	"	"	"	"	"	ND "	0.30
Ethylbenzene	"	"	"	"	"	ND "	0.50
Xylenes (total)	"	"	"	"	"	ND "	0.50
<i>Surrogate: 1,4-Bromofluorobenzene</i>					"	103 %	63-150
<b>MW-2 (A311436-02)</b>		<b>Sample Type: Water</b>			<b>Sampled: 11/19/03 12:25</b>		
<b>TPH as Gasoline by GCFID/5030 and BTEX by 8020/5030</b>							
TPH as Gasoline	8015GRO/8020	AK32607	11/24/03	11/25/03	1	3700 ug/l	50
Benzene	"	"	"	"	"	9.7 "	0.30
Toluene	"	"	"	"	3.7	ND "	1.1 R-01
Ethylbenzene	"	"	"	"	2.2	ND "	1.1 R-01
Xylenes (total)	"	"	"	"	1	7.5 "	0.50
<i>Surrogate: 1,4-Bromofluorobenzene</i>					"	78.8 %	63-150
<b>MW-3 (A311436-03)</b>		<b>Sample Type: Water</b>			<b>Sampled: 11/19/03 14:38</b>		
<b>TPH as Gasoline by GCFID/5030 and BTEX by 8020/5030</b>							
TPH as Gasoline	8015GRO/8020	AK32607	11/24/03	11/25/03	1	160 ug/l	50
Benzene	"	"	"	"	1.8	ND "	0.54 R-04
Toluene	"	"	"	"	"	ND "	0.54 R-04
Ethylbenzene	"	"	"	"	1.1	ND "	0.55 R-04
Xylenes (total)	"	"	"	"	3.2	ND "	1.6 R-04
<i>Surrogate: 1,4-Bromofluorobenzene</i>					"	103 %	63-150
<b>VRW-1 (A311436-04)</b>		<b>Sample Type: Water</b>			<b>Sampled: 11/19/03 12:00</b>		
<b>TPH as Gasoline by GCFID/5030 and BTEX by 8020/5030</b>							
TPH as Gasoline	8015GRO/8020	AK32607	11/24/03	11/25/03	1	1200 ug/l	50
Benzene	"	"	"	"	"	19 "	0.30
Toluene	"	"	"	"	1.8	ND "	0.54 R-01
Ethylbenzene	"	"	"	"	1.1	ND "	0.55 R-01

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.

Melanie B. Neece For Sheri L. Speaks  
Project Manager

12/3/2003



# Alpha

Alpha Analytical Laboratories Inc.

208 Mason St. Ukiah, California 95482

e-mail: clientservices@alpha-labs.com • Phone: (707) 468-0401 • Fax: (707) 468-5267

## CHEMICAL EXAMINATION REPORT

Page 3 of 9

Brunsing Associates, Inc  
P.O. Box 588  
Windsor, CA 95492  
Attn: Michelle Floyd Frederick

Report Date: 12/03/03 15:39  
Project No: 29.016  
Project ID: Pacific Supply

Order Number A311436	Receipt Date/Time 11/20/2003 11:10	Client Code BRUNS	Client PO/Reference ! Global ID
-------------------------	---------------------------------------	----------------------	------------------------------------

### Alpha Analytical Laboratories, Inc.

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
<b>VRW-1 (A311436-04)</b>		<b>Sample Type: Water</b>			<b>Sampled: 11/19/03 12:00</b>		
<b>TPH as Gasoline by GCFID/5030 and BTEX by 8020/5030 (cont'd)</b>							
Xylenes (total)	8015GRO/8020	"	"	11/25/03	1	6.3 "	0.50
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		86.6 %	63-150
<b>VRW-2 (A311436-05)</b>		<b>Sample Type: Water</b>			<b>Sampled: 11/19/03 13:05</b>		
<b>TPH as Gasoline by GCFID/5030 and BTEX by 8020/5030</b>							
TPH as Gasoline	8015GRO/8020	AK32607	11/24/03	11/25/03	1	1300 ug/l	50
Benzene	"	"	"	"	"	51 "	0.30
Toluene	"	"	"	"	1.8	ND "	0.54 R-01
Ethylbenzene	"	"	"	"	1.1	ND "	0.55 R-01
Xylenes (total)	"	"	"	"	1	4.0 "	0.50
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		87.4 %	63-150
<b>VRW-3 (A311436-06)</b>		<b>Sample Type: Water</b>			<b>Sampled: 11/19/03 16:44</b>		
<b>TPH as Gasoline by GCFID/5030 and BTEX by 8020/5030</b>							
TPH as Gasoline	8015GRO/8020	AK32607	11/24/03	11/25/03	1	160 ug/l	50
Benzene	"	"	"	"	"	1.7 "	0.30
Toluene	"	"	"	"	1.8	ND "	0.54 R-04
Ethylbenzene	"	"	"	"	1.1	ND "	0.55 R-04
Xylenes (total)	"	"	"	"	1	2.7 "	0.50
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		109 %	63-150
<b>VRW-4 (A311436-07)</b>		<b>Sample Type: Water</b>			<b>Sampled: 11/19/03 13:37</b>		
<b>TPH as Gasoline by GCFID/5030 and BTEX by 8020/5030</b>							
TPH as Gasoline	8015GRO/8020	AK32607	11/24/03	11/25/03	1	1700 ug/l	50
Benzene	"	"	"	"	"	210 "	0.30
Toluene	"	"	"	"	"	2.4 "	0.30
Ethylbenzene	"	"	"	"	4.4	ND "	2.2 R-01
Xylenes (total)	"	"	"	"	1	36 "	0.50
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		88.7 %	63-150
<b>VRW-5 (A311436-08)</b>		<b>Sample Type: Water</b>			<b>Sampled: 11/19/03 16:25</b>		

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Melanie B. Neece For Sheri L. Speaks  
Project Manager

12/3/2003



Alpha Analytical Laboratories Inc.

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CHEMICAL EXAMINATION REPORT

Brunsing Associates, Inc  
P.O. Box 588  
Windsor, CA 95492  
Attn: Michelle Floyd Frederick

Report Date: 12/03/03 15:39  
Project No: 29.016  
Project ID: Pacific Supply

Order Number: A311436      Receipt Date/Time: 11/20/2003 11:10      Client Code: BRUNS      Client PO/Reference: ! Global ID

Alpha Analytical Laboratories, Inc.

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
<b>VRW-5 (A311436-08)</b>		<b>Sample Type: Water</b>			<b>Sampled: 11/19/03 16:25</b>		
<b>TPH as Gasoline by GCFID/5030 and BTEX by 8020/5030</b>							
TPH as Gasoline	8015GRO/8020	AK32607	11/24/03	11/25/03	1	2900 ug/l	50
Benzene	"	"	"	"	"	250 "	0.30
Toluene	"	"	"	"	3.7	ND "	1.1 R-01
Ethylbenzene	"	"	"	"	1	24 "	0.50
Xylenes (total)	"	"	"	"	"	41 "	0.50
Surrogate: 1,4-Bromofluorobenzene					"	75.8 %	63-150

<b>VRW-6 (A311436-09)</b>		<b>Sample Type: Water</b>			<b>Sampled: 11/19/03 15:02</b>		
<b>TPH as Gasoline by GCFID/5030 and BTEX by 8020/5030</b>							
TPH as Gasoline	8015GRO/8020	AK32607	11/24/03	11/25/03	1	210 ug/l	50
Benzene	"	"	"	"	"	13 "	0.30
Toluene	"	"	"	"	1.8	ND "	0.54 R-04
Ethylbenzene	"	"	"	"	1	1.0 "	0.50
Xylenes (total)	"	"	"	"	"	2.5 "	0.50
Surrogate: 1,4-Bromofluorobenzene					"	77.1 %	63-150

<b>VRW-7 (A311436-10)</b>		<b>Sample Type: Water</b>			<b>Sampled: 11/19/03 14:25</b>		
<b>TPH as Gasoline by GCFID/5030 and BTEX by 8020/5030</b>							
TPH as Gasoline	8015GRO/8020	AK32607	11/24/03	11/25/03	1	1100 ug/l	50
Benzene	"	"	"	"	"	14 "	0.30
Toluene	"	"	"	"	1.8	ND "	0.54 R-04
Ethylbenzene	"	"	"	"	1	1.7 "	0.50
Xylenes (total)	"	"	"	"	"	5.6 "	0.50
Surrogate: 1,4-Bromofluorobenzene					"	85.3 %	63-150

<b>VRW-8 (A311436-11)</b>		<b>Sample Type: Water</b>			<b>Sampled: 11/19/03 15:45</b>		
<b>TPH as Gasoline by GCFID/5030 and BTEX by 8020/5030</b>							
TPH as Gasoline	8015GRO/8020	AL30316	12/02/03	12/02/03	1	3600 ug/l	50
Benzene	"	"	"	"	"	36 "	0.30
Toluene	"	"	"	"	9	ND "	2.7 R-01

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.

*Melanie B. Neece*

Melanie B. Neece For Sheri L. Speaks  
Project Manager

12/3/2003



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208 Mason St. Ukiah, California 95482

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**CHEMICAL EXAMINATION REPORT**

Page 5 of 9

Brunsing Associates, Inc  
P.O. Box 588  
Windsor, CA 95492  
Attn: Michelle Floyd Frederick

Report Date: 12/03/03 15:39  
Project No: 29.016  
Project ID: Pacific Supply

Order Number A311436	Receipt Date/Time 11/20/2003 11:10	Client Code BRUNS	Client PO/Reference ! Global ID
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**Alpha Analytical Laboratories, Inc.**

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
<b>VRW-8 (A311436-11)</b>		<b>Sample Type: Water</b>			<b>Sampled: 11/19/03 15:45</b>		
<b>TPH as Gasoline by GCFID/5030 and BTEX by 8020/5030 (cont'd)</b>							
Ethylbenzene	8015GRO/8020	"	"	12/02/03	5.4	ND "	2.7 R-01
Xylenes (total)	"	"	"	"	1	4.3 "	0.50
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		112 %	63-150

<b>VRW-9 (A311436-12)</b>		<b>Sample Type: Water</b>			<b>Sampled: 11/19/03 15:20</b>		
<b>TPH as Gasoline by GCFID/5030 and BTEX by 8020/5030</b>							
TPH as Gasoline	8015GRO/8020	AL30316	12/02/03	12/02/03	1	860 ug/l	50
Benzene	"	"	"	"	3.7	ND "	1.1 R-01
Toluene	"	"	"	"	"	ND "	1.1 R-01
Ethylbenzene	"	"	"	"	2.2	ND "	1.1 R-01
Xylenes (total)	"	"	"	"	1	5.5 "	0.50
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		96.5 %	63-150

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.

Melanie B. Neece For Sheri L. Speaks  
Project Manager

12/3/2003



# alpha

Alpha Analytical Laboratories Inc.

