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Brunsing Associates, Inc.

Alameda County
AUG 0 6 2003
Environmental Health

July 29, 2003

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 June 2003, and Site Closure Request
June 2003
Pacific Supply Company
1735 24th Street
Oakland, California

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 from June 5, 2003 through June 10, 2003, and the laboratory analyses of the groundwater samples collected. The fieldwork was completed in accordance with your letter dated May 6, 2003. Additional historical site information has been provided herein, per your request on August 6, 2001. 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. Additionally, BAI requests that this site be reviewed for closure based on the results of the current groundwater monitoring, the historical removal of the tank source, and the anticipated soil concentrations after the implementation of the soil vapor extraction system.

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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 and Tables 3 and 4). The results indicated that soil in the vicinity of the tank was contaminated with gasoline and raised the possibility that gasoline may have reached

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groundwater below the site. 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 below 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 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 soil analytical results for these monitoring events are presented in Table 3 and their locations are provided on Plate 2. The historical boring logs and historical well completion logs for these wells are presented in Appendices C and D, respectively. 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 insitu 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 (Table 3). Further discussions of the zero line investigation is 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. The results of these soil samples are presented in Table 3 and their locations are provided on Plate 2. Installation 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, and Oakland Tier 1 Risk Based Screening Levels (RBSLs) for inhalation of indoor air vapors at a commercial/industrial site. 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. Table 3 presents a summary of historical soil analytical data and compares the results to the Oakland Tier 1 RBSLs and the Oakland Tier 2 site-specific target levels (SSTLs) for clayey silts. Table 4 presents a summary of historic vapor analytical data. Table 5 provides groundwater analytical results for the off-site borings drilled in August 2000. Plate 2 presents a site map that includes the historical boring and sampling locations. Groundwater elevations and flow direction for June 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. Appendices C and D present the historical boring logs and well completion details, respectively.

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 from June 5, 2003 through June 10, 2003. Groundwater levels were also measured in all wells, except well VRW-1, on June 5, 2003, prior to sampling any wells. Groundwater level in well VRW-1 was measured on June 10, 2003 prior to sampling well VRW-1 due to access difficulties. 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 wells and vapor recovery wells were surveyed to mean sea level by Phelps & Associates, a California-certified land surveyor, in June 2003. The groundwater elevations and flow directions are presented in Plate 3. The groundwater elevation is highest near vapor recovery well VRW-4, causing groundwater to flow primarily radially from this well. The groundwater gradient in the southern portion of the study area is relatively shallow, while the gradient in the northern corner of the study area is slightly steeper.

Groundwater Sampling and Analytical Results

Groundwater samples for laboratory analysis were collected from monitoring well MW-3 and vapor recovery well VRW-4 on June 5, 2003, from vapor recovery wells VRW-6, VRW-7, VRW-8 and VRW-9 on June 6, 2003, vapor recovery wells VRW-2, VRW-3 and VRW-5 on June 9, 2003, and from monitoring wells MW-1 and MW-2, and vapor recovery well VRW-1 on June 10, 2003. Groundwater sampling was performed in accordance with the sampling protocol presented in Appendix A. Groundwater samples were analyzed by BACE Analytical and Field Services (BAFS), a state-certified analytical laboratory, 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 June 2003 groundwater analyses for monitoring wells MW-1 through MW-3 are included in the summary.

The groundwater samples collected from monitoring well MW-1 and MW-3 were reported to contain no detectable TPH as gasoline, BTEX, petroleum oxygenates or lead scavengers (Table 1). Monitoring well MW-2 was reported to contain TPH as gasoline at 1.6 milligrams per liter (mg/l), benzene at 52 micrograms per liter (µg/l), toluene at 2.3 µg/l, ethylbenzene at 32 µg/l, and xylenes at 9.1 µg/l.

Table 2 presents a summary of the groundwater analytical results for vapor recovery wells VRW-1 through VRW-9 (Plate 2) for the three times the wells have been sampled, with the exception of well VRW-1 which has only been sampled twice. Wells VRW-2 through VRW-9 were first sampled after their installation in November 1993, and were re-sampled in May 2002 and June 2003.

For well VRW-1, the June 2003 sample contained TPH as gasoline at a concentration of 0.44 mg/l, benzene at 5.9 µg/l and xylenes at 1.9 µg/l. The groundwater sample collected from well VRW-2 during June 2003 reported TPH as gasoline at 0.47 mg/l, benzene at 38 µg/l, and toluene at 2.8 µg/l. The VRW-3 sample contained 0.061 mg/l of TPH as gasoline and 4.8 µg/l of benzene. The groundwater sample collected from vapor recovery well VRW-4 reported 2.2 mg/l of TPH as gasoline, 1,200 µg/l of benzene, 100 µg/l of toluene, 12 µg/l of ethylbenzene, and 89 µg/l of xylenes. TPH as gasoline, benzene, and ethylbenzene were reported in the groundwater sample from well VWR-5 at concentrations of 0.93 mg/l, 90 µg/l, and 14 µg/l, respectively. For well VRW-6, the June 2003 sample was reported to contain no detectable TPH as gasoline, BTEX, petroleum oxygenates or lead scavengers. The groundwater sample collected

from well VRW-7 during June 2003 contained 0.36 mg/l of TPH as gasoline, 19 µg/l of benzene, 1.3 µg/l of toluene, and 2.2 µg/l of xylenes. For well VRW-8, the June 2003 sample reportedly contained 1.8 mg/l of TPH as gasoline, 70 µg/l of benzene, 10 µg/l of toluene, 11 µg/l of ethylbenzene, and 6.1 µg/l of xylenes. Groundwater collected from vapor recovery well VRW-9 was reported to contain TPH as gasoline at a concentration of 0.58 mg/l, benzene at 10 µg/l, toluene at 4.4 µg/l, and ethylbenzene at 4.9 µg/l.

Discussion of Groundwater Analytical Results

The samples collected from monitoring well MW-1 showed a reduction of TPH as gasoline from 0.35 mg/l in May 2002 to below reporting limits in June 2003. Groundwater samples from monitoring well MW-2 indicate a 51% decrease in TPH as gasoline, but an increase in BTEX from May 2002 to June 2003. Monitoring well MW-3 continues to contain TPH as gasoline and BTEX concentrations below the laboratory reporting limits.

Vapor recovery well VRW-1 was not sampled in May 2002 due to access difficulties. However, it was sampled during the June 2003 sampling event. The concentrations reported during the June 2003 event show a significant decrease in all constituents. The TPH as gasoline concentration decreased from 3 mg/l in November 1993 to 0.44 mg/l in June 2003. The largest reduction was in the benzene concentration, which showed a 99% decrease in concentration from 1600 µg/l in November 1993 to 5.9 µg/l during the June 2003 monitoring event. Toluene and ethylbenzene in the June 2003 groundwater samples were both reported below reporting limits.

Vapor recovery well VRW-2 reported a 92% decrease in benzene concentration from May 2002 (471 mg/l) to June 2003 (38 mg/l). TPH as gasoline concentration in well VRW-2 decreased 83% from May 2002 to June 2003, while the toluene concentration increased from below the reporting limit to 2.8 µg/l. The vapor recovery well VRW-3 data also indicate a reduction in TPH as gasoline, benzene, and xylenes since the May 2002 sampling event. Ethylbenzene and toluene continue to be below the reporting limits.

The laboratory results for vapor recovery well VRW-4 indicate a significant decrease in all constituents. The concentrations for well VRW-4 decreased by 72% to 98% for TPH as gasoline and BTEX from May 2002 to June 2003. The VRW-4 TPH as gasoline concentrations decreased from 11 mg/l in May 2002 to 2.2 mg/l during the June 2003 monitoring event. Benzene concentrations decreased in well VRW-4 from 4,270 µg/l in May 2002 to 1,200 µg/l in June 2003. Toluene, ethylbenzene, and xylenes decreased in

groundwater for well VRW-4 from 741 µg/l, 512 µg/l, and 1,130 µg/l in May 2002 to 100 µg/l, 12 µg/l, and 89 µg/l in June 2003, respectively.

Vapor recovery well VRW-5 reported a slight increase in concentrations of TPH as gasoline, benzene, and ethylbenzene. The VRW-5 TPH as gasoline increased from 0.87 mg/l in May 2002 to 0.93 mg/l in June 2003. Benzene concentrations increased in well VRW-5 from 44.3 µg/l during the May 2002 monitoring event to 90 µg/l in June 2003. Ethylbenzene concentrations also increased from below the reporting limit (5.0 µg/l) in May 2002 to 14 µg/l during the June 2003 monitoring event.

Groundwater concentrations of TPH as gasoline and BTEX were all below the laboratory reporting limits for vapor recovery well VRW-6 during the June 2003 monitoring event. Benzene concentration reported the most significant decrease in concentration, from 178 µg/l in May 2002 to below the reporting limit during the June 2003 sampling event. Vapor recovery well VRW-7 data indicate a decrease in concentrations for TPH as gasoline and benzene from May 2002 to June 2003, and a slight increase in concentrations for toluene and xylenes.

Vapor recovery well VRW-8 sample was observed to have a slight increase in ethylbenzene concentration from the May 2002 monitoring event to the June 2003 monitoring event. However, TPH as gasoline, benzene, and toluene decreased significantly from May 2002 to June 2003. Benzene had the most significant reduction, from 248 µg/l in May 2002 to 70 µg/l during the June 2003 monitoring event.

TPH as gasoline, benzene, toluene, and ethylbenzene concentrations increased in June 2003 for vapor recovery well VRW-9 compared to the May 2002 monitoring event. The most significant increase was in the benzene concentration, which increased from 0.99 µg/l in May 2002 to 10 µg/l in the June 2003 groundwater sample. TPH as gasoline increased from 0.08 mg/l in the May 2002 sample to 0.58 mg/l in the June 2003 sample. The toluene and ethylbenzene concentrations in groundwater increased from 2 µg /l and below the reporting limit in May 2002 to 4.4 µg/l and 4.9 µg/l in June 2003, respectively. Ethylbenzene concentrations decreased in the VRW-9 samples from 5.93 µg/l in May 2002 to below the reporting limit in June 2003.

Overall, the June 2003 monitoring results generally show a decrease in petroleum hydrocarbon concentrations for all wells, with the exception of monitoring well MW-2, and vapor recovery well VRW-9 and VRW-5 which increased slightly. Vapor recovery well VRW-1, which was not sampled in May 2002, contained significantly lower concentrations compared with the initial groundwater concentrations in November 1993, indicating that the SVE remedial system likely had a significant impact in this area. Vapor recovery well VRW-4, which had previously reported the highest

concentrations during the May 2002 monitoring event, decreased significantly during the June 2003 monitoring event.