208 Mason St. Ukiah, California 95482

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## CHEMICAL EXAMINATION REPORT

Page 6 of 9

Brunsing Associates, Inc  
P.O. Box 588  
Windsor, CA 95492  
Attn: Michelle Floyd Frederick

Report Date: 12/03/03 15:39  
Project No: 29.016  
Project ID: Pacific Supply

Order Number A311436	Receipt Date/Time 11/20/2003 11:10	Client Code BRUNS	Client PO/Reference ! Global ID
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### SourceResult

### TPH as Gasoline by GCFID/5030 and BTEX by 8020/5030 - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AK32607 - EPA 5030 Water GC</b>										
<b>Blank (AK32607-BLK1)</b> Prepared: 11/24/03 Analyzed: 11/25/03										
TPH as Gasoline	ND	50	ug/l							
Benzene	ND	0.30	"							
Toluene	ND	0.30	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Surrogate: 1,4-Bromofluorobenzene	24.0		"	23.1		104	63-150			
<b>LCS (AK32607-BS1)</b> Prepared: 11/24/03 Analyzed: 11/25/03										
Benzene	5.36	0.30	ug/l	5.00		107	74-115			
Toluene	5.43	0.30	"	5.00		109	75-115			
Ethylbenzene	5.27	0.50	"	5.00		105	75-115			
Xylenes (total)	15.8	0.50	"	15.0		105	74-116			
Surrogate: 1,4-Bromofluorobenzene	21.3		"	20.0		106	63-150			
<b>LCS (AK32607-BS2)</b> Prepared: 11/24/03 Analyzed: 11/25/03										
TPH as Gasoline	55.1	50	ug/l	50.0		110	79-123			
Surrogate: 1,4-Bromofluorobenzene	22.0		"	20.0		110	63-150			
<b>LCS Dup (AK32607-BSD1)</b> Prepared: 11/24/03 Analyzed: 11/25/03										
Benzene	4.75	0.30	ug/l	5.00		95.0	74-115	12.1	15	
Toluene	4.86	0.30	"	5.00		97.2	75-115	11.1	15	
Ethylbenzene	4.67	0.50	"	5.00		93.4	75-115	12.1	15	
Xylenes (total)	14.1	0.50	"	15.0		94.0	74-116	11.4	15	
Surrogate: 1,4-Bromofluorobenzene	19.4		"	20.0		97.0	63-150			
<b>LCS Dup (AK32607-BSD2)</b> Prepared: 11/24/03 Analyzed: 11/25/03										

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.

Melanie B. Neece For Sheri L. Speaks  
Project Manager

12/3/2003



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**CHEMICAL EXAMINATION REPORT**

Page 7 of 9

Brunsing Associates, Inc  
P.O. Box 588  
Windsor, CA 95492  
Attn: Michelle Floyd Frederick

Report Date: 12/03/03 15:39  
Project No: 29.016  
Project ID: Pacific Supply

Order Number A311436	Receipt Date/Time 11/20/2003 11:10	Client Code BRUNS	Client PO/Reference ! Global ID
-------------------------	---------------------------------------	----------------------	------------------------------------

**TPH as Gasoline by GCFID/5030 and BTEX by 8020/5030 - Quality Control**

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AK32607 - EPA 5030 Water GC</b>										
<b>LCS Dup (AK32607-BSD2)</b>				Prepared: 11/24/03 Analyzed: 11/25/03						
TPH as Gasoline	53.2	50	ug/l	50.0		106	79-123	3.51	15	
Surrogate: 1,4-Bromofluorobenzene	22.0		"	20.0		110	63-150			
<b>Batch AL30316 - EPA 5030 Water GC</b>										
<b>Blank (AL30316-BLK1)</b>				Prepared & Analyzed: 12/02/03						
TPH as Gasoline	ND	50	ug/l							
Benzene	ND	0.30	"							
Toluene	ND	0.30	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Surrogate: 1,4-Bromofluorobenzene	19.4		"	23.1		84.0	63-150			
<b>LCS (AL30316-BS1)</b>				Prepared & Analyzed: 12/02/03						
Benzene	5.21	0.30	ug/l	5.00		104	74-115			
Toluene	5.22	0.30	"	5.00		104	75-115			
Ethylbenzene	5.23	0.50	"	5.00		105	75-115			
Xylenes (total)	15.6	0.50	"	15.0		104	74-116			
Surrogate: 1,4-Bromofluorobenzene	22.5		"	20.0		112	63-150			
<b>LCS (AL30316-BS2)</b>				Prepared & Analyzed: 12/02/03						
TPH as Gasoline	53.8	50	ug/l	50.0		108	79-123			
Surrogate: 1,4-Bromofluorobenzene	22.4		"	20.0		112	63-150			
<b>LCS Dup (AL30316-BSD1)</b>				Prepared & Analyzed: 12/02/03						
Benzene	5.03	0.30	ug/l	5.00		101	74-115	3.52	15	
Toluene	5.15	0.30	"	5.00		103	75-115	1.35	15	
Ethylbenzene	5.05	0.50	"	5.00		101	75-115	3.50	15	

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.

Melanie B. Neece For Sheri L. Speaks  
Project Manager

12/3/2003



# Alpha

Alpha Analytical Laboratories Inc.

208 Mason St. Ukiah, California 95482

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## CHEMICAL EXAMINATION REPORT

Page 8 of 9

Brunsing Associates, Inc  
P.O. Box 588  
Windsor, CA 95492  
Attn: Michelle Floyd Frederick

Report Date: 12/03/03 15:39  
Project No: 29.016  
Project ID: Pacific Supply

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A311436	11/20/2003 11:10	BRUNS	! Global ID

### TPH as Gasoline by GCFID/5030 and BTEX by 8020/5030 - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
<b>Batch AL30316 - EPA 5030 Water GC</b>										
<b>LCS Dup (AL30316-BSD1)</b>				Prepared & Analyzed: 12/02/03						
Xylenes (total)	15.1	0.50	"	15.0		101	74-116	3.26	15	
Surrogate: 1,4-Bromofluorobenzene	21.8		"	20.0		109	63-150			
<b>LCS Dup (AL30316-BSD2)</b>				Prepared & Analyzed: 12/02/03						
TPH as Gasoline	53.6	50	ug/l	50.0		107	79-123	0.372	15	
Surrogate: 1,4-Bromofluorobenzene	22.5		"	20.0		112	63-150			

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.

Melanie B. Neece For Sheri L. Speaks  
Project Manager

12/3/2003



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## CHEMICAL EXAMINATION REPORT

Page 9 of 9

Brunsing Associates, Inc  
P.O. Box 588  
Windsor, CA 95492  
Attn: Michelle Floyd Frederick

Report Date: 12/03/03 15:39  
Project No: 29.016  
Project ID: Pacific Supply





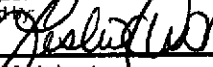


Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A311436	11/20/2003 11:10	BRUNS	! Global ID

### Notes and Definitions

- R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.
- R-04 The Reporting Limits for this analysis are elevated due to sample foaming.
- 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
- PQL Practical Quantitation Limit



**Chain-of Custody Form**

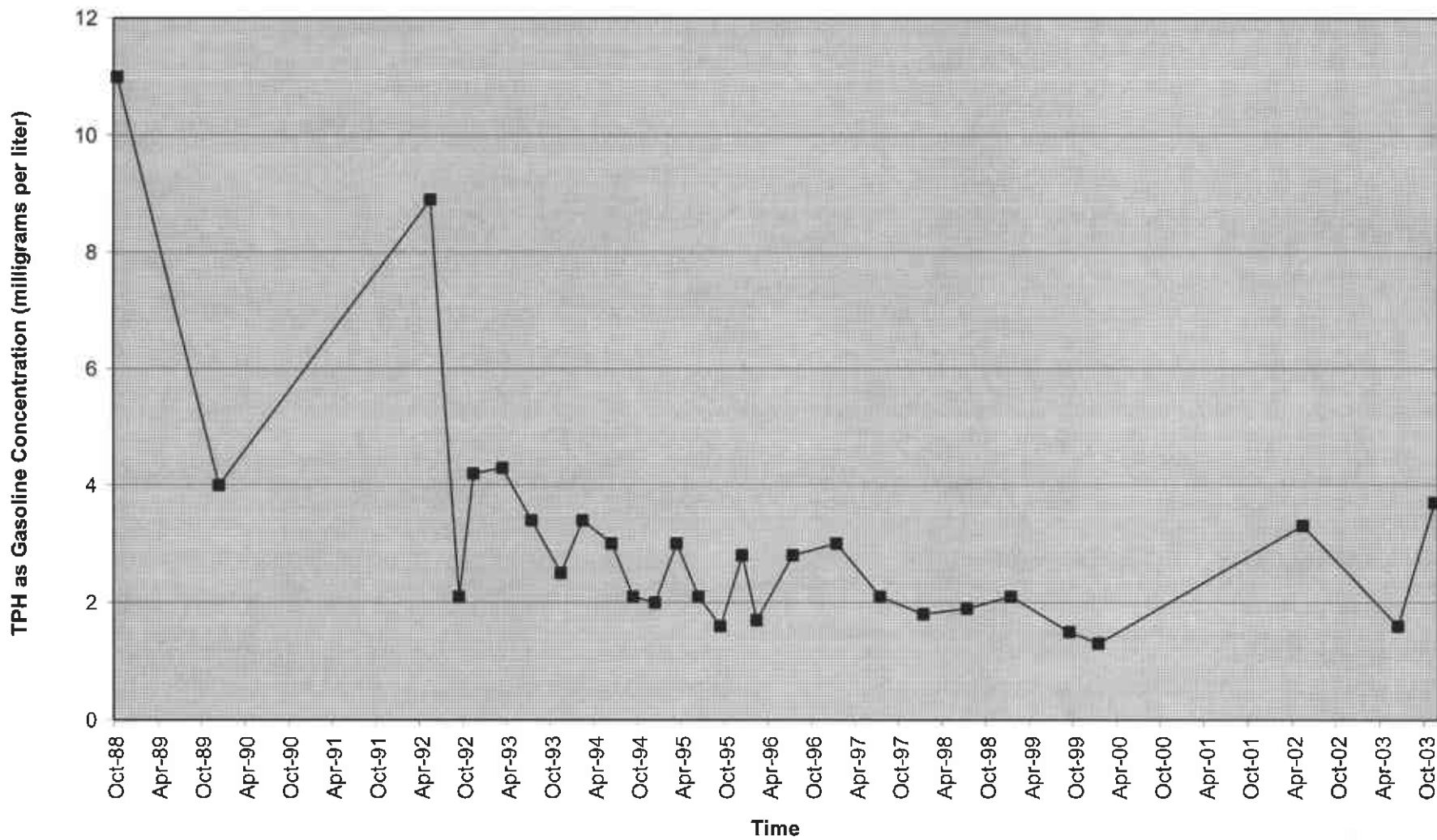
Project # <b>29.016</b>			Project Name <b>PACIFIC SUPPLY</b>			C.O.C. No. <b>10838</b>																		
L.P. No.			Sampler's Signature 			No. of Con- tainers	TPH-GAS	BTEX (8221)													Remarks: <b>EDF</b>			
Date Sampled	Sample I.D.	Time (24 Hour)	Sample Type																					
<b>11/19/03</b>	<b>MW-1</b>	<b>/</b>	<b>11:48</b>	<b>WATER</b>	<b>4</b>	<b>X</b>	<b>X</b>																<b>Recd-4-HCL vials per site</b>	
	<b>MW-2</b>	<b>/</b>	<b>12:25</b>			<b>X</b>	<b>X</b>																	
	<b>MW-3</b>	<b>/</b>	<b>14:35</b>			<b>X</b>	<b>X</b>																	
	<b>VRW-1</b>	<b>/</b>	<b>12:00</b>			<b>X</b>	<b>X</b>																	
	<b>VRW-2</b>	<b>/</b>	<b>13:05</b>			<b>X</b>	<b>X</b>																	
	<b>VRW-3</b>	<b>/</b>	<b>16:44</b>			<b>X</b>	<b>X</b>																	
	<b>VRW-4</b>	<b>/</b>	<b>13:37</b>			<b>X</b>	<b>X</b>																	
	<b>VRW-5</b>	<b>/</b>	<b>14:25</b>			<b>X</b>	<b>X</b>																	
	<b>VRW-6</b>	<b>/</b>	<b>15:02</b>			<b>X</b>	<b>X</b>																	
	<b>VRW-7</b>	<b>/</b>	<b>14:25</b>			<b>X</b>	<b>X</b>																	
	<b>VRW-8</b>	<b>/</b>	<b>15:45</b>			<b>X</b>	<b>X</b>																	
	<b>VRW-9</b>	<b>/</b>	<b>15:20</b>			<b>X</b>	<b>X</b>																	
Laboratory: <b>BAPS ALPHA</b>						Preservation: A - HCL; B - H2SO4; C - NaOH; D - HNO3; E - Ice; F - (specify)																		
Relinquished by: (signed) 			Date/Time <b>11/20/03 9:20</b>			Received by: (signed) 			Remarks: <b>STANDARD TAT</b>										<b>Brunsing Associates, Inc.</b> P.O. Box 588 5803 Skylane Blvd. Windsor, CA 95492 (707) 838-3027 (707) 838-4420 fax					
Relinquished by: (signed) 			Date/Time <b>11/20/03 10:00</b>			Received by: (signed) 			ATTN: <b>MICHELLE FLOYD-FREDRICK</b>															
Relinquished by: (signed) 			Date/Time <b>11/20/03 9:22</b>			Received for Laboratory by: (signed) 			<b>11/20/03 11:10</b>															

# APPENDIX C

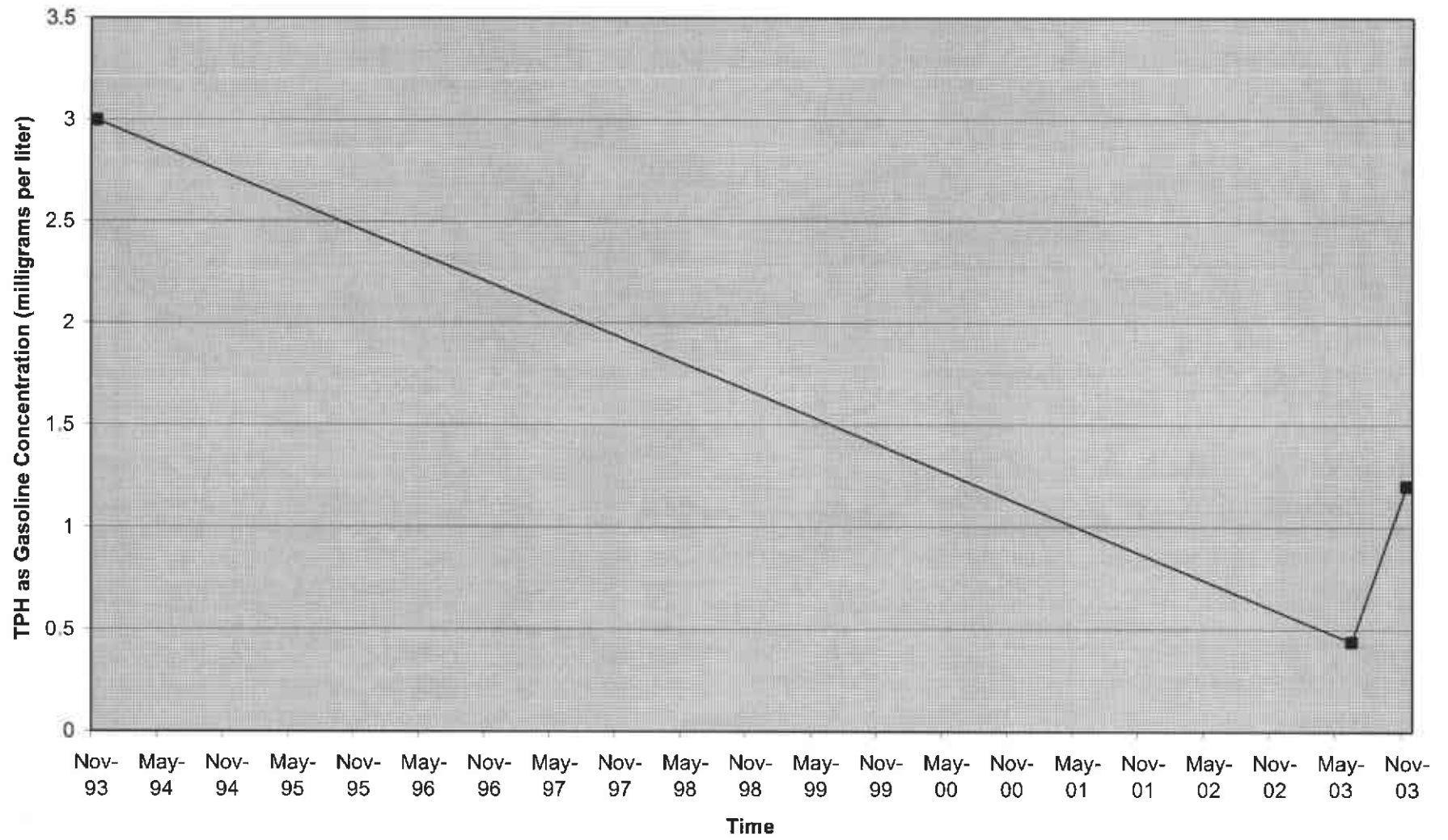
## Concentration verses Time Plots



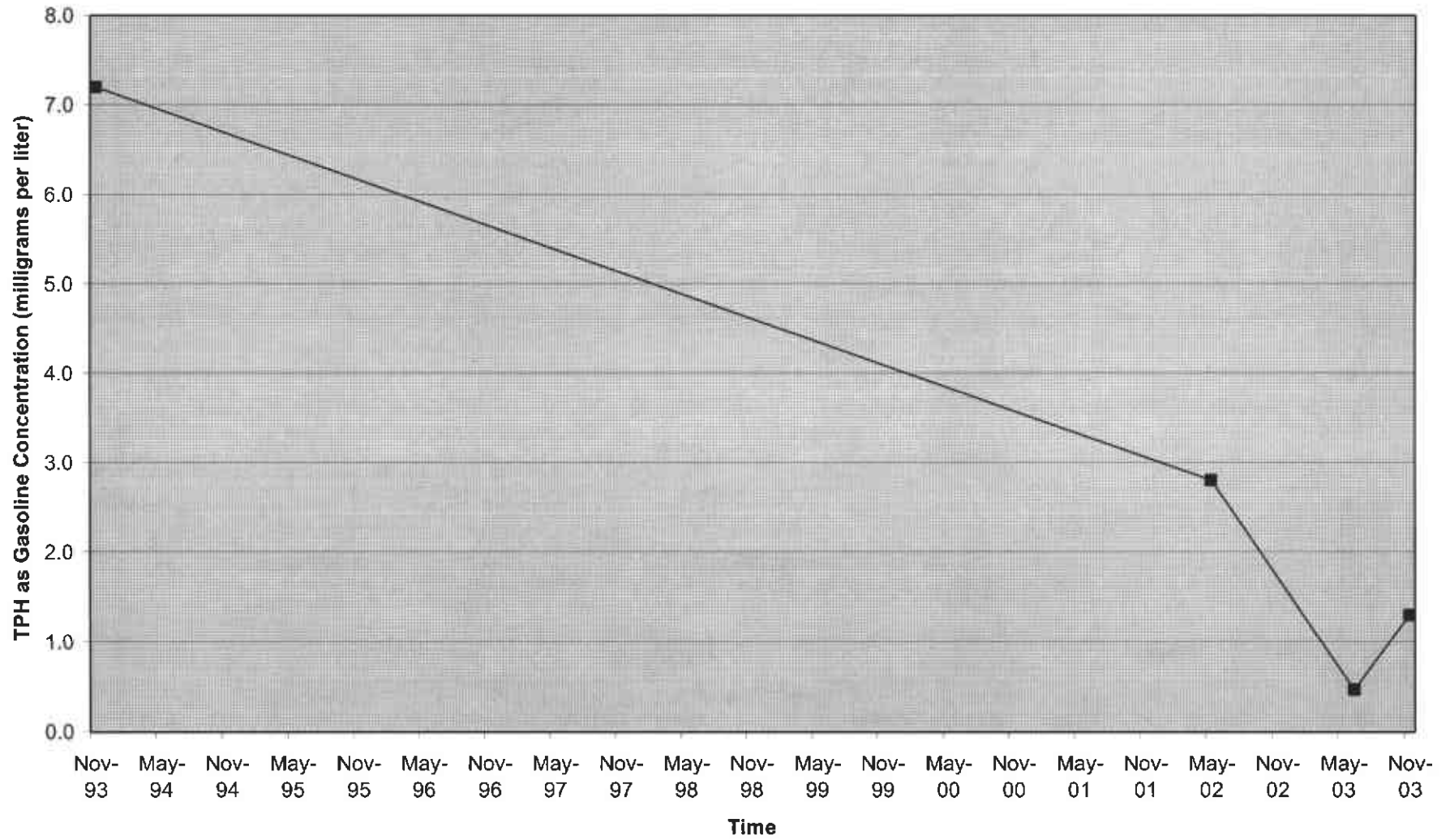
Concentration of TPH as Gasoline in Well MW-2 verses Time



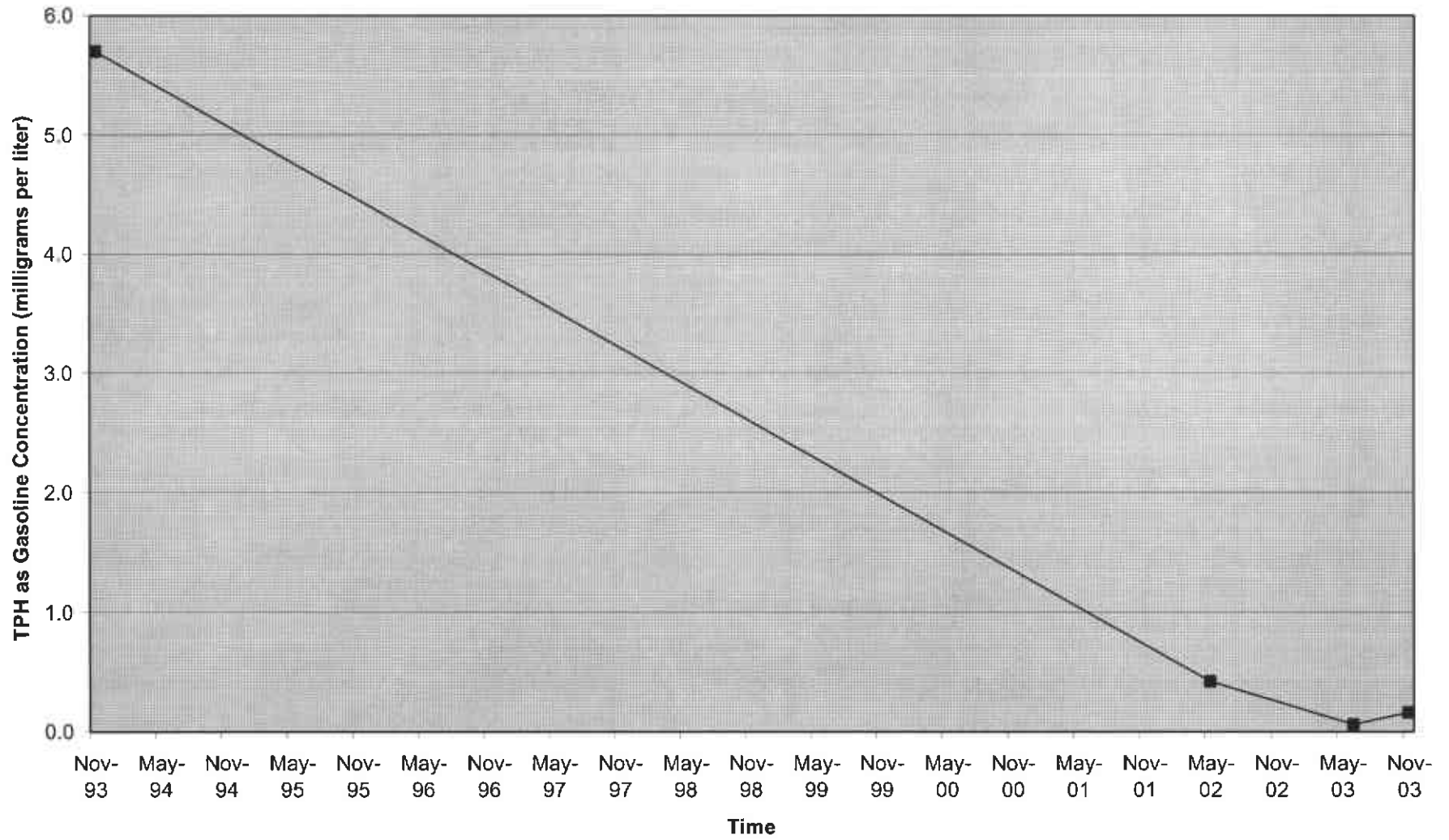
Concentration of TPH as Gasoline in Well VRW-1 verses Time