Comparison of Site Analyses to Oakland Risk Based Screening Levels

The City of Oakland Public Works Agency published a guidance document providing risk based corrective action (RBCA) standards for the Oakland area titled, "Oakland Urban Land Redevelopment Program: Guidance Document" (Guidance) dated January 1, 2000. The Guidance document is based on the guidelines presented in the American Society for Testing and Materials (ASTM) Standard E-1739, which has been endorsed by the U.S. EPA. The ASTM standard has a three-tiered decision making process. Tier 1 provides the most conservative set of risk-based screening levels (RBSLs) and is generally used with sites with limited site investigation data. Tier 2 provides SSTLs, which are less conservative than the Tier 1 levels but are used at sites where more intensive site investigation work has been performed. Tier 3 SSTLs are based on a highly detailed site-specific assessment.

In order to qualify for the Oakland RBCA levels, Table 1 in the Guidance requires that eight criteria exist at the site. Based on the historical investigation of the site and the information obtained from representatives of Pacific Coast Supply, all eight of the criteria have been met at this location. The site is located in a highly industrial area of Oakland were groundwater levels have been observed at 7 to 8 feet bgs (Appendix C and D). The 1,000-gallon tank that was the source of the contamination was removed in 1987 and free-product has not been observed since the implementation of the remedial system. The contaminants of concern at the site are BTEX. Underground utilities have been observed along the adjacent 24th Street and the majority of the site is covered with an asphalt cap. There is no data that indicates that the chemicals of concern have been observed at a depth less than three feet.

The groundwater monitoring data collected historically and currently was compared with the Oakland Tier 1 RBSLs (Table 1), for the Indoor Air Vapor exposure route at a commercial/industrial site. During the 16 years that investigations and remediation have occurred on the site, the concentrations reported in the monitoring wells have not exceeded the Tier 1 levels (Table 1). In November 1993, groundwater sampling of the vapor extraction wells, indicate that only two of nine samples contained benzene concentrations greater than the Oakland Tier 1 RBSLs (Table 2). During the June 2003 groundwatermonitoring event, no samples contained concentrations that were greater than the Oakland Tier 1 RBSLs (Table 2).

Table 3 presents a comparison of the soil analytical data and Oakland Tier 1 RBSLs for the Indoor Air Vapor exposure route, and Oakland Tier 2 SSTLs for Clayey Silts. All

soil samples were collected prior to December 1993, when SVE was initiated at the site. The analytical results of the soil samples show that 12 of 29 samples exceeded the benzene Tier 1 RBSLs for the Indoor Air Vapor exposure route at a commercial/industrial site. Of these samples only one of the 29 samples collected exceeded the benzene Tier 2 SSTLs for the Clayey Silts, for the Indoor Air Vapor exposure route at a commercial/industrial site. It is projected that the current soil concentrations are significantly lower after soil vapor extraction remediation was implemented from December 1993 to June 1996. This analysis is further supported by the decrease in groundwater contaminant levels at the site, which have likely resulted from the remediation. In addition to the remediation, the site has been further supplemented by approximately seven additional years of natural attenuation and biodegradation.

Conclusion

After a review of both the historical and current analytical data, BAI recommends that the site be reviewed for closure based on the site attributes listed below.

- This site is in a highly industrial area of Oakland, and the majority of the site is capped with an asphalt pavement.
- The impacted groundwater is less than 10 feet, the soils are predominately clays and silts, and groundwater is not a source of drinking water.
- The 1,000-gallon gasoline tank source was removed in 1987.
- SVE remediation was implemented at the site from December 1993 to June 1996, which extracted approximately 6,550 pounds of petroleum hydrocarbons.
- Shut-down and dismantling of the system was approved in December 1996 by the ACHCSA, with the intent that natural attenuation would continue to remediate the site.
- Groundwater analyses of monitoring wells and vapor recovery wells collected in June 2003 indicate that all reported concentrations are below the Oakland Tier 1 RBSLs.

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

Michelle Floyd Frederick
Project Engineer

Diana M. Dickerson

REGISTERED GEOLOGIST
DIANA M. DICKERSON
NO. 6013
STATE OF CALIFORNIA

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

cc: Ms. Normita Callison, Pacific Coast Building Supply

LIST OF ATTACHMENTS

TABLES

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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-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	–	–
Oakland Tier 1 RBSLs					**1,800**	**>Sol**	**>Sol**	**>Sol**	**NA**	**>Sol**

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-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	–	–
Oakland Tier 1 RBSLs					**1,800**	**>Sol**	**>Sol**	**>Sol**	**NA**	**>Sol**

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	–	–
Oakland Tier 1 RBSLs					1,800	>Sol	>Sol	>Sol	NA	>Sol

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-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
Oakland Tier 1 RBSLs					**1,800**	**>Sol**	**>Sol**	**>Sol**	**NA**	**>Sol**

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
Oakland Tier 1 RBSLs					**1,800**	**>Sol**	**>Sol**	**>Sol**	**NA**	**>Sol**

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	–	–	–	–	–	–	–
Oakland Tier 1 RBSLs					**1,800**	**>Sol**	**>Sol**	**>Sol**	**NA**	**>Sol**

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
Oakland Tier 1 RBSLs					**1,800**	**>Sol**	**>Sol**	**>Sol**	**NA**	**>Sol**

Notes:

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 scenerio at a commerical/industrial site.

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

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)	Ethyl-benzene (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	na	na
VRW-1	6/10/2003	7.31	11.18	3.87	0.44	5.9	<0.5	<0.5	1.9	na	na
Oakland Tier 1 RBSLs-Inhalation of Indoor Air Vapors, Commerical/Industrial Site						1800	>Sol	>Sol	>Sol	>Sol	
VRW-2	11/4/1993	–	–	–	7.2	3,300	600	2.4	870	na	na
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	na	na
Oakland Tier 1 RBSLs-Inhalation of Indoor Air Vapors, Commerical/Industrial Site						1800	>Sol	>Sol	>Sol	>Sol	
VRW-3	11/4/1993	–	–	–	5.7	120	41	1.1	380	na	na
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	na	na
Oakland Tier 1 RBSLs-Inhalation of Indoor Air Vapors, Commerical/Industrial Site						1800	>Sol	>Sol	>Sol	>Sol	
VRW-4	11/4/1993	–	–	–	9.0	4,400	900	5.4	990	na	na
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	na	na
Oakland Tier 1 RBSLs-Inhalation of Indoor Air Vapors, Commerical/Industrial Site						1800	>Sol	>Sol	>Sol	>Sol	
VRW-5	11/4/1993	–	–	–	0.90	68	33	2.5	32	na	na
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	na	na
Oakland Tier 1 RBSLs-Inhalation of Indoor Air Vapors, Commerical/Industrial Site						1800	>Sol	>Sol	>Sol	>Sol	
VRW-6	11/4/1993	–	–	–	0.41	6.6	1.0	ND	31	na	na
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	na	na
Oakland Tier 1 RBSLs-Inhalation of Indoor Air Vapors, Commerical/Industrial Site						1800	>Sol	>Sol	>Sol	>Sol	
VRW-7	11/4/1993	–	–	–	0.10	ND	ND	ND	ND	na	na
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	na	na
Oakland Tier 1 RBSLs-Inhalation of Indoor Air Vapors, Commerical/Industrial Site						1800	>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 (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Other Oxygenates & Lead Scavengers (µg/l)
VRW-8	11/4/1993	–	–	–	5.9	460	54	ND	53	na	na
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	na	na
Oakland Tier 1 RBSLs-Inhalation of Indoor Air Vapors, Commerical/Industrial Site						1800	>Sol	>Sol	>Sol	>Sol	
VRW-9	11/4/1993	–	–	–	0.47	36	18	ND	1.0	na	na
VRW-9	5/16/2002	–	–	–	0.080	0.990	2.00	<0.50	5.93	<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	na	na
Oakland Tier 1 RBSLs-Inhalation of Indoor Air Vapors, Commerical/Industrial Site						1800	>Sol	>Sol	>Sol	>Sol	

mg/l = milligrams per kilogram which is generally equivalent to parts per million (ppm).
µg/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 scenerio at a commerical/industrial site.
There are no RBBSLs for Total Petroleum Hydrocarbons.
na = not analyzed.
ND = not detected above laboratory reporting limits.
>Sol = RBSL exceeds solubility of chemical in water.

TABLE 3. SUMMARY OF SOIL ANALYTICAL DATA

Pacific Supply Company, 1735 24th Street, Oakland, California

Sample Location	Sample Date	Soil Depth (feet)	TPH as Gasoline (mg/kg)	TPH as Diesel (mg/kg)	TPH as Motor Oil (mg/kg)	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Organic Xylenes (µg/kg)	Lead (mg/kg)	MTBE (µg/kg)
V-3	5/11/1987	7	160	–	–	2,200	4,000	–	12,000	–	–
V-7	5/11/1987	7	8	–	–	410	250	–	810	–	–
MW-1	9/13/1988	8	26	–	–	<2.5	220	–	850	–	–
MW-2	9/13/1988	8	1,400	–	–	990	700	–	1,100	–	–
MW-3	9/13/1988	8	1,300	–	–	530	590	–	22,000	–	–
MW-4	9/13/1988	8	3,700	–	–	3,700	2,400	–	12,000	–	–
MW-6[(a)]	12/19/1989	5.5	370	–	–	<500	<500	<500	<500	1.5	–
MW-7	12/19/1989	5.5	<2.5	<1.0	160	<5	<5	<5	<5	1.7	–
VEW-1	6/6/1992	4.5	100	–	–	9,100	830	1,300	21,000	–	–
VEW-1	6/6/1992	8	780	–	–	23,000	93,000	60,000	170,000	–	–
B1	3/5/1993	2.5	<1	–	–	<5	<5	<5	<5	–	–
B2	3/5/1993	6.0	<1	–	–	<5	<5	<5	<5	–	–
B3	3/5/1993	8.0	<1	–	–	<5	<5	<5	<5	–	–
B4	3/5/1993	7.0	7,000	–	–	28,000	17,000	73,000	43,000	–	–
B5	3/5/1993	7.0	900	–	–	1,600	2,400	10,000	6,200	–	–
B6	3/5/1993	7.0	10	–	–	71	38	78	100	–	–
B7	3/5/1993	7.0	10	–	–	30	42	30	110	–	–
B8	3/5/1993	7.0	2,200	–	–	10,000	41,000	21,000	94,000	–	–
B9	3/5/1993	8.5	910	–	–	1,200	1,500	3,700	6,700	–	–
B10	3/5/1993	6.0	<1	–	–	<5	5	<5	<5	–	–
VRW-1	8/25/1993	7.5	1.5	–	–	14	<5	<5	<5	–	–
VRW-2	8/26/1993	7	27	–	–	110	200	46	190	–	–
VRW-3	8/25/1993	7.5	15	–	–	700	90	16	60	–	–
VRW-4	8/26/1993	7	5.5	–	–	410	120	110	490	–	–
VRW-5	8/27/1993	7.5	700	–	–	7,300	3,000	5,300	3,600	–	–
VRW-6	8/26/1993	7.5	3800	–	–	41,000	130,000	53,000	270,000	–	–
VRW-7	8/27/1993	7	1100	–	–	1,300	2,900	2,600	6,000	–	–
VRW-8	8/26/1993	7.5	30	–	–	220	120	400	670	–	–
VRW-9	8/27/1993	7	370	–	–	2,300	2,200	620	2,300	–	–
Soil Vapor Extraction System Implemented from December 1993 to June 1996											
Oakland Tier 1 RBSLs						1,100	360,000	>Sat	>Sat	–	–
Oakland Tier 2 SSTLs for Clayey Silts						30,000	>Sat	>Sat	>Sat	–	–

(a) This sample was also analyzed for volatile organic compounds (VOCs) by Method 8010 and semi-volatile compounds (SVOCs) by Method 625. No compounds were detected above reporting limit of 250 µg/kg for VOCs and 50 µg/kg for SVOCs.