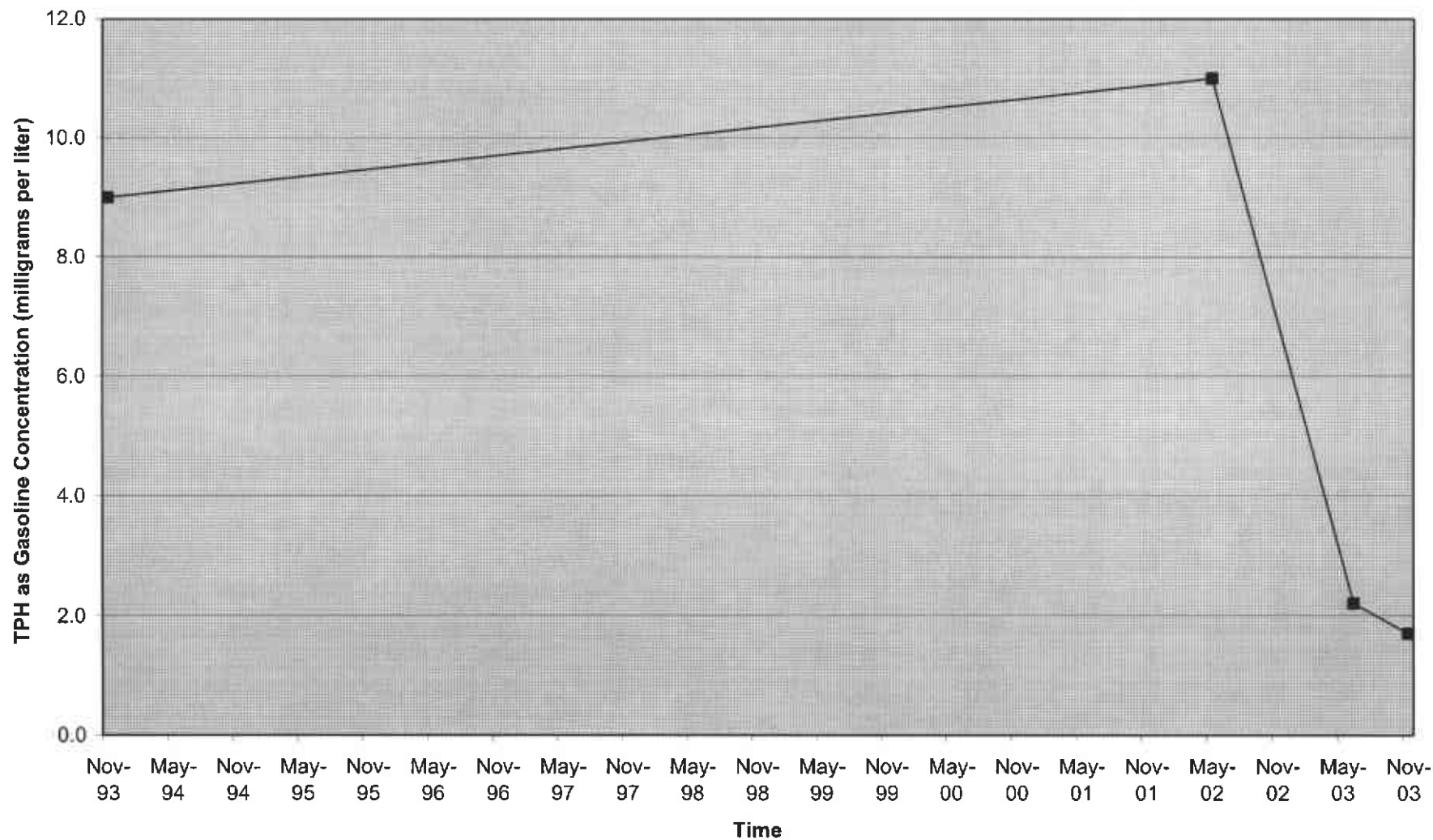
Concentration of TPH as Gasoline in Well VRW-2 verses Time



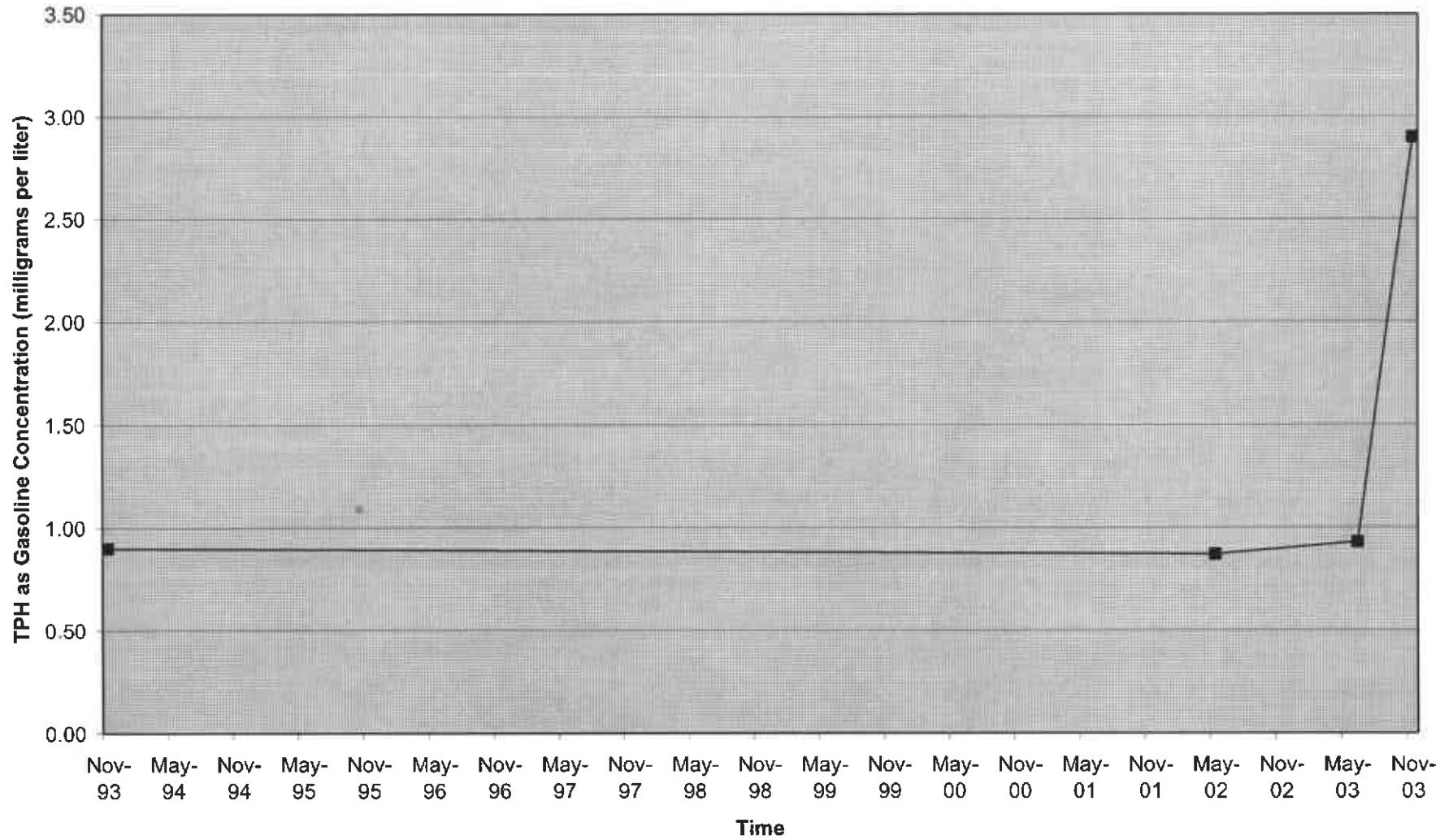
Concentration of TPH as Gasoline in Well VRW-3 verses Time



Concentration of TPH as Gasoline in Well VRW-4 verses Time

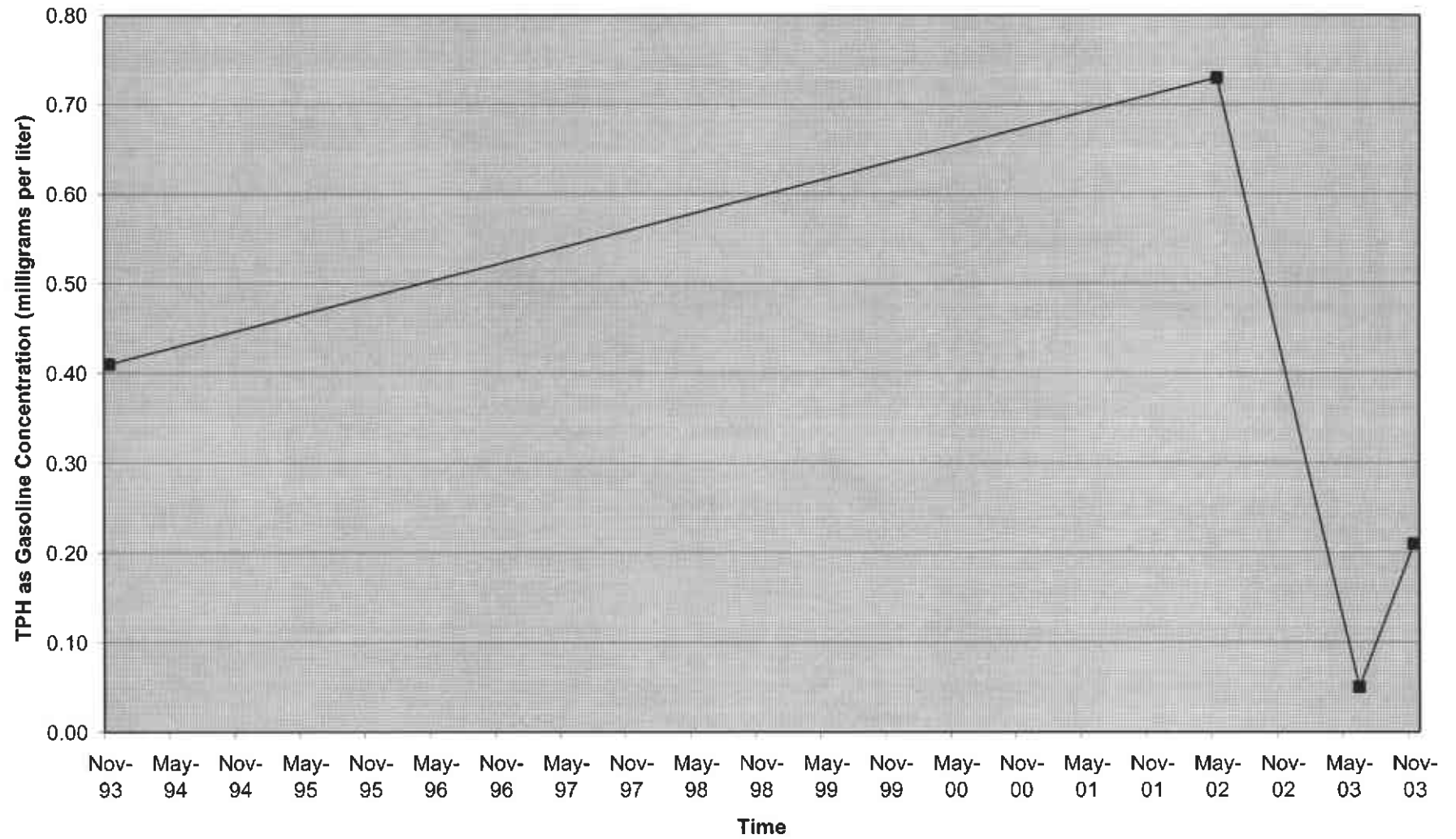


Concentration of TPH as Gasoline in Well VRW-5 verses Time

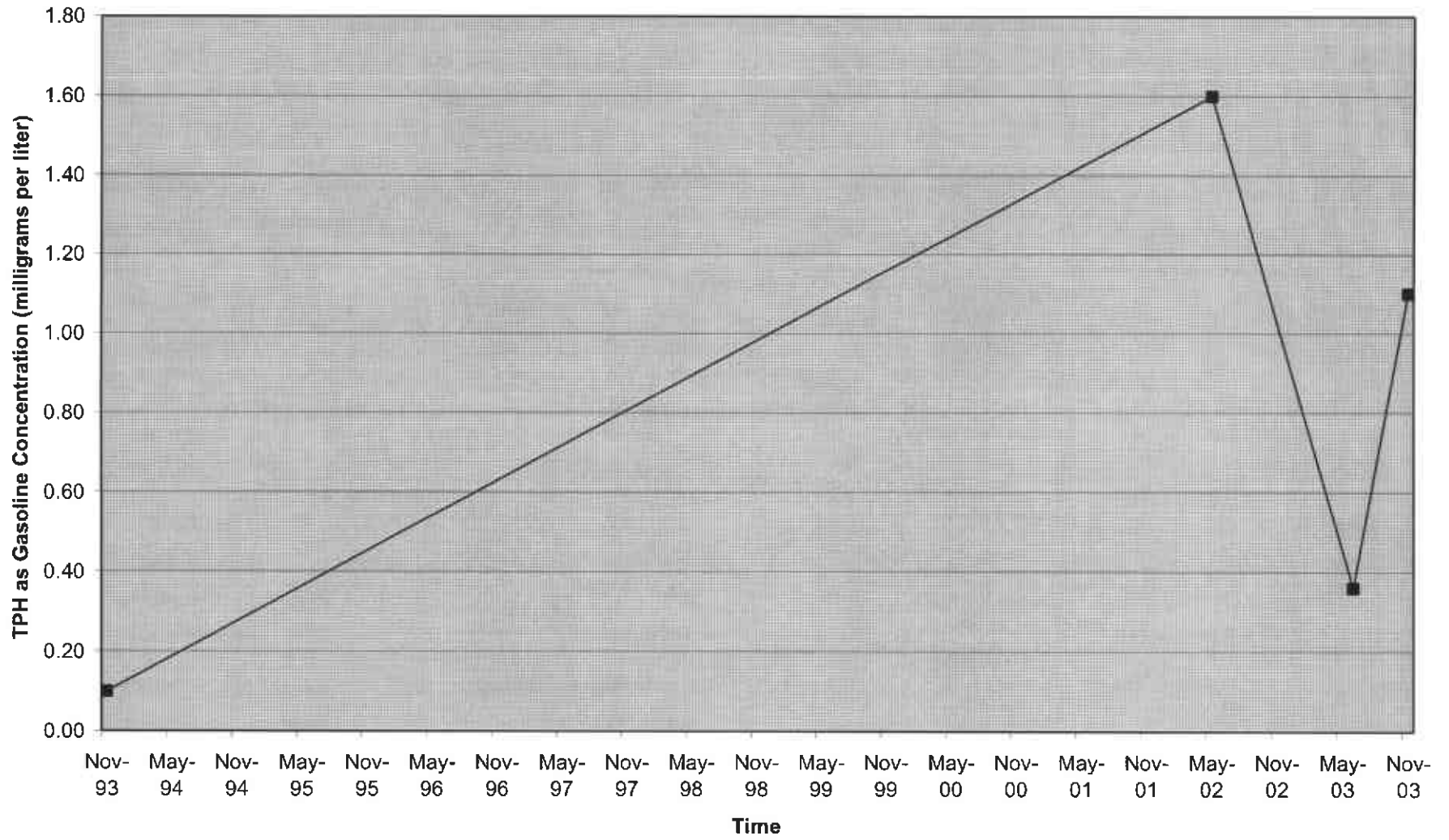




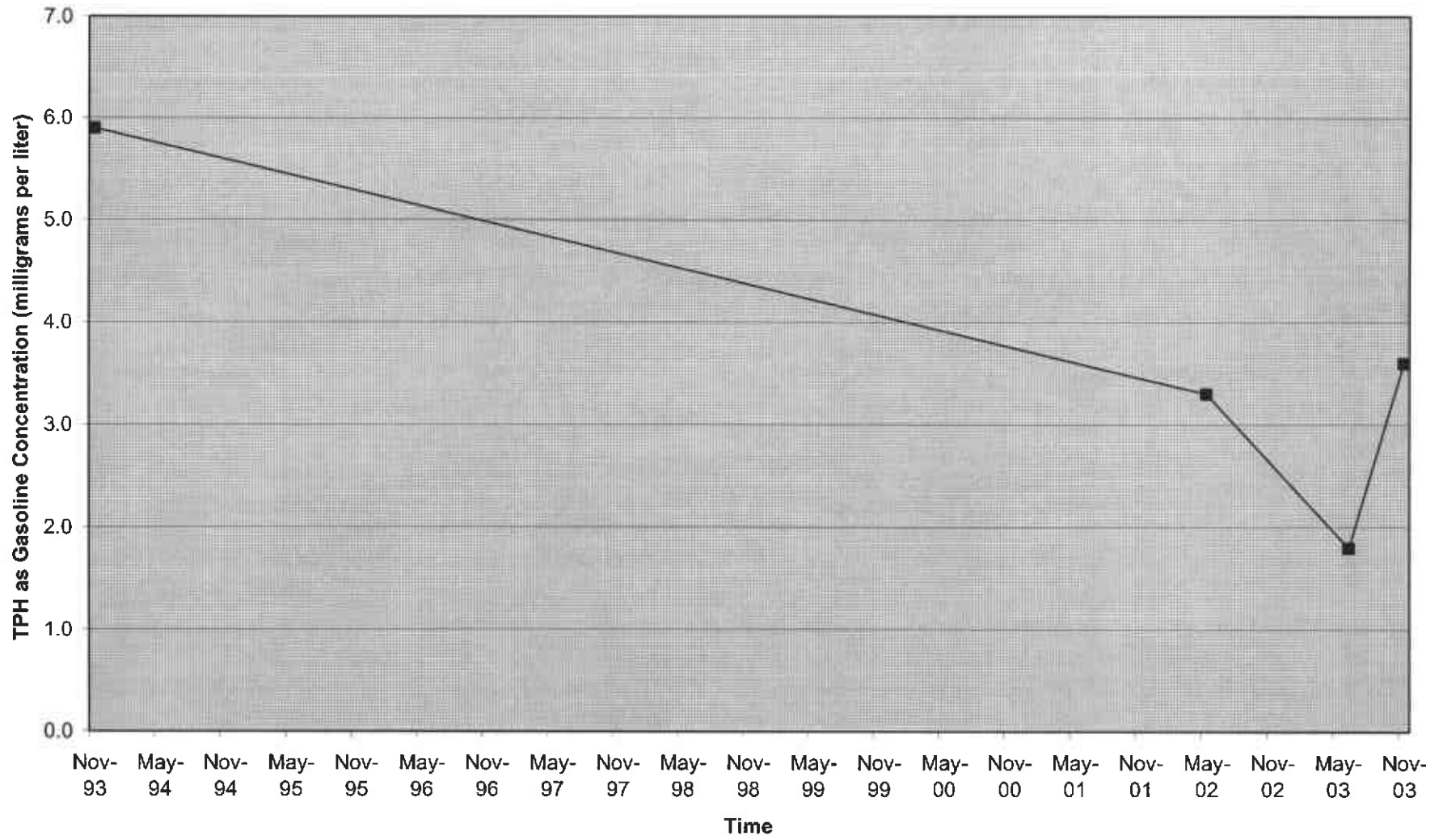
Concentration of TPH as Gasoline in Well VRW-6 verses Time



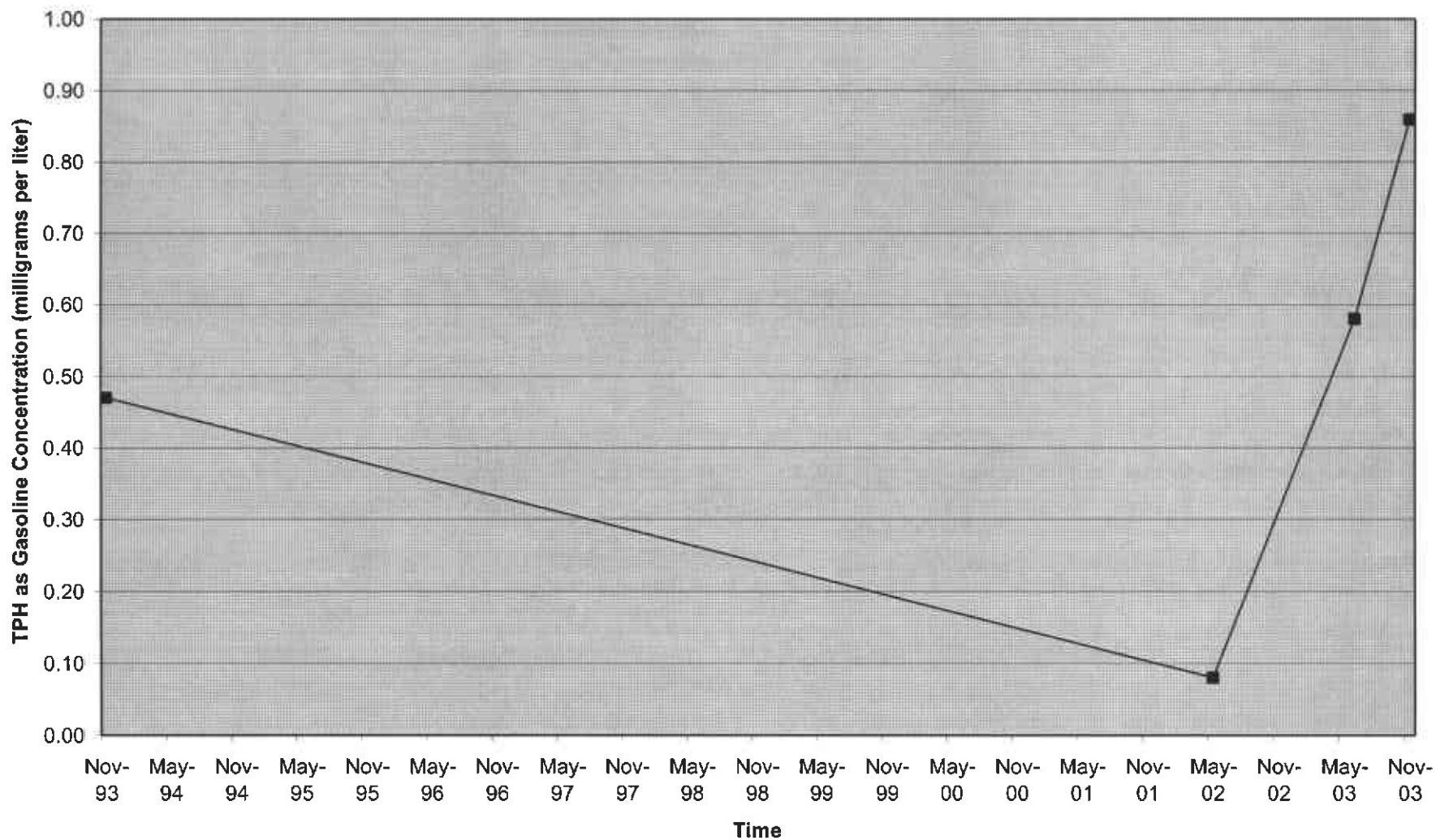
Concentration of TPH as Gasoline in Well VRW-7 verses Time