>Sat = RBSL exceeds saturation soil concentration of chemical.

There are no RBSLs for total petroleum hydrocarbons.

TABLE 4. SUMMARY OF VAPOR ANALYTICAL DATA

Pacific Supply Company, 1735 24th Street, Oakland, California

Sample Location	Sample Date	TPH as gasoline (ppm)
Tank Area (West)	4/28/1987	1,400
Tank Area (East)	4/28/1987	2,000
V-1	5/11/1987	3,700
V-2	5/11/1987	2,200
V-3	5/11/1987	2,500
V-4	5/11/1987	1,800
V-5	5/11/1987	2,300

ppm = parts per million

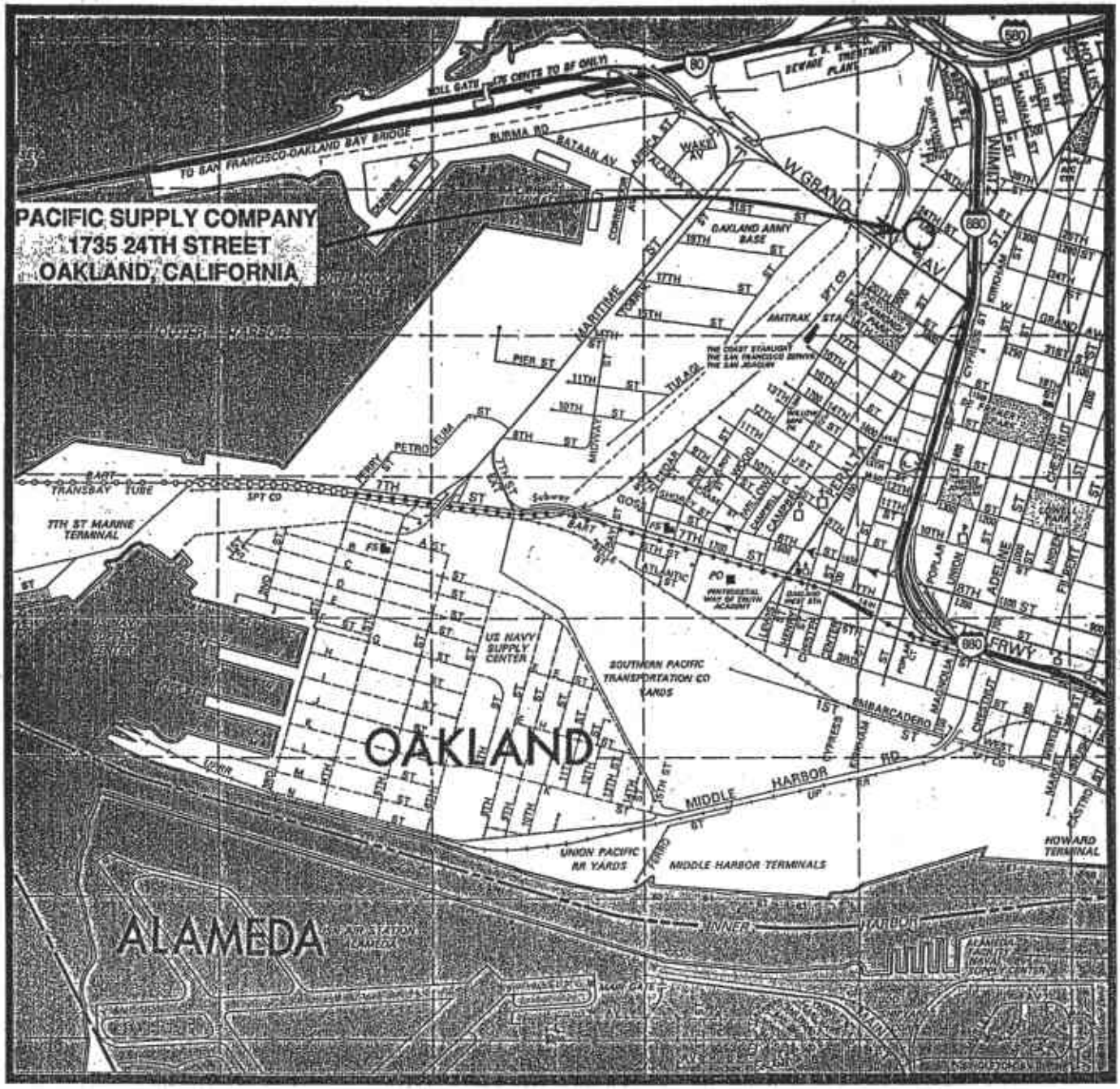
Shallow soil ESL's 100ppm TPHg

TABLE 5. GROUNDWATER ANALYTICAL RESULTS, 8/29/00

Pacific Supply Company, 1735 24th Street, Oakland, California

Sample ID	TPH as gasoline (mg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TAME (µg/l)	TBA (µg/l)	Other Oxygenates & Scavengers (µg/l)
B-10W	**0.060**	**1.4**	**1.4**	ND	**1.0**	**0.660**	**4.03**	**58.3**	ND
B-11W	ND	ND	ND	ND	ND	<2.5	<10	<500	<10
B-12W	ND	ND	ND	ND	ND	<1.25	<5	<250	<5
MW-2	**3.5**	**120**	**16**	<5	**28**	**5.09**	ND	**102**	ND
Method Reporting Limit	0.05 mg/l	0.5 µg/l	0.5 µg/l	0.5 µg/l	0.5 µg/l	0.5 µg/l	2.0 µg/l	100 µg/l	2.00 µg/l

mg/l = milligrams per liter which is generally equivalent to parts per million (ppm).
µg/l = micrograms per liter which is generally equivalent to parts per billion (ppb).
ND = Not detected at the method reporting limit.
nr = Analysis not requested.
< = Not detected at the indicated reporting limit.



APPROXIMATE SCALE
(feet)

0 1100 2200 4400

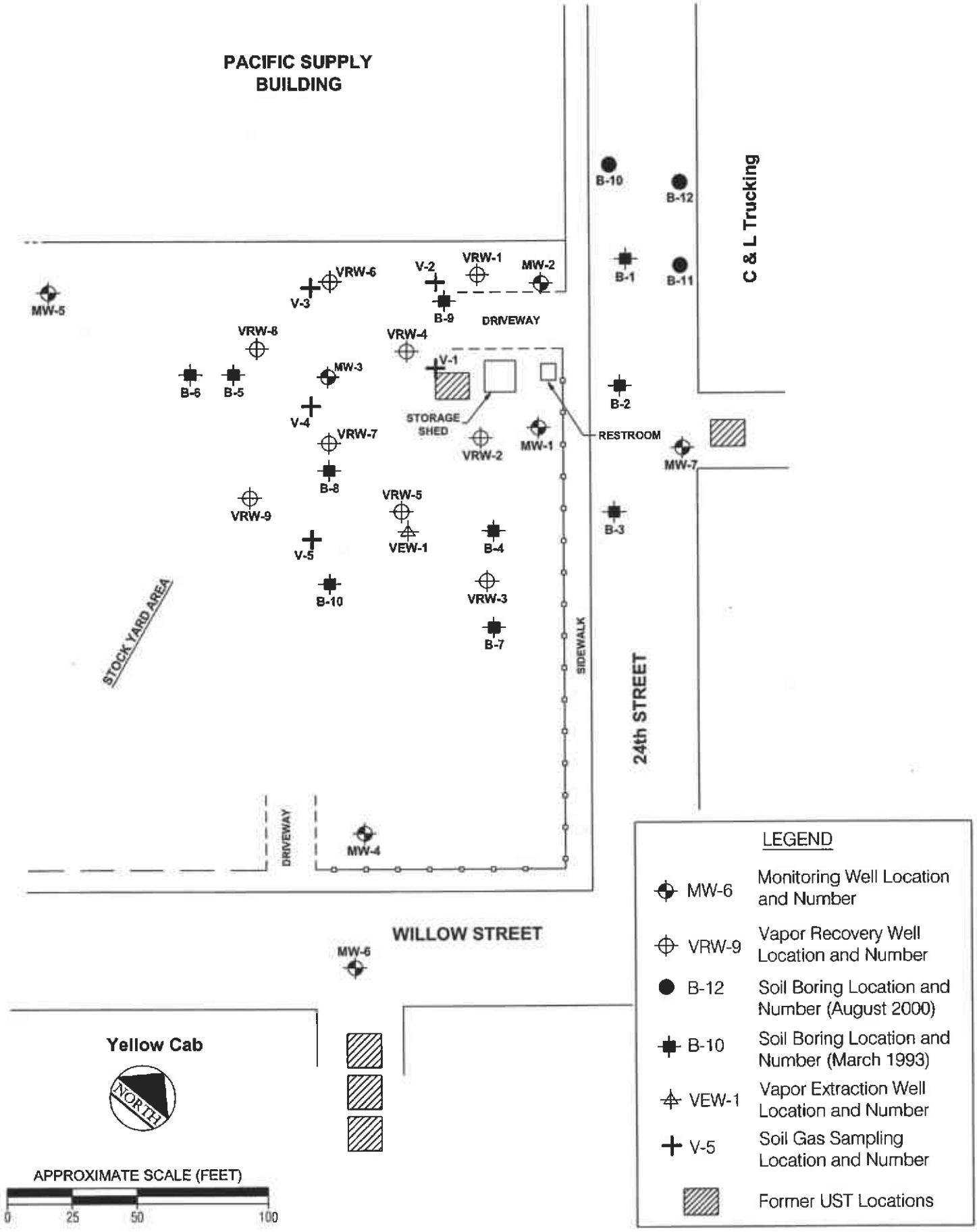
NORTH

REFERENCE: Thomas Guide, Alameda Couty, 1989

PROJECT NO.: 029.5		
DRAWN BY:	JG	3/21/90
CHECKED BY:	MEV	3/21/90
APPROVED BY:	MEV	3/22/90
REVISION NO.:	2	6/26/90

BRUNSING ASSOCIATES, INC.

FIGURE 1
VICINITY MAP
PACIFIC SUPPLY COMPANY
OAKLAND, CALIFORNIA

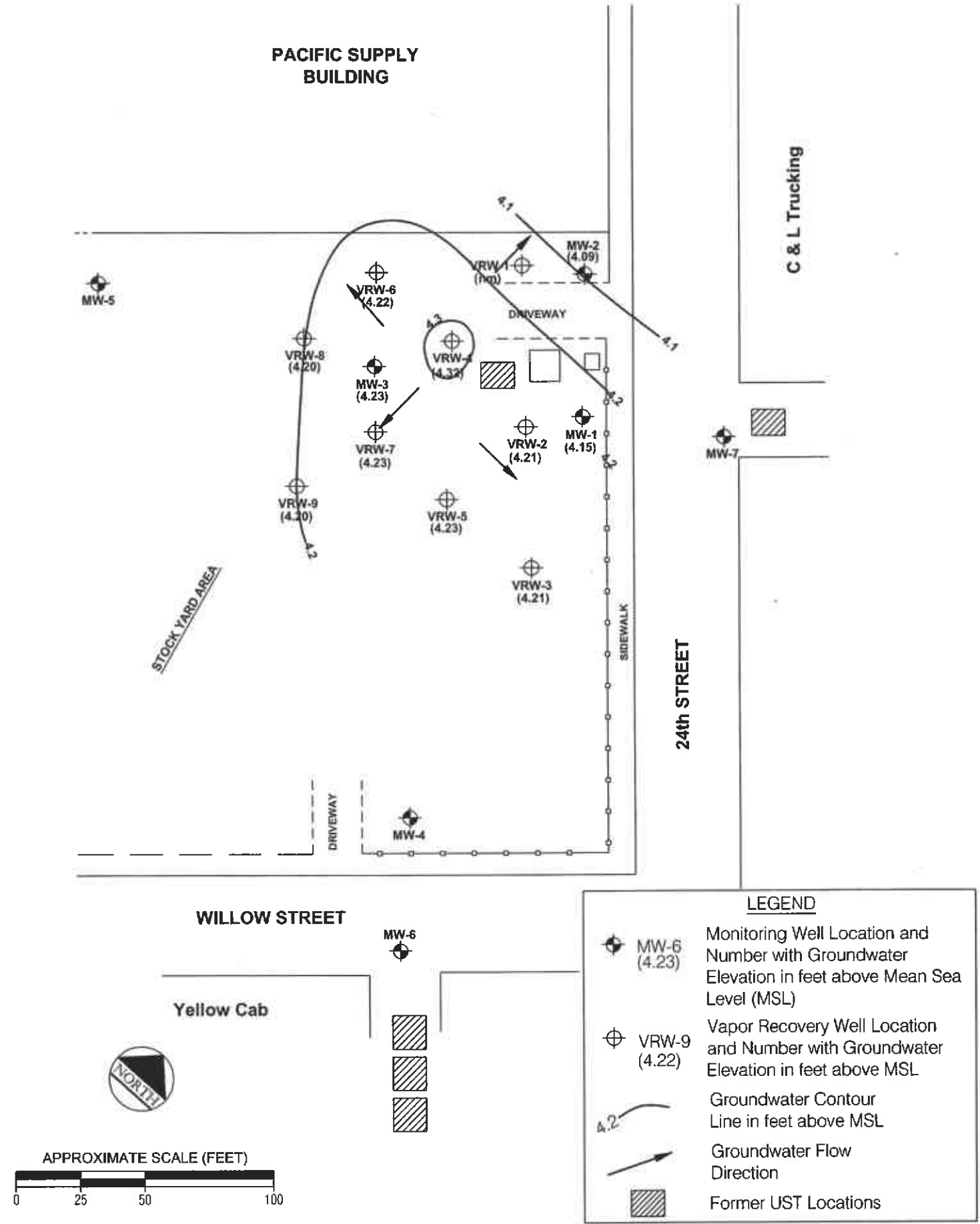


Brunsing Associates, Inc.
5803 Skylane Blvd., Suite A
Windsor, California 95492
Tel: (707) 838-3027

Job No.: 29
Appr.:
Date: 7/24/03

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

PLATE
2



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

Job No.: 29
Appr.:
Date: 7/24/03

GROUNDWATER ELEVATIONS
JUNE 5, 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 stabile. 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.

BRUNSING ASSOCIATES, INC.
ENVIRONMENTAL DIVISION

FIELD REPORT

JOB NO: 29
INITIAL: CDS
DATE: 6-5-03

PROJECT: PACIFIC SUPPLY
SUBJECT: GROUNDWATER SAMPLING
PROJECT PHASE NUMBER: 04
VEHICLE USED: Ford F-150

TOTAL MILEAGE:

TIME	DESCRIPTION OF WORK AND CONVERSATION RECORD
0730	LOAD EQUIPMENT AND SUPPLIES.
0945	TO SITE
1115	ARRIVE AT SITE, SET-UP FOR GROUNDWATER SAMPLING.
	MEASURED TWO ROUNDS OF DISTANCE TO WATER AT WELLS MW-1, MW-2,
	MW-3, VRW-2, VRW-3, VRW-4, VRW-5, VRW-6, VRW-7, VRW-8 AND VRW-9.
	PERFORMED SAMPLING AT WELLS MW-3 AND VRW-4
	STORED PURGEWATER IN DRUMS LOCATED IN THE FORMER REMEDIATION
	SYSTEM COMPOUND AREA.
	CLOSED ALL WELLS AND MONUMENTS.
	DECON SAMPLING EQUIPMENT
	LOAD EQUIPMENT AND SUPPLIES.
1658	LEAVE SITE, TRAVEL AND COMPLETED FIELD NOTES.
1726	FINISHED WITH WORK.

BRUNSING ASSOCIATES, INC.
ENVIRONMENTAL DIVISION

WATER LEVELS

PROJECT: PACIFIC SUPPLY PROJECT NUMBER: 29

INSTRUMENT TYPE: HERON INTERFACE PROBE INITIALS: CDS DATE: 6-5-03

WELL NUMBER	DEPTH TO PRODUCT	DISTANCE TO WATER	TIME (24 HOUR)	EQUILIBRATED (CHECK FOR YES)	NOTES
MW-1	—	7.31	1233		
MW-2	—	6.71	1237		
MW-3	—	7.53	1245		
VRW-1	—	—	—	—	COULD NOT BE ACCESSED. UNDER BRICK PATIO.
VRW-2	—	6.87	1230		
VRW-3	—	7.40	1228		
VRW-4	—	7.00	1234		
VRW-5	—	7.33	1251		
VRW-6	—	7.21	1239		
VRW-7	—	7.47	1247		
VRW-8	—	7.42	1242		
VRW-9	—	7.66	1249		
MW-1	—	7.32	1258	✓	
MW-2	—	6.71	1303	✓	
MW-3	—	7.53	1310	✓	
VRW-1	—	—	—	—	NO ACCESS.
VRW-2	—	6.87	1256	✓	
VRW-3	—	7.41	1254	✓	
VRW-4	—	7.01	1300	✓	
VRW-5	—	7.33	1318	✓	
VRW-6	—	7.21	1305	✓	
VRW-7	—	7.47	1312	✓	
VRW-8	—	7.42	1308	✓	
VRW-9	—	7.67	1315	✓	

BRUNSING ASSOCIATES, INC.
ENVIRONMENTAL DIVISION
WELL SAMPLING

SHEET 3 OF 4

PROJECT: Pacific Supply PROJECT NUMBER: 29

WELL # MW-3 PRECIP. IN LAST 5 DAYS: — WIND ✓ DATE: 6-5-03

STARTING TIME: 1433 FINISHING TIME: 1503 INITIALS: CDS

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH: (15.86) 16.00	- D.T.W.	7.53	= H2O COLUMN:	8.47	X 0.5 =	4.24	GALLONS
4" WELL	DEPTH:	- D.T.W.		= H2O COLUMN:		X 2.0 =		

THEREFORE TOTAL PURGE GALLONS EQUALS 4

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
1438	1	7.17	3.86 ms	22.4	CLOUDY GREEN-BROWN, ORGANIC ODOR
1441	2.5	7.04	3.57 ms	21.8	TURBID GREEN-BROWN, ORGANIC ODOR, SANDY
1445	4	7.05	3.45 ms	21.5	SAME

SAMPLING: SAMPLE ANALYSIS: TPH-GAS | EPA 8021 | | | |

SAMPLE TIME: 1456 DID WELL GO DRY? NO

WATER LEVELS: TIME	D.T.W.
1503	8.30

NOTES:

BRUNSING ASSOCIATES, INC.
ENVIRONMENTAL DIVISION
WELL SAMPLING

SHEET 4 OF 4

PROJECT: Pacific Supply PROJECT NUMBER: 29

WELL # VRW-4 PRECIP. IN LAST 5 DAYS: — WIND ✓ DATE: 6-5-03

STARTING TIME: 1319 FINISHING TIME: 1432 INITIALS: CDS

CALCULATION OF PURGE VOLUME

2" WELL DEPTH: [ ] - D.T.W. [ ] = H20 COLUMN: [ ] X 0.5 = [ ]

4" WELL DEPTH: [20.00] - D.T.W. [7.01] = H20 COLUMN: [12.99] X 2.0 = [25.98]

THEREFORE TOTAL PURGE GALLONS EQUALS [26] GALLONS

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	NS CONDUCTIVITY	TEMP.	OBSERVATIONS
1327	1	6.65	1019	22.6	CLEAR BROWN, PHC ODOR, SEDIMENT
1336	13	6.85	2.67 mS	22.1	TURBID GREY-GREEN, PHC ODOR, SEDIMENT
1405	26	7.17	1592	21.3	SAME

SAMPLING: SAMPLE ANALYSIS: [TPH-GAS] [EPA 8021] [ ] [ ] [ ]

SAMPLE TIME: [1416] DID WELL GO DRY? [NO]

WATER LEVELS: TIME	D.T.W.	NOTES:
1432	14.08	SLOW RECOVERY

BRUNSING ASSOCIATES, INC.
ENVIRONMENTAL DIVISION

FIELD REPORT

JOB NO: 29
INITIAL: CDS
DATE: 6-6-03

PROJECT: PACIFIC SUPPLY
SUBJECT: GROUNDWATER SAMPLING
PROJECT PHASE NUMBER: 04
VEHICLE USED: Ford F-150

PAGE 1 OF 5

TOTAL MILEAGE:

TIME	DESCRIPTION OF WORK AND CONVERSATION RECORD:
0633	TO SITE.
0650	ARRIVE AT SITE. SET-UP FOR GROUNDWATER SAMPLING.
	PERFORMED SAMPLING AT WELLS VRW-6, VRW-7, VRW-8 AND VRW-9.
	STORED PURGEWATER IN DRUMS AT THE FORMER SYSTEM COMPOUND AREA.
	CLOSED ALL WELLS AND MONUMENTS.
	DECON SAMPLING EQUIPMENT
	LOAD EQUIPMENT AND SUPPLIES.
1318	LEAVE SITE.
1444	ARRIVE AT OFFICE. STORED SAMPLES AND COMPLETED FIELD NOTES.
1522	FINISHED WITH WORK.