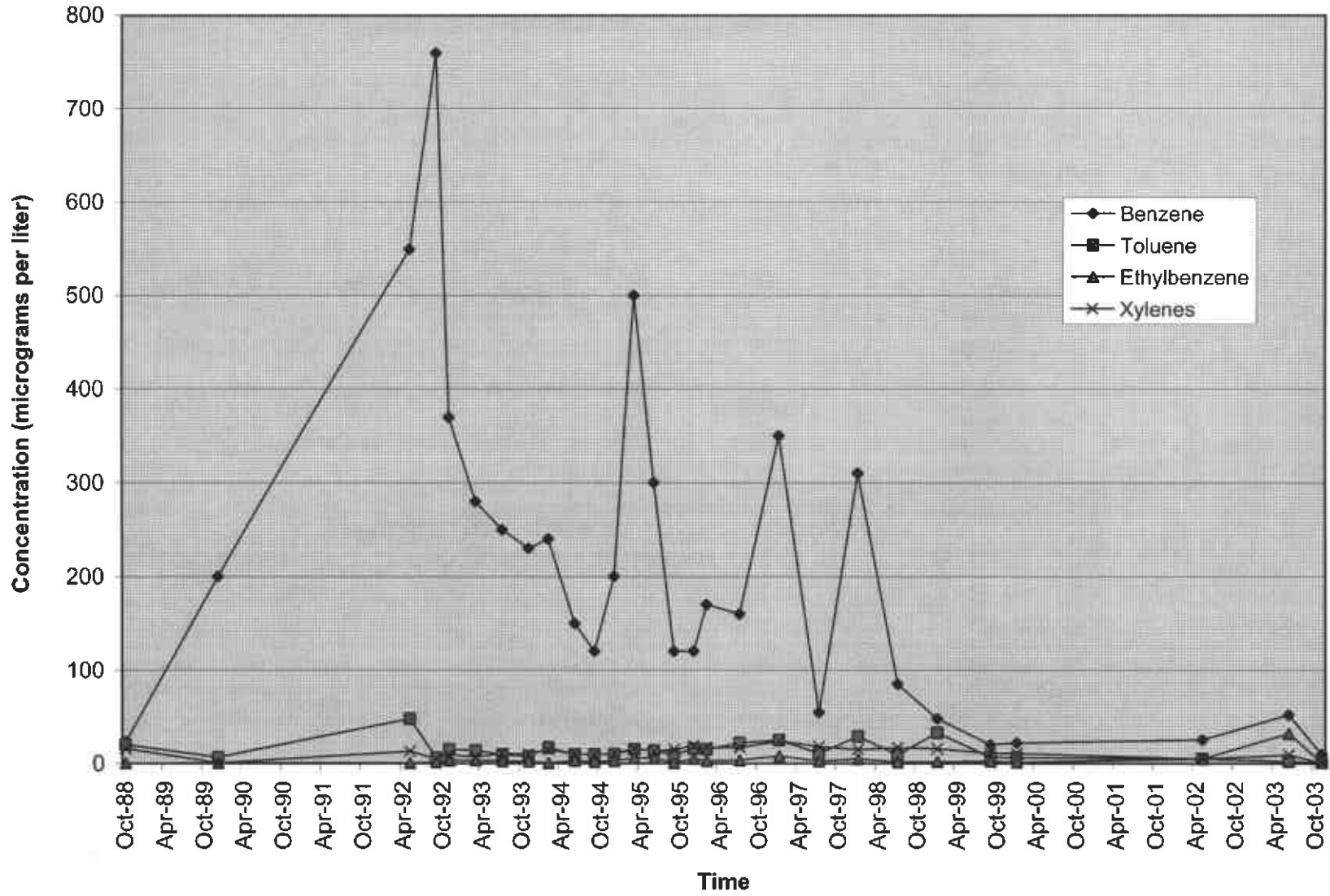
Concentration of TPH as Gasoline in Well VRW-8 verses Time



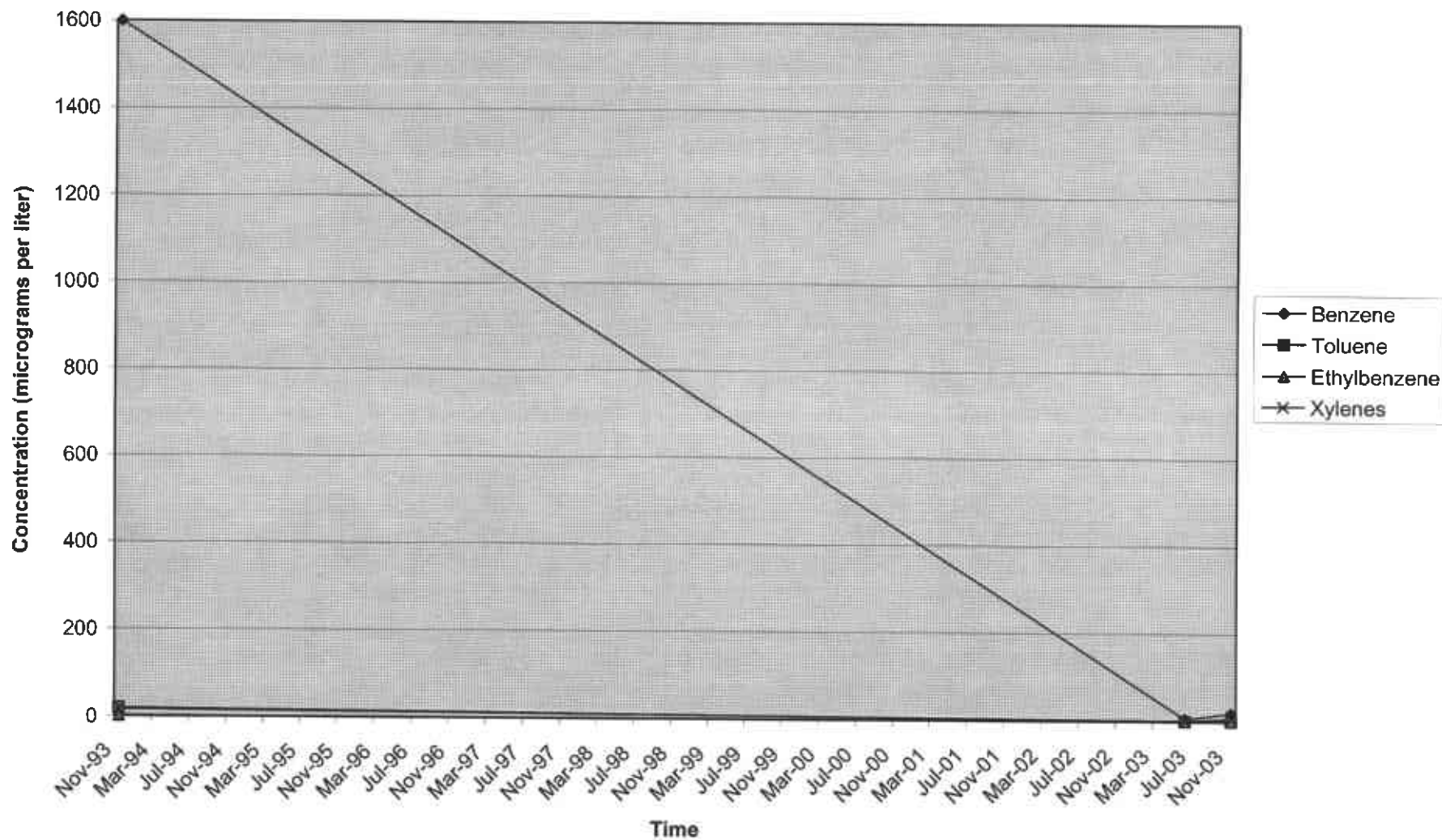
Concentration of TPH as Gasoline in Well VRW-9 verses Time



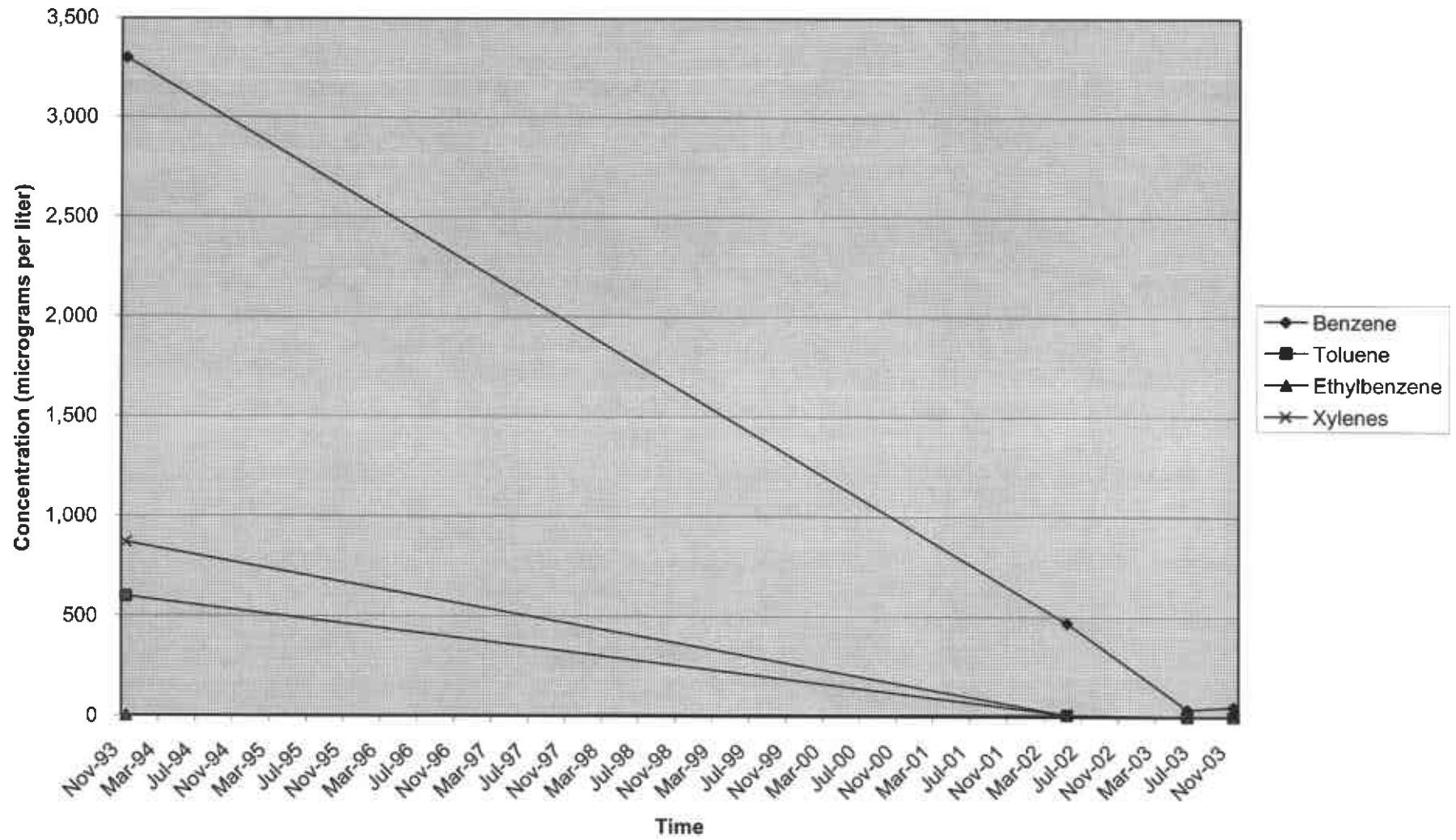
Concentration of BTEX Components in Well MW-2 verses Time