BRUNSING ASSOCIATES, INC.
ENVIRONMENTAL DIVISION
WELL SAMPLING

PROJECT: PACIFIC SUPPLY PROJECT NUMBER: 29

WELL # VMW-6 PRECIP. IN LAST 5 DAYS: — WIND ✓ DATE: 6-6-03

STARTING TIME: 0846 FINISHING TIME: 1020 INITIALS: CDS

CALCULATION OF PURGE VOLUME

2" WELL DEPTH: [ ] - D.T.W. [ ] = H20 COLUMN: [ ] X 0.5 = [ ]

4" WELL DEPTH: [20.00] - D.T.W. [7.21] = H20 COLUMN: [12.79] X 2.0 = [25.58]

THEREFORE TOTAL PURGE GALLONS EQUALS [26] GALLONS

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	NS CONDUCTIVITY	TEMP.	OBSERVATIONS
0905	1	6.89	1236µS	19.3	CLEAR GREEN-BROWN, PHC ODOR, SEDIMENT
0913	13	6.89	1372	19.3	TURBID BLACK PHC ODOR, SHEEN, SEDIMENT
0945	26	7.15	1499	19.5	SAME

SAMPLING: SAMPLE ANALYSIS: [TPH-GAS] [EPA] [8021] [ ] [ ] [ ]

SAMPLE TIME: [0950] DID WELL GO DRY? [NO]

WATER LEVELS: TIME	D.T.W.
1007	9.75

NOTES:

SLOW RECOVERY

BRUNSING ASSOCIATES, INC.
ENVIRONMENTAL DIVISION
WELL SAMPLING

SHEET 3 OF 5

PROJECT: Pacific Supply PROJECT NUMBER: 29

WELL # VRW-7 PRECIP. IN LAST 5 DAYS: — WIND ✓ DATE: 6-6-03

STARTING TIME: 0658 FINISHING TIME: 0941 INITIALS: CDS

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH:		- D.T.W.		= H20 COLUMN:		X 0.5 =		GALLONS
4" WELL	DEPTH:	20.00	- D.T.W.	7.47	= H20 COLUMN:	12.53	X 2.0 =	25.06	

THEREFORE TOTAL PURGE GALLONS EQUALS 25

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
0710	1	7.01	4.04 ms	20.7	TURBID GREEN-BROWN, PHCODOR, SEDIMENT
0719	7	6.95	4.08 ms	20.6	TURBID GREY-BLACK, PHCODOR, SHEEN, SANDY
0727	15	7.22	3.52 ms	21.6	SAME

SAMPLING: SAMPLE ANALYSIS: TPH-6As | EPA 8021 | | | |

SAMPLE TIME: 0935 DID WELL GO DRY? YES

WATER LEVELS: TIME	D.T.W.
0727	18.81
0827	11.23
0927	9.67
0941	10.04

NOTES:

BRUNSING ASSOCIATES, INC.
ENVIRONMENTAL DIVISION
WELL SAMPLING

PROJECT: PACIFIC SUPPLY PROJECT NUMBER: 29.0

WELL # VAW-8 PRECIP. IN LAST 5 DAYS: — WIND ✓ DATE: 6-6-03

STARTING TIME: 1021 FINISHING TIME: 1148 INITIALS: CDS

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH:		- D.T.W.		= H20 COLUMN:		X 0.5 =		GALLONS
4" WELL	DEPTH:	20.00	- D.T.W.	7.42	= H20 COLUMN:	12.58	X 2.0 =	25.16	

THEREFORE TOTAL PURGE GALLONS EQUALS 25

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY (µS)	TEMP.	OBSERVATIONS
1034	1	6.93	1894	19.4	CLEAR YELLOW-BROWN, SLIGHT PITC ODOR
1045	13	6.86	1828	19.1	TURBID GREEN-BROWN, ORGANIC ODOR, SANDY
1106	25	6.87	1401	19.3	SAME

SAMPLING: SAMPLE ANALYSIS: TPH GAS | EPA | 8021

SAMPLE TIME: 1124 DID WELL GO DRY? NO

WATER LEVELS: TIME	D.T.W.
1133	7.45

NOTES:

BRUNSING ASSOCIATES, INC.
ENVIRONMENTAL DIVISION
WELL SAMPLING

SHEET 5 OF 5

PROJECT: PACIFIC SUPPLY PROJECT NUMBER: 29

WELL # VRW-9 PRECIP. IN LAST 5 DAYS: ✓ WIND ✓ DATE: 6-6-03

STARTING TIME: 0728 FINISHING TIME: 0845 INITIALS: CDS

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH:		- D.T.W.		= H20 COLUMN:		X 0.5 =	
4" WELL	DEPTH:	20.00	- D.T.W.	7.67	= H20 COLUMN:	12.33	X 2.0 =	24.66

THEREFORE TOTAL PURGE GALLONS EQUALS 25 GALLONS

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
0751	1	7.07	2.85 mS	20.1	TURBIO GREY-GREEN, ORGANIC ODOR, SANDY
0759	13	7.14	2.39 mS	20.4	TURBIO GREEN - BROWN, ORGANIC ODOR, SANDY, SEDIMENT
0824	25	7.19	1654 µS	20.8	SAME

SAMPLING: SAMPLE ANALYSIS: TPH-GAS | EPA 8021

SAMPLE TIME: 0831 DID WELL GO DRY? NO

WATER LEVELS:	
TIME	D.T.W.
0945	7.73

NOTES:

BRUNSING ASSOCIATES, INC.
ENVIRONMENTAL DIVISION

FIELD REPORT

JOB NO: 29
INITIAL: CDS
DATE: 6-9-03

PROJECT: PACIFIC SUPPLY
SUBJECT: GROUNDWATER SAMPLING
PROJECT PHASE NUMBER: 04
VEHICLE USED: Ford F-150

TOTAL MILEAGE:

TIME	DESCRIPTION OF WORK AND CONVERSATION RECORD
0432	LOAD EQUIPMENT AND SUPPLIES.
0455	TO SITE.
0609	ARRIVE AT SITE. SET-UP FOR GROUNDWATER SAMPLING.
	MEASURED TWO-ROUNDS OF DISTANCE TO WATER AT WELLS MW-1, MW-2,
	VRW-2, VRW-3 AND VRW-5.
	PERFORMED SAMPLING AT WELLS VRW-2, VRW-3 AND VRW-5.
	STORED PURGE WATER IN DRUMS AT THE FORMER SYSTEM COMPOUND AREA.
	CLOSED ALL WELLS AND MONUMENTS.
	DECON SAMPLING EQUIPMENT.
	LOAD EQUIPMENT AND SUPPLIES.
1238	LEAVE SITE. TRAVEL.
	LOGGED SAMPLES ON CHAIN OF CUSTODY AND COMPLETED FIELD NOTES.
1310	FINISHED WITH WORK

BRUNSING ASSOCIATES, INC.
ENVIRONMENTAL DIVISION

WATER LEVELS

SHEET 2 OF 5

PROJECT: PACIFIC SUPPLY PROJECT NUMBER: 29

INSTRUMENT TYPE: ET (WLP) INITIALS: CDS DATE: 6-9-03

WELL NUMBER	DEPTH TO PRODUCT	DISTANCE TO WATER	TIME (24 HOUR)	EQUILIBRATED (CHECK FOR YES)	NOTES
MW-1	—	7.30	0738		
MW-2	—	6.75	0740		
VRW-2	—	6.82	0737		
VRW-3	—	7.34	0733		
VRW-5	—	7.29	0735		
MW-1	—	7.30	0749	✓	
MW-2		6.75	0751	✓	
VRW-2	—	6.82	0747	✓	
VRW-3	—	7.34	0743	✓	
VRW-5	—	7.29	0745	✓	

BRUNSING ASSOCIATES, INC.
ENVIRONMENTAL DIVISION
WELL SAMPLING

SHEET 3 OF 5

PROJECT: PACIFIC SUPPLY PROJECT NUMBER: 29

WELL # VPW-2 PRECIP. IN LAST 5 DAYS: — WIND ✓ DATE: 6-9-03

STARTING TIME: 1033 FINISHING TIME: 1150 INITIALS: CPS

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH:		- D.T.W.		= H2O COLUMN:		X 0.5 =		GALLONS
4" WELL	DEPTH:	20.00	- D.T.W.	6.75	= H2O COLUMN:	13.25	X 2.0 =	26.50	

THEREFORE TOTAL PURGE GALLONS EQUALS 27

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
1050	1	6.80	925 µS	20.9	CLEAR YELLOW-BROWN, PHC ODOR
1059	14	6.93	1192	20.6	TURBIDITY-BLACK, PHC ODOR, SEDIMENT
1117	27	7.00	1116	20.4	SAME

SAMPLING: SAMPLE ANALYSIS: TPHmDAS | EPA | 8021 | | | |

SAMPLE TIME: 1127 DID WELL GO DRY? No

WATER LEVELS:	
TIME	D.T.W.
1135	7.69

NOTES:

BRUNSING ASSOCIATES, INC.
ENVIRONMENTAL DIVISION
WELL SAMPLING

SHEET 4 OF 5

PROJECT: PACIFIC SUPPLY PROJECT NUMBER: 29

WELL # VRW-3 PRECIP. IN LAST 5 DAYS: — WIND ✓ DATE: 6-9-03

STARTING TIME: 0752 FINISHING TIME: 1032 INITIALS: CDS

CALCULATION OF PURGE VOLUME

2" WELL DEPTH: [ ] - D.T.W.: [ ] = H20 COLUMN: [ ] X 0.5 = [ ]

4" WELL DEPTH: [20.00] - D.T.W. [7.34] = H20 COLUMN: [12.66] X 2.0 = [25.32]

THEREFORE TOTAL PURGE GALLONS EQUALS [25] GALLONS

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
0820	1	6.61	577 µS	18.8	CLEAR, ORGANIC ODOR, SEDIMENT
0831	13	6.77	1023	18.3	TUBIO GREEN BLACK, PHC ODOR, SHEEN, SEDIMENT
0843	20	7.01	951	18.3	SAME

SAMPLING: SAMPLE ANALYSIS: TPH-GAS | EPA 8021 | | | |

SAMPLE TIME: 1014 DID WELL GO DRY? YES

WATER LEVELS:	
TIME	D.T.W.
0844	18.66
0944	7.55
1020	7.63

NOTES:

DRY AT 20 GAL. PURGE

BRUNSING ASSOCIATES, INC.
ENVIRONMENTAL DIVISION
WELL SAMPLING

SHEET 5 OF 5

PROJECT: PACIFIC SUPPLY PROJECT NUMBER: 29

WELL # VRW-5 PRECIP. IN LAST 5 DAYS: — WIND ✓ DATE: 6-9-03

STARTING TIME: 0957 FINISHING TIME: 1010 INITIALS: CPS

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH:		- D.T.W.		= H20 COLUMN:		X 0.5 =	
4" WELL	DEPTH:	20.00	- D.T.W.	7.29	= H20 COLUMN:	12.71	X 2.0 =	25.42

THEREFORE TOTAL PURGE GALLONS EQUALS 25 GALLONS

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
0916	1	6.77	1150	19.0	CLEAR YELLOW-BROWN, PHC ODOR
0926	13	6.87	1342	18.9	TURBID GREY-BLACK, PHC ODOR, SEDIMENT, SHEEN
0948	25	6.83	1300	19.4	SAME

SAMPLING: SAMPLE ANALYSIS: TPH-GAS | EPA | 8021 | | | |

SAMPLE TIME: 0958 DID WELL GO DRY? NO

WATER LEVELS:	
TIME	D.T.W.
1010	7.42

NOTES:

BRUNSING ASSOCIATES, INC.
ENVIRONMENTAL DIVISION

FIELD REPORT

JOB NO: 29.016
INITIAL: CDS
DATE: 6-10-03

PROJECT: PACIFIC SUPPLY
SUBJECT: GROUNDWATER SAMPLING
PROJECT PHASE NUMBER: 04
VEHICLE USED: Ford F-150

TOTAL MILEAGE:

TIME	DESCRIPTION OF WORK AND CONVERSATION RECORD:
0634	TO SITE
0656	ARRIVE AT SITE. SET-UP FOR GROUNDWATER SAMPLING.
	PERFORMED SAMPLING AT WELLS MW-1 AND MW-2.
	LOCATED VRW-1, MEASURED TWO-ROUNDS OF DISTANCE TO WATER
	AND PERFORMED SAMPLING.
	STORED PURGEWATER IN DRUMS AT THE FORMER SYSTEM COMPOUND AREA.
	CLOSED ALL WELLS AND MONUMENTS. LEFT BRICKWORK AWAY FROM
	VRW-1 FOR ELEVATION SURVEY.
	DECON SAMPLING EQUIPMENT.
	LOAD EQUIPMENT AND SUPPLIES.
1424	LEAVE SITE.
1535	ARRIVE AT OFFICE. SUBMITTED ALL SAMPLES ON CHAIN OF CUSTODY
	FOR ANALYSIS.
	COMPLETED FIELD NOTES.
	UNLOAD EQUIPMENT AND SUPPLIES.
1641	FINISHED WITH WORK.

BRUNSING ASSOCIATES, INC.
ENVIRONMENTAL DIVISION
WELL SAMPLING

SHEET 2 OF 4

PROJECT: Pacific Supply PROJECT NUMBER: 29

WELL # MW-1 PRECIP. IN LAST 5 DAYS: — WIND ✓ DATE: 6-10-03

STARTING TIME: 0838 FINISHING TIME: 0922 INITIALS: CDS

CALCULATION OF PURGE VOLUME

2" WELL DEPTH: 19.00 - D.T.W. 7.30 = H20 COLUMN: 11.70 X 0.5 = 5.85

4" WELL DEPTH: - D.T.W. = H20 COLUMN: X 2.0 =

GALLONS

THEREFORE TOTAL PURGE GALLONS EQUALS 6

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	µS CONDUCTIVITY	TEMP.	OBSERVATIONS
0839	1	7.27	1453	17.6	TURBID GREY-BLACK, ORGANIC ODOR, SEDIMENT
0844	3	7.05	1014	17.8	SAME
0854	6	7.03	996	18.2	SAME

SAMPLING: SAMPLE ANALYSIS: TPH GAS | EPA 8021

SAMPLE TIME: 0905 DID WELL GO DRY? NO

WATER LEVELS:	
TIME	D.T.W.
0911	8.79

NOTES:

BRUNSING ASSOCIATES, INC.
ENVIRONMENTAL DIVISION
WELL SAMPLING

SHEET 3 OF 4

PROJECT: PACIFIC SUPPLY PROJECT NUMBER: 29

WELL # MW-2 PRECIP. IN LAST 5 DAYS: — WIND ✓ DATE: 6-10-03

STARTING TIME: 0712 FINISHING TIME: 0837 INITIALS: CDS

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH:		- D.T.W.		= H20 COLUMN:		X 0.5 =	
4" WELL	DEPTH:	20.00	- D.T.W.	6.75	= H20 COLUMN:	13.25	X 2.0 =	26.50

THEREFORE TOTAL PURGE GALLONS EQUALS 27 GALLONS

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	NS CONDUCTIVITY	TEMP.	OBSERVATIONS
0738	1	6.92	1501	17.7	CLEAR YELLOW-BROWN, ORGANIC ODOR
0747	14	6.88	1170	18.4	CLOUDY YELLOW-BROWN, PHC ODOR, SEDIMENT
0807	27	6.90	881	18.7	SAME

SAMPLING: SAMPLE ANALYSIS: TPH. GAS | EPA 8021

SAMPLE TIME: 0821 DID WELL GO DRY? No

WATER LEVELS:	
TIME	D.T.W.
0830	6.93

NOTES:

BRUNSING ASSOCIATES, INC.
ENVIRONMENTAL DIVISION
WELL SAMPLING

SHEET 4 OF 4

PROJECT: Pacific Supply PROJECT NUMBER: 29

WELL # VAW-1 PRECIP. IN LAST 5 DAYS: — WIND ✓ DATE: 6-10-03

STARTING TIME: 1100 FINISHING TIME: 1407 INITIALS: CDS

CALCULATION OF PURGE VOLUME

2" WELL	DEPTH:		- D.T.W.		= H20 COLUMN:		X 0.5 =	
4" WELL	DEPTH:	20.00	- D.T.W.	7.31	= H20 COLUMN:	12.69	X 2.0 =	25.38

THEREFORE TOTAL PURGE GALLONS EQUALS 25 GALLONS

FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	NS CONDUCTIVITY	TEMP.	OBSERVATIONS
1319	1	7.01	1418	20.4	CLEAR YELLOW-BROWN, PHCODOR, SEDIMENT
1329	13	6.95	1722	20.0	CLEAR GREY-BLACK, PHCODOR, SHEEN, SEDIMENT
1344	25	7.02	1813	19.9	TURBIO GREY-BLACK, PHCODOR, SHEEN, SEDIMENT

SAMPLING: SAMPLE ANALYSIS: TPH-GAS | EPA | 8021 | | | |

SAMPLE TIME: 1354 DID WELL GO DRY? NO

WATER LEVELS: TIME	D.T.W.	NOTES:
1254	7.31	1100 — 1252 : LOCATE VAW-1 REMOVE ANCILLARIES AND PUMP
1300	7.31	
1407	13.55	

APPENDIX B
Analytical Laboratory Report

Laboratory Report Project Overview

EDF 1.2a

Laboratory:	Bace Analytical, Windsor, CA
Lab Report Number:	4094
Project Name:	PACIFIC SUPPLY
Work Order Number:	29.016
Control Sheet Number:	NA

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run Sub
4094	MW-1	4094-1	W	CS	CATPH-G	SW5030B	06/10/2003	06/19/2003	06/19/2003	06192003	3
4094	MW-1	4094-1	W	CS	SW8021B	SW5030B	06/10/2003	06/19/2003	06/19/2003	06192003	3
4094	MW-2	4094-2	W	CS	CATPH-G	SW5030B	06/10/2003	06/19/2003	06/19/2003	06192003	5
4094	MW-2	4094-2	W	CS	SW8021B	SW5030B	06/10/2003	06/19/2003	06/19/2003	06192003	5
4094	MW-3	4094-3	W	CS	CATPH-G	SW5030B	06/05/2003	06/19/2003	06/19/2003	06192003	6
4094	MW-3	4094-3	W	CS	SW8021B	SW5030B	06/05/2003	06/19/2003	06/19/2003	06192003	6
4094	VRW-1	4094-4	W	CS	CATPH-G	SW5030B	06/10/2003	06/19/2003	06/19/2003	06192003	8
4094	VRW-1	4094-4	W	CS	SW8021B	SW5030B	06/10/2003	06/19/2003	06/19/2003	06192003	8
4094	VRW-2	4094-5	W	CS	CATPH-G	SW5030B	06/09/2003	06/19/2003	06/19/2003	06192003	17
4094	VRW-2	4094-5	W	CS	SW8021B	SW5030B	06/09/2003	06/19/2003	06/19/2003	06192003	17
4094	VRW-3	4094-6	W	CS	CATPH-G	SW5030B	06/09/2003	06/19/2003	06/19/2003	06192003	15
4094	VRW-3	4094-6	W	CS	SW8021B	SW5030B	06/09/2003	06/19/2003	06/19/2003	06192003	15
4094	VRW-4	4094-7	W	CS	CATPH-G	SW5030B	06/05/2003	06/19/2003	06/19/2003	06192003	10
4094	VRW-4	4094-7	W	CS	SW8021B	SW5030B	06/05/2003	06/19/2003	06/19/2003	06192003	10
4094	VRW-5	4094-8	W	CS	CATPH-G	SW5030B	06/09/2003	06/19/2003	06/19/2003	06192003	14
4094	VRW-5	4094-8	W	CS	SW8021B	SW5030B	06/09/2003	06/19/2003	06/19/2003	06192003	14
4094	VRW-6	4094-9	W	CS	CATPH-G	SW5030B	06/06/2003	06/19/2003	06/19/2003	06192003	13
4094	VRW-6	4094-9	W	CS	SW8021B	SW5030B	06/06/2003	06/19/2003	06/19/2003	06192003	13
4094	VRW-7	4094-10	W	CS	CATPH-G	SW5030B	06/06/2003	06/19/2003	06/19/2003	06192003	16
4094	VRW-7	4094-10	W	CS	SW8021B	SW5030B	06/06/200	06/19/200	06/19/200	06192003	16

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run Sub
							3	3	3		
4094	VRW-8	4094-11	W	CS	CATPH-G	SW5030B	06/06/200	06/19/200	06/19/200	06192003	12
							3	3	3		
4094	VRW-8	4094-11	W	CS	SW8021B	SW5030B	06/06/200	06/19/200	06/19/200	06192003	12
							3	3	3		
4094	VRW-9	4094-12	W	CS	CATPH-G	SW5030B	06/06/200	06/19/200	06/19/200	06192003	18
							3	3	3		
4094	VRW-9	4094-12	W	CS	SW8021B	SW5030B	06/06/200	06/19/200	06/19/200	06192003	18
							3	3	3		
		4094MB	W	LB1	CATPH-G	SW5030B	/ /	06/19/200	06/19/200	06192003	1
								3	3		
		4094MB	W	LB1	SW8021B	SW5030B	/ /	06/19/200	06/19/200	06192003	1
								3	3		
		4094MS	W	MS1	CATPH-G	SW5030B	/ /	06/19/200	06/19/200	06192003	21
								3	3		
		4094MS	W	MS1	SW8021B	SW5030B	/ /	06/19/200	06/19/200	06192003	19
								3	3		
		4094SD	W	SD1	CATPH-G	SW5030B	/ /	06/19/200	06/19/200	06192003	22
								3	3		
		4094SD	W	SD1	SW8021B	SW5030B	/ /	06/19/200	06/19/200	06192003	20
								3	3		