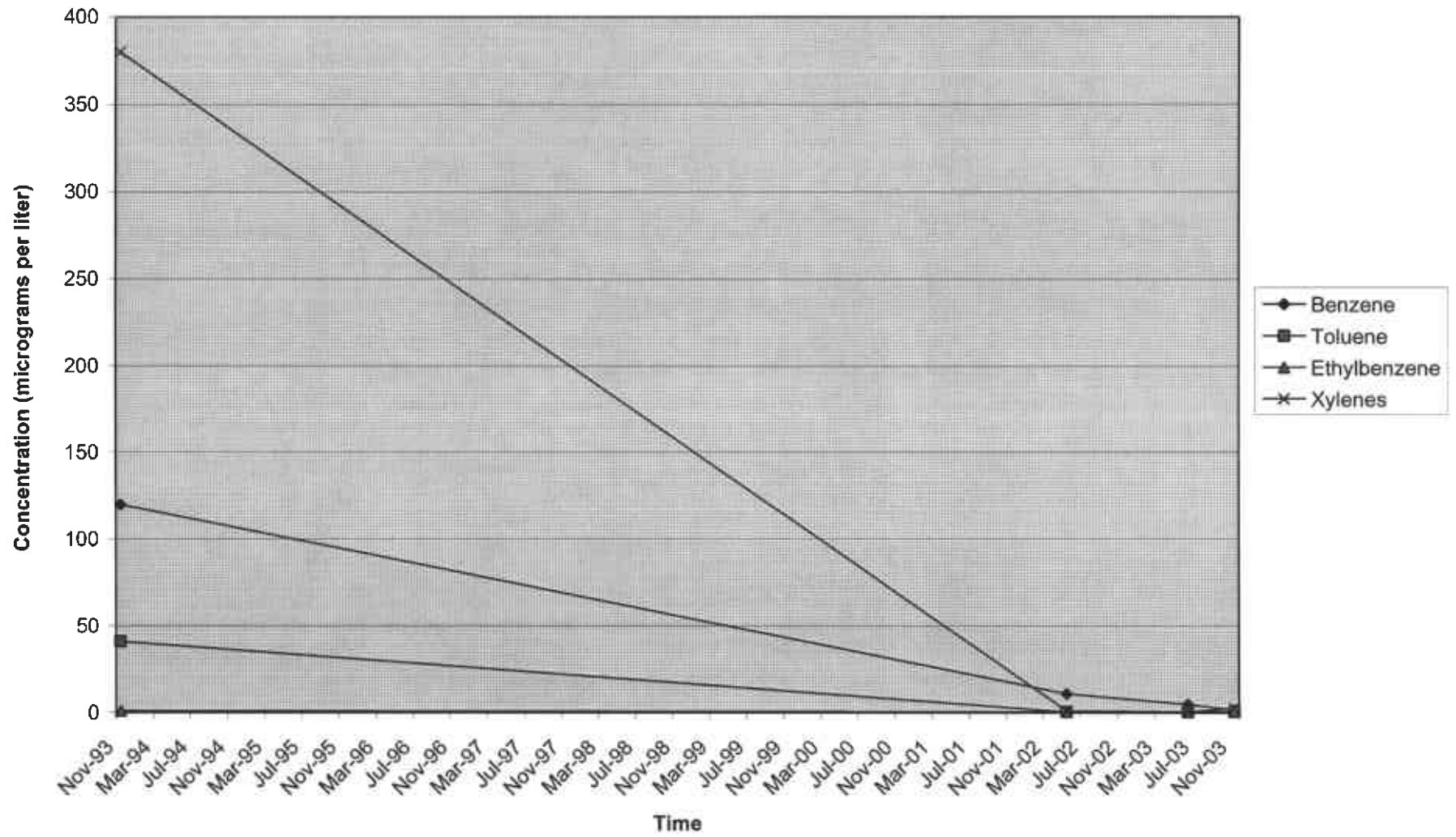
Concentration of BTEX Components in Well VRW-1 verses Time