Bace Analytical, Windsor, CA

Lab Report No.: 4094 Date: 07/04/2003

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29.016	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	MW-1	Lab Samp ID:	4094-1
Descr/Location:	MW-1	Rec'd Date:	06/11/2003
Sample Date:	06/10/2003	Prep Date:	06/19/2003
Sample Time:	0905	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline	0.020	0.050	PQL		ND	MG/L	1

Approved by: _____ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29.016	Method:	CATPH-G
		Prep Meth:	SW5030B
Field ID:	MW-2	Lab Samp ID:	4094-2
Descr/Location:	MW-2	Rec'd Date:	06/11/2003
Sample Date:	06/10/2003	Prep Date:	06/19/2003
Sample Time:	0821	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline	0.020	0.050	PQL		1.6	MG/L	1

Approved by: _____ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29.016	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	MW-3	Lab Samp ID:	4094-3
Descr/Location:	MW-3	Rec'd Date:	06/11/2003
Sample Date:	06/05/2003	Prep Date:	06/19/2003
Sample Time:	1456	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline	0.020	0.050	PQL		ND	MG/L	1

Approved by: _____ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29.016	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	VRW-1	Lab Samp ID:	4094-4
Descr/Location:	VRW-1	Rec'd Date:	06/11/2003
Sample Date:	06/10/2003	Prep Date:	06/19/2003
Sample Time:	1354	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline	0.020	0.050	PQL		0.44	MG/L	1

Approved by: _____ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29.016	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	VRW-2	Lab Samp ID:	4094-5
Descr/Location:	VRW-2	Rec'd Date:	06/11/2003
Sample Date:	06/09/2003	Prep Date:	06/19/2003
Sample Time:	1127	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline	0.040	0.100	PQL		0.47	MG/L	2

Approved by: _____ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29.016	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	VRW-3	Lab Samp ID:	4094-6
Descr/Location:	VRW-3	Rec'd Date:	06/11/2003
Sample Date:	06/09/2003	Prep Date:	06/19/2003
Sample Time:	1014	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline	0.020	0.050	PQL		0.061	MG/L	1

Approved by: _____ Date: 7/5/03

Bace Analytical, Windsor, CA

Lab Report No.: 4094 Date: 07/04/2003 Page: 7

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29.016	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	VRW-4	Lab Samp ID:	4094-7
Descr/Location:	VRW-4	Rec'd Date:	06/11/2003
Sample Date:	06/05/2003	Prep Date:	06/19/2003
Sample Time:	1416	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline	0.200	0.500	PQL		2.2	MG/L	10

Approved by: _____ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29.016	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	VRW-5	Lab Samp ID:	4094-8
Descr/Location:	VRW-5	Rec'd Date:	06/11/2003
Sample Date:	06/09/2003	Prep Date:	06/19/2003
Sample Time:	0958	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline	0.200	0.500	PQL		0.93	MG/L	10

Approved by: _____ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29.016	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	VRW-6	Lab Samp ID:	4094-9
Descr/Location:	VRW-6	Rec'd Date:	06/11/2003
Sample Date:	06/06/2003	Prep Date:	06/19/2003
Sample Time:	0956	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline	0.020	0.050	PQL		ND	MG/L	1

Approved by: _____ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29.016	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	VRW-7	Lab Samp ID:	4094-10
Descr/Location:	VRW-7	Rec'd Date:	06/11/2003
Sample Date:	06/06/2003	Prep Date:	06/19/2003
Sample Time:	0935	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline	0.020	0.050	PQL		0.36	MG/L	1

Approved by: _____ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29.016	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	VRW-8	Lab Samp ID:	4094-11
Descr/Location:	VRW-8	Rec'd Date:	06/11/2003
Sample Date:	06/06/2003	Prep Date:	06/19/2003
Sample Time:	1124	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline	0.200	0.500	PQL		1.8	MG/L	10

Approved by: _____ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	CA LUFT Method for Gasoline Range Organics
Project No:	29.016	Method:	CATPH-G
		Prep Meth:	SW5030B

Field ID:	VRW-9	Lab Samp ID:	4094-12
Descr/Location:	VRW-9	Rec'd Date:	06/11/2003
Sample Date:	06/06/2003	Prep Date:	06/19/2003
Sample Time:	0831	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline	0.020	0.050	PQL		0.58	MG/L	1

Approved by: _____ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	Halogenated and Aromatic Volatiles by GC using
Project No:	29.016	Method:	SW8021B
		Prep Meth:	SW5030B

Field ID:	MW-1	Lab Samp ID:	4094-1
Descr/Location:	MW-1	Rec'd Date:	06/11/2003
Sample Date:	06/10/2003	Prep Date:	06/19/2003
Sample Time:	0905	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.13	0.50	PQL		ND	UG/L	1
Ethylbenzene	0.11	0.50	PQL		ND	UG/L	1
Toluene	0.12	0.50	PQL		ND	UG/L	1
Xylenes	0.26	0.50	PQL		ND	UG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		75-125	SMSA		102%		1

Approved by: _____ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	Halogenated and Aromatic Volatiles by GC using
Project No:	29.016	Method:	SW8021B
		Prep Meth:	SW5030B

Field ID:	MW-2	Lab Samp ID:	4094-2
Descr/Location:	MW-2	Rec'd Date:	06/11/2003
Sample Date:	06/10/2003	Prep Date:	06/19/2003
Sample Time:	0821	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.13	0.50	PQL		52	UG/L	1
Ethylbenzene	0.11	0.50	PQL		23	UG/L	1
Toluene	0.12	0.50	PQL		32	UG/L	1
Xylenes	0.26	0.50	PQL		9.1	UG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		75-125	SMSA		117%		1

Approved by: _____ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	Halogenated and Aromatic Volatiles by GC using
Project No:	29.016	Method:	SW8021B
		Prep Meth:	SW5030B

Field ID:	MW-3	Lab Samp ID:	4094-3
Descr/Location:	MW-3	Rec'd Date:	06/11/2003
Sample Date:	06/05/2003	Prep Date:	06/19/2003
Sample Time:	1456	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.13	0.50	PQL		ND	UG/L	1
Ethylbenzene	0.11	0.50	PQL		ND	UG/L	1
Toluene	0.12	0.50	PQL		ND	UG/L	1
Xylenes	0.26	0.50	PQL		ND	UG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		75-125	SMSA		102%		1

Approved by: _____ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	Halogenated and Aromatic Volatiles by GC using
Project No:	29.016	Method:	SW8021B
		Prep Meth:	SW5030B

Field ID:	VRW-1	Lab Samp ID:	4094-4
Descr/Location:	VRW-1	Rec'd Date:	06/11/2003
Sample Date:	06/10/2003	Prep Date:	06/19/2003
Sample Time:	1354	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.13	0.50	PQL		5.9	UG/L	1
Ethylbenzene	0.11	0.50	PQL		ND	UG/L	1
Toluene	0.12	0.50	PQL		ND	UG/L	1
Xylenes	0.26	0.50	PQL		1.9	UG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		75-125	SMSA		105%		1

Approved by: _____ Date: 7/15/03

Project Name:	PACIFIC SUPPLY	Analysis:	Halogenated and Aromatic Volatiles by GC using
Project No:	29.016	Method:	SW8021B
		Prep Meth:	SW5030B

Field ID:	VRW-2	Lab Samp ID:	4094-5
Descr/Location:	VRW-2	Rec'd Date:	06/11/2003
Sample Date:	06/09/2003	Prep Date:	06/19/2003
Sample Time:	1127	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.26	1.0	PQL		38	UG/L	2
Ethylbenzene	0.22	1.0	PQL		ND	UG/L	2
Toluene	0.20	1.0	PQL		28	UG/L	2
Xylenes	0.50	1.0	PQL		ND	UG/L	2
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		75-125	SMSA		91%		1

Approved by: _____ Date: 7/3/03

Project Name:	PACIFIC SUPPLY	Analysis:	Halogenated and Aromatic Volatiles by GC using
Project No:	29.016	Method:	SW8021B
		Prep Meth:	SW5030B

Field ID:	VRW-3	Lab Samp ID:	4094-6
Descr/Location:	VRW-3	Rec'd Date:	06/11/2003
Sample Date:	06/09/2003	Prep Date:	06/19/2003
Sample Time:	1014	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.13	0.50	PQL		4.8	UG/L	1
Ethylbenzene	0.11	0.50	PQL		ND	UG/L	1
Toluene	0.12	0.50	PQL		ND	UG/L	1
Xylenes	0.26	0.50	PQL		ND	UG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		75-125	SMSA		105%		1

Approved by: _____ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	Halogenated and Aromatic Volatiles by GC using
Project No:	29.016	Method:	SW8021B
		Prep Meth:	SW5030B

Field ID:	VRW-4	Lab Samp ID:	4094-7
Descr/Location:	VRW-4	Rec'd Date:	06/11/2003
Sample Date:	06/05/2003	Prep Date:	06/19/2003
Sample Time:	1416	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	1.3	5.0	PQL		1200.	UG/L	10
Ethylbenzene	1.1	5.0	PQL		12.	UG/L	10
Toluene	1.0	5.0	PQL		100.	UG/L	10
Xylenes	2.5	5.0	PQL		89.	UG/L	10
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		75-125	SMSA		120%		1

Approved by: _____ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	Halogenated and Aromatic Volatiles by GC using
Project No:	29.016	Method:	SW8021B
		Prep Meth:	SW5030B

Field ID:	VRW-5	Lab Samp ID:	4094-8
Descr/Location:	VRW-5	Rec'd Date:	06/11/2003
Sample Date:	06/09/2003	Prep Date:	06/19/2003
Sample Time:	0958	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.26	1.0	PQL		90.	UG/L	2
Ethylbenzene	0.22	1.0	PQL		ND	UG/L	2
Toluene	0.20	1.0	PQL		14.	UG/L	2
Xylenes	0.50	1.0	PQL		16.	UG/L	2
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		75-125	SMSA		105%		1

Approved by: _____ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	Halogenated and Aromatic Volatiles by GC using
Project No:	29.016	Method:	SW8021B
		Prep Meth:	SW5030B

Field ID:	VRW-6	Lab Samp ID:	4094-9
Descr/Location:	VRW-6	Rec'd Date:	06/11/2003
Sample Date:	06/06/2003	Prep Date:	06/19/2003
Sample Time:	0956	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.13	0.50	PQL		ND	UG/L	1
Ethylbenzene	0.11	0.50	PQL		ND	UG/L	1
Toluene	0.12	0.50	PQL		ND	UG/L	1
Xylenes	0.26	0.50	PQL		ND	UG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		75-125	SMSA		95%		1

Approved by: WRR Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	Halogenated and Aromatic Volatiles by GC using
Project No:	29.016	Method:	SW8021B
		Prep Meth:	SW5030B