Concentration of BTEX Components in Well VRW-2 verses Time

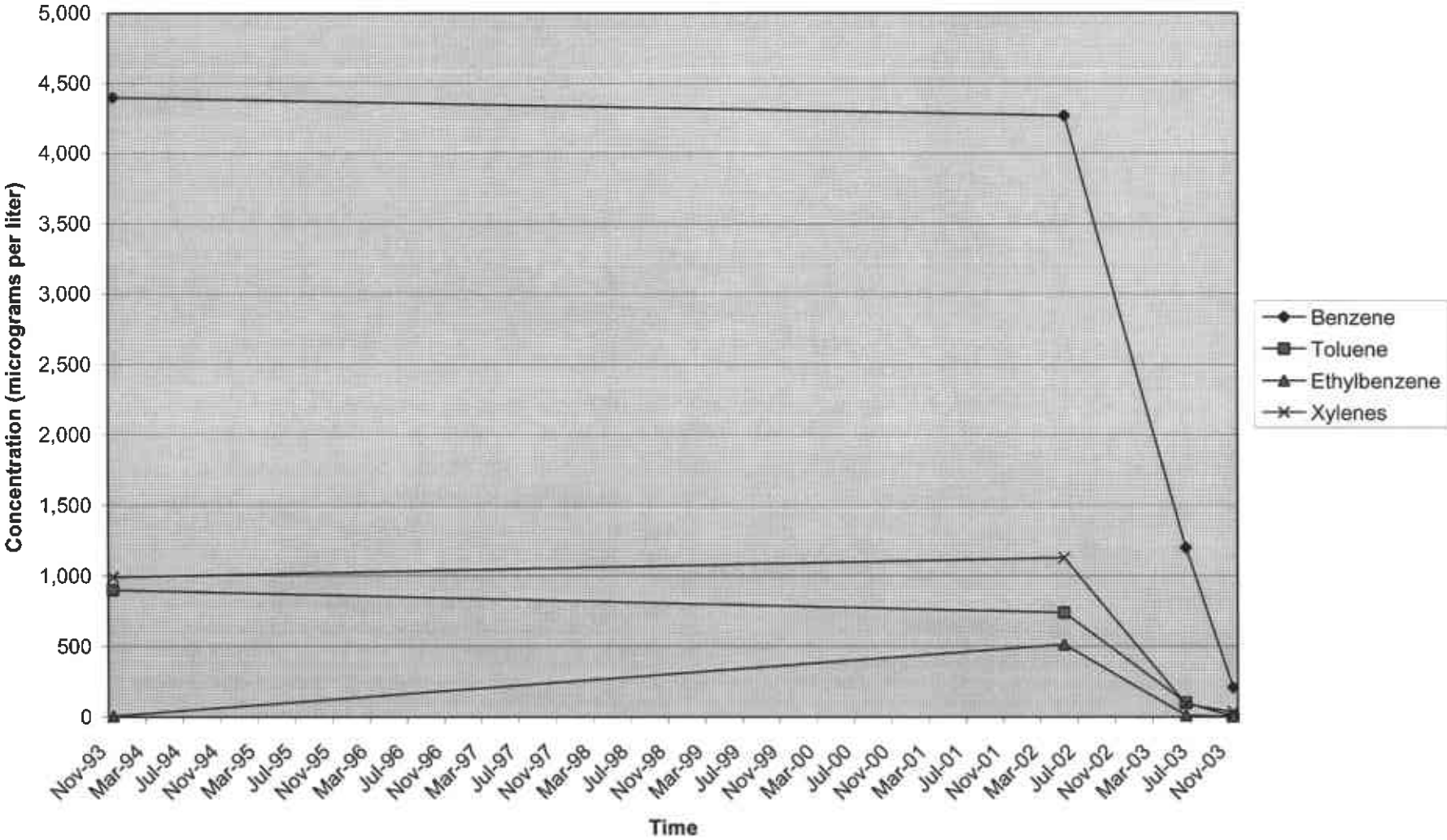


Concentration of BTEX Components in Well VRW-3 verses Time

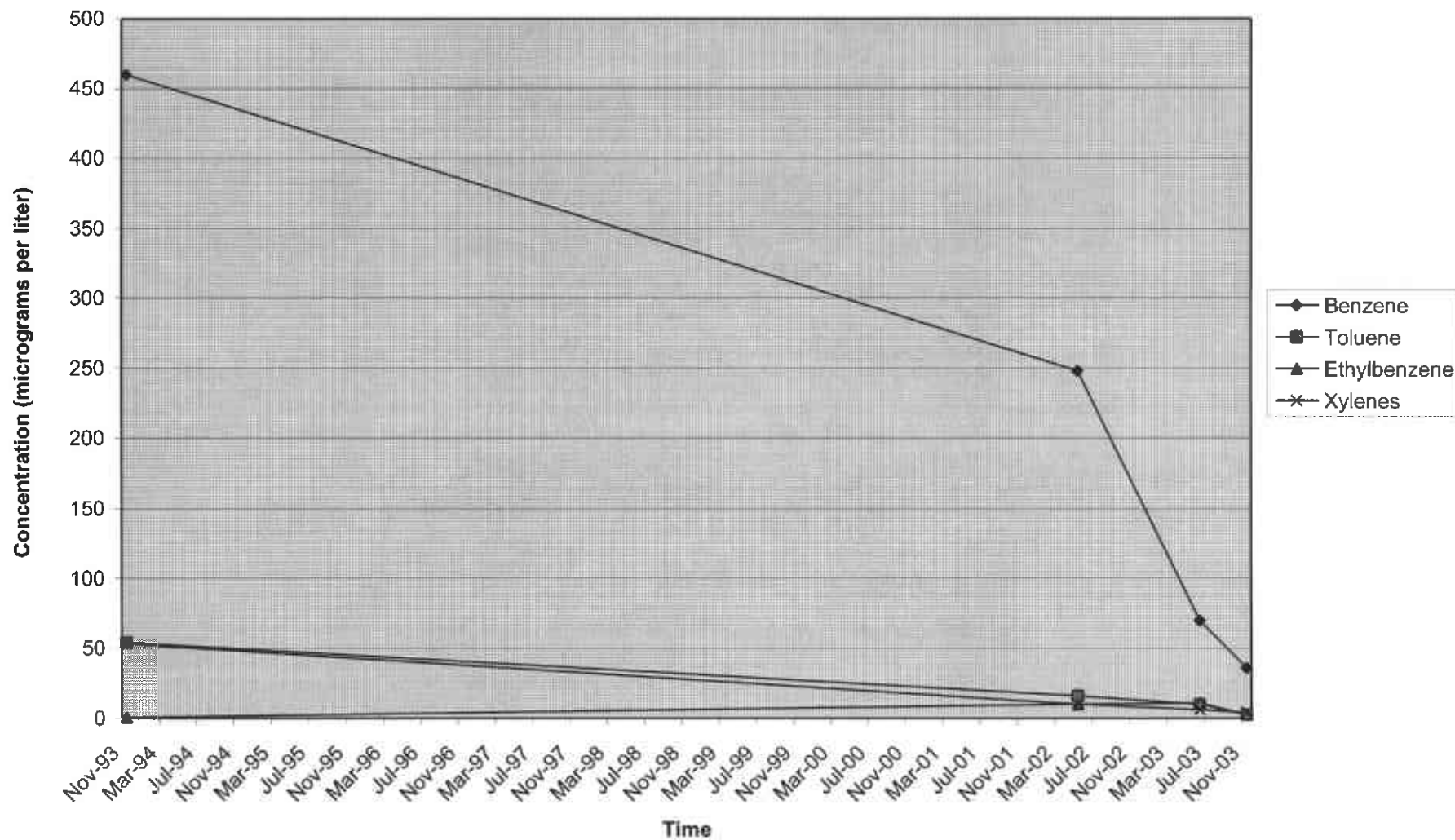




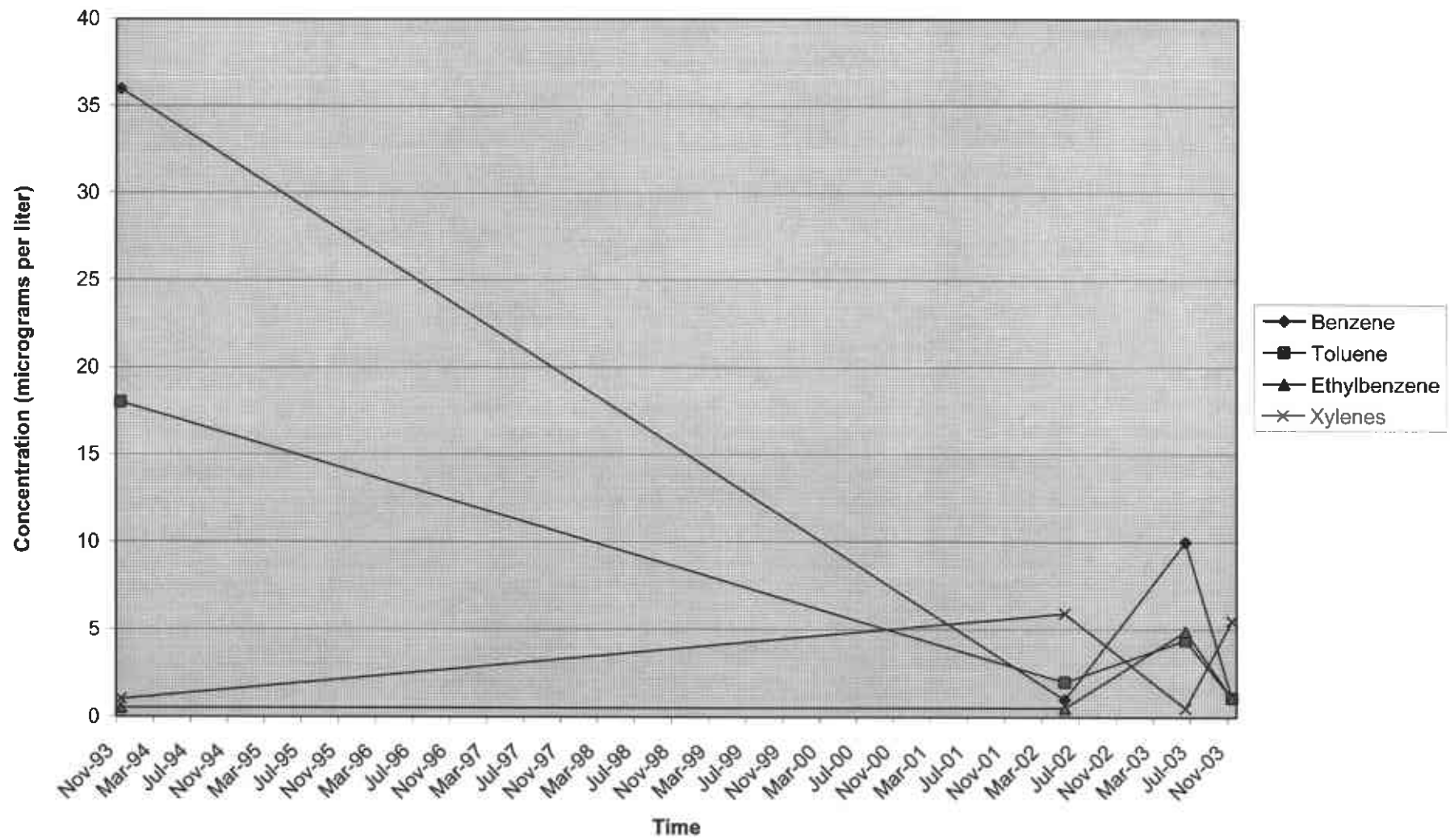
Concentration of BTEX Components in Well VRW-4 verses Time



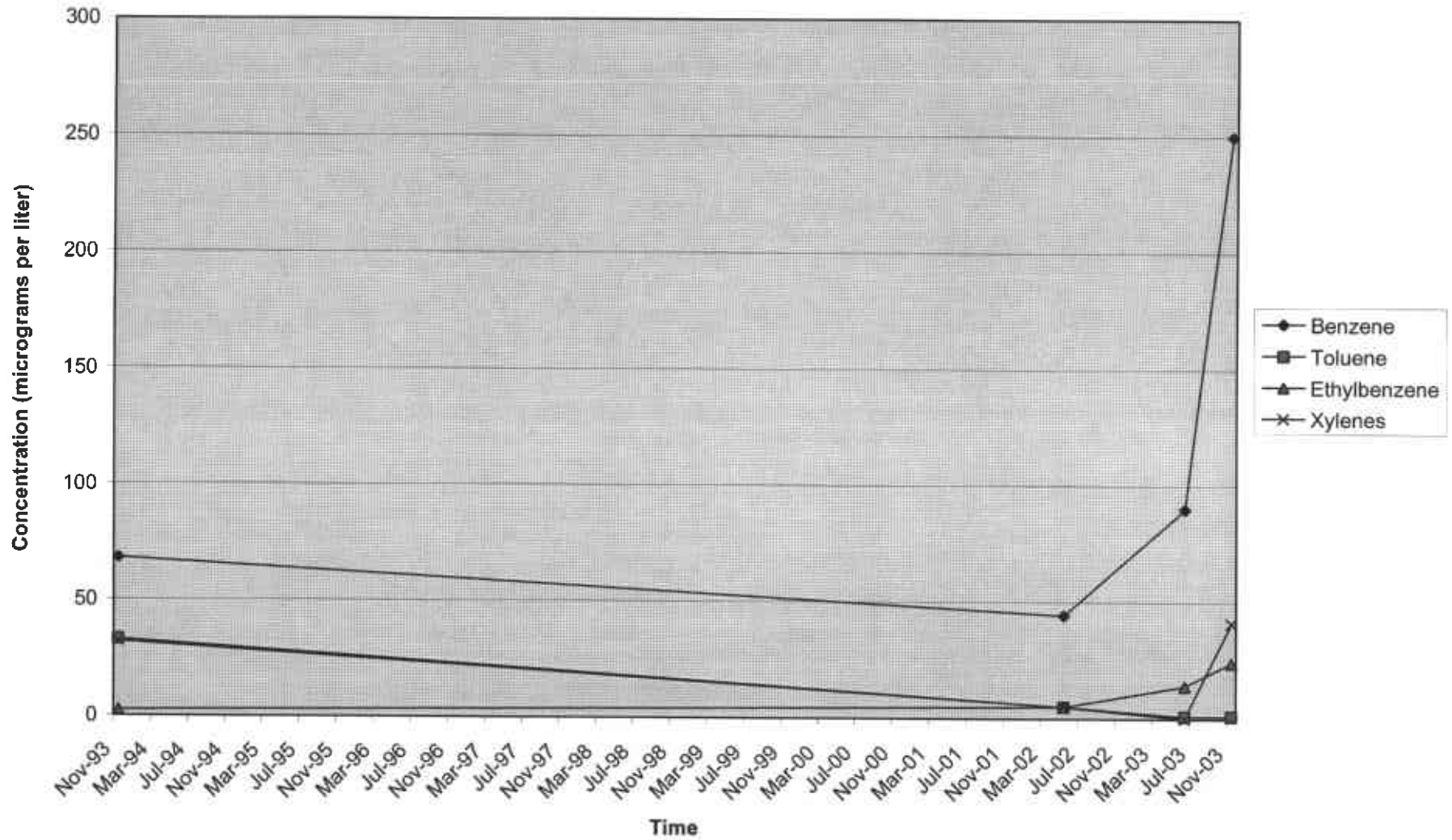
Concentration of BTEX Components in Well VRW-8 verses Time



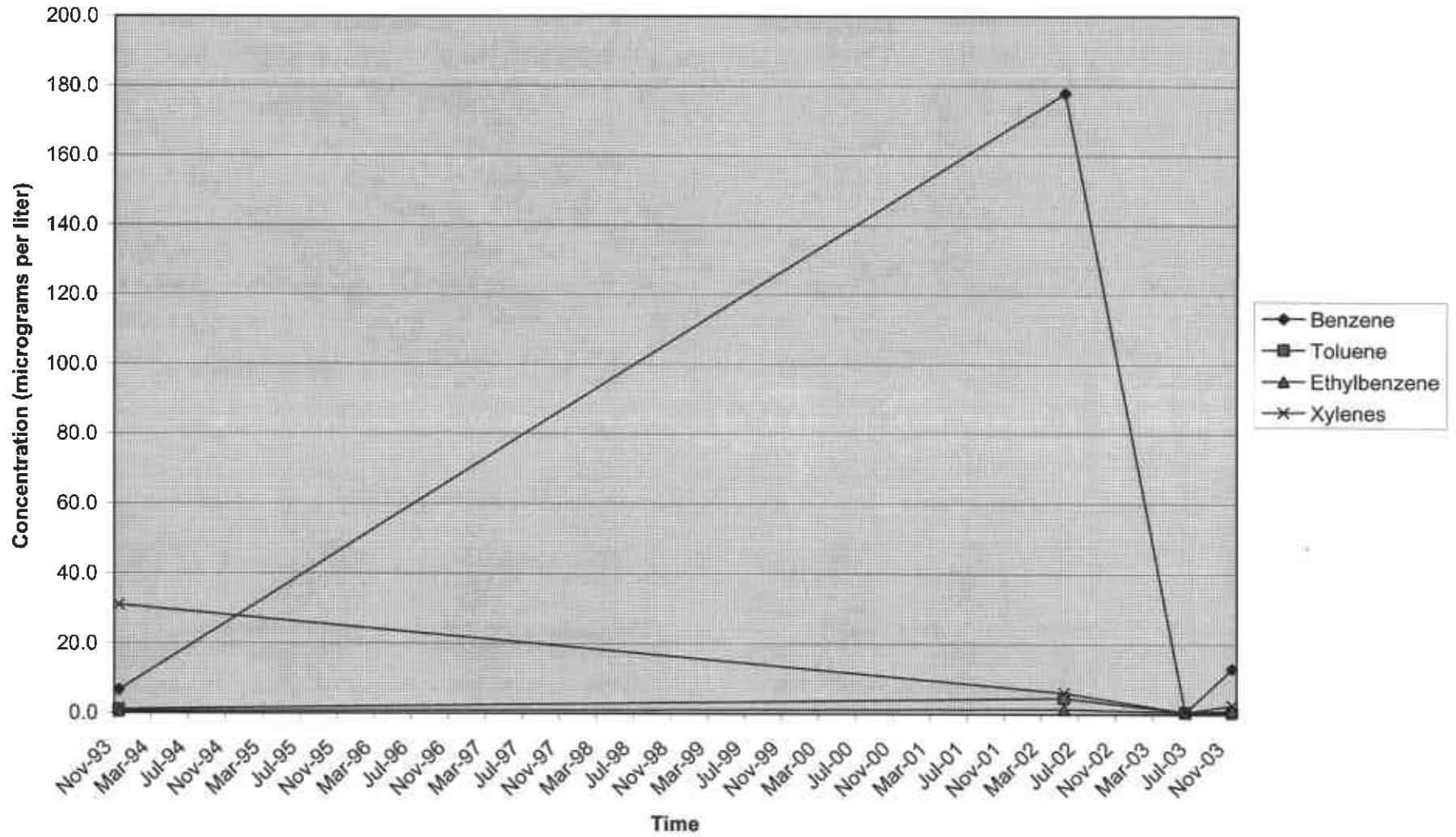
Concentration of BTEX Components in Well VRW-9 verses Time



Concentration of BTEX Components in Well VRW-5 verses Time



Concentration of BTEX Components in Well VRW-6 verses Time



Concentration of BTEX Components in Well VRW-7 verses Time