Field ID:	VRW-7	Lab Samp ID:	4094-10
Descr/Location:	VRW-7	Rec'd Date:	06/11/2003
Sample Date:	06/06/2003	Prep Date:	06/19/2003
Sample Time:	0935	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.13	0.50	PQL		19.	UG/L	1
Ethylbenzene	0.11	0.50	PQL		ND	UG/L	1
Toluene	0.12	0.50	PQL		1.3	UG/L	1
Xylenes	0.26	0.50	PQL		2.2	UG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		75-125	SMSA		94%		1

Approved by: _____ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	Halogenated and Aromatic Volatiles by GC using
Project No:	29.016	Method:	SW8021B
		Prep Meth:	SW5030B

Field ID:	VRW-8	Lab Samp ID:	4094-11
Descr/Location:	VRW-8	Rec'd Date:	06/11/2003
Sample Date:	06/06/2003	Prep Date:	06/19/2003
Sample Time:	1124	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	1.3	5.0	PQL		70.	UG/L	10
Ethylbenzene	1.1	5.0	PQL		11.	UG/L	10
Toluene	1.0	5.0	PQL		10.	UG/L	10
Xylenes	2.5	5.0	PQL		61	UG/L	10
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		75-125	SMSA		95%		1

Approved by: WHQ Date: 7/5/03

Project Name:	PACIFIC SUPPLY	Analysis:	Halogenated and Aromatic Volatiles by GC using
Project No:	29.016	Method:	SW8021B
		Prep Meth:	SW5030B

Field ID:	VRW-9	Lab Samp ID:	4094-12
Descr/Location:	VRW-9	Rec'd Date:	06/11/2003
Sample Date:	06/06/2003	Prep Date:	06/19/2003
Sample Time:	0831	Analysis Date:	06/19/2003
Matrix:	Water	QC Batch:	06192003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.13	0.50	PQL		10.	UG/L	1
Ethylbenzene	0.11	0.50	PQL		ND	UG/L	1
Toluene	0.12	0.50	PQL		4.4	UG/L	1
Xylenes	0.26	0.50	PQL		4.9	UG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		75-125	SMSA		120%		1

Approved by: [signature] Date: 7/5/03

QA/QC Report
Method Blank Summary

Bace Analytical, Windsor, CA

Lab Report No.: 4094 Date: 07/04/2003

QC Batch:	06192003	Analysis:	CA LUFT Method for Gasoline Range
Matrix:	Water	Method:	CATPH-G
Lab Samp ID:	4094MB	Prep Meth:	SW5030B
Analysis Date:	06/19/2003	Prep Date:	06/19/2003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline	0.020	0.050	PQL		ND	MG/L	1

QA/QC Report
Method Blank Summary

Bace Analytical, Windsor, CA

Lab Report No.: 4094 Date: 07/04/2003

QC Batch:	06192003	Analysis:	Halogenated and Aromatic Volatiles by GC
Matrix:	Water	Method:	SW8021B
Lab Samp ID:	4094MB	Prep Meth:	SW5030B
Analysis Date:	06/19/2003	Prep Date:	06/19/2003
Basis:	Not Filtered	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Benzene	0.13	0.50	PQL		ND	UG/L	1
Ethylbenzene	0.11	0.50	PQL		ND	UG/L	1
Toluene	0.10	0.50	PQL		ND	UG/L	1
Xylenes	0.25	0.50	PQL		ND	UG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Trifluorotoluene		75-125	SMSA		99%		1

QA/QC Report
Matrix Spike/Duplicate Matrix Spike Summary

Bace Analytical, Windsor, CA

Lab Report No.: 4094 Date: 07/04/2003

QC Batch: 06192003
Matrix: Water
Lab Samp ID: 4094MS
Basis: Not Filtered

Project Name: PACIFIC SUPPLY
Project No.: 29.016
Field ID: MW-1
Lab Ref ID: 4094-1

Analyte	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Units	% Recoveries MS	% Recoveries DMS	% Recoveries RPD	Acceptance Criteria % Rec		Acceptance Criteria RPD
Gasoline	CATPH-G	1.00	1.00	ND	1.14	1.02	MG/L	114	102	11	130-70	MSA	20MSP
Benzene	SW8021B	40.0	40.0	ND	41.9	37.9	UG/L	105	94.8	10	125-75	MSA	20MSP
Ethylbenzene	SW8021B	40.0	40.0	ND	40.6	36.6	UG/L	102	91.5	11	125-75	MSA	20MSP
Toluene	SW8021B	40.0	40.0	ND	35.5	36.6	UG/L	88.8	91.5	3.0	125-75	MSA	20MSP
Xylenes	SW8021B	120.	120.	ND	122.	118.	UG/L	102	98.3	3.7	125-75	MSA	20MSP
Trifluorotoluene	SW8021B	100.	100.	102.	98.	93.	PERCENT	98.0	93.0	5.2	125-75	SMSA	20SMSP

Chain-of Custody Form

Project #	Project Name				Analysis			C.O.C. No. 10486
29.016	PACIFIC SUPPLY							
L.P. No.	Sampler's Signature: Chris Scott							Remarks:
Date Sampled	Sample I.D.	Time (24 Hour)	Sample Type	No. of Containers	TPH-GAS	BTEX (8021)		
6-10-03	MW-1	0905	WATER	3	X	X		4094-1
6-10-03	MW-2	0821			X	X		-2
6-5-03	MW-3	1456			X	X		-3
6-10-03	VRW-1	1354			X	X		-4
6-9-03	VRW-2	1127			X	X		-5
6-9-03	VRW-3	1014			X	X		-6
6-5-03	VRW-4	1416			X	X		-7
6-9-03	VRW-5	0958			X	X		-8
6-6-03	VRW-6	0956			X	X		-9
6-6-03	VRW-7	0935			X	X		-10
6-6-03	VRW-8	1124			X	X		-11
6-6-03	VRW-9	0831			X	X		-12

Laboratory: BAFS

Preservation: A - HCL: B - H2SO4: C - NaOH: D - HNO3: E - Ice: F - (specify)

Relinquished by: (signed) Chris Scott	Date/Time 6/10/03 1620	Received by: (signed)	Remarks: STANDARD TAT
Relinquished by: (signed)	Date/Time	Received by: (signed)	ATTN. MICHELLE FLOYD-FREDERICK
Relinquished by: (signed)	Date/Time 6/11/03 85	Received for Laboratory by: (signed)	

Brunsing Associates, Inc.
P.O. Box 588
5803 Skylane Blvd.
Windsor, CA 95492
(707) 838-3027
(707) 838-4420 fax

APPENDIX C
Historical Boring Logs

BRUNSING ASSOCIATES
Consulting Engineers

Project Name **PACIFIC SUPPLY**

Project No. **029**

Boring Location **MW-1 1735 24th Street, Oakland**

Surface Elevation **9.11 feet** Driller **ASE** Date **9/13/88**

Depth	SOIL DESCRIPTION AND REMARKS	Lithology	U.S.C.S Soil Type	qu TSF	Contact Depth	SAMPLE No.	SAMPLE Type	SAMPLE Interval From	SAMPLE Interval To	BLOW COUNT 0-6	BLOW COUNT 6-12	BLOW COUNT 12-18	Recovery In Inches	Piezometer
	asphalt first 3 inches base aggregate													
	green loose silty sand with abundant quartz grains; moist; marsh gas odor?					1	SS	3.0	4.5				18	
5			SW			2	SS	5.0	6.5	1	1	1	12	
	green soft clay; very plastic; moist; strong SO4 odor		CL		6.0	3	SS	6.5	8.0	1	1	1	18	
	black soft silty clay; very moist to wet, very abundant grass, etc.		CL		7.5									
10	green, soft clay; very plastic, very moist abundant grass, clams, etc.		CL		8.5	4	SS	10.0	11.5	2	3	1	18	
15	brown-black; very soft, very plastic clay; very moist; abundant grass, roots, clamshells, etc. strong SO4 odor.				15.0	5	SS	15.0	16.5	2	3	3	18	
20	Bottom of Boring at 20 feet													
25														
30														
35														

Field Log of Boring No. **MW-1** By: **G. Eiche** Page **1** of **1**

BRUNSING ASSOCIATES
Consulting Engineers

Project Name **PACIFIC SUPPLY**

Project No. **029**

Boring Location **MW-2** **1735 24th Street, Oakland**

Surface Elevation **8.14 feet** Driller **ASE** Date **9/13/88**

Depth	SOIL DESCRIPTION AND REMARKS	Lithology	U.S.C.S Soil Type	qu TSF	Contact Depth
	asphalt first 3 inches				
	green loose silty sand; predominantly quartz, well-rounded, well-sorted grains. Heavy "marsh gas" odor		SW		
5	light green, very pastic soft clay; abundant roots and miscellaneous organic material; very strong SO4 odor		CL		6.0
	black soft silty clay; very plastic; very wet abundant debris: glass fragments, roots, etc.; v. strong SO4 odor		CL		7.5
10	green very plastic soft clay; wet; abundant clamshells, grasses, roots, etc. very strong SO4 odor		CL		9.5 to 13.5
15					
	brown very plastic soft clay; very moist; very abundant grassy material; strong SO4 odor		CL		18.5
20	Bottom of Boring at 20 feet				
25					
30					
35					

SAMPLE No.	SAMPLE Type	SAMPLE Interval From	SAMPLE Interval To	BLOW COUNT 0 to 6	BLOW COUNT 6 to 12	BLOW COUNT 12 to 18	Recovery In Inches	Piezometer
1	SS	3.0	4.5	2	3	2	14	
2	SS	5.0	6.5	1	2	1	18	
3	SS	6.5	8.0				18	
4	SS	8.0	9.5	3	3	1	4	
5	SS	13.5	15.0	1	1	1	18	
6	SS	18.5	20.0	1	1	1	18	

Field Log of Boring No. **MW-2** By: **G. Eiche** Page **1** of **1**

BRUNSING ASSOCIATES
Consulting Engineers

Project Name **PACIFIC SUPPLY**

Project No. **029**

Boring Location **MW-3 1735 24th Street, Oakland**

Surface Elevation **9.49 feet** Driller **ASE** Date **9/13/88**

Depth	SOIL DESCRIPTION AND REMARKS	Lithology	U.S.C.S Soil Type	qu TSF	Contact Depth	SAMPLE No.	SAMPLE Type	SAMPLE Interval From	SAMPLE Interval To	BLOW COUNT 0	BLOW COUNT 6	BLOW COUNT 12	Recovery In Inches	Piezometer
	asphalt first 3 inches													
						1	SS	3.0	4.5				12	
	green, loose sand; moist; some organic material (i.e. roots).		SW											
5	predominantly quartz, well-rounded grains													
						2	SS	6.5	8.0				18	
	black, soft silty clay; very moist; strong hydrocarbon odor; extreme abundant grasses, leaves, etc. - Major fraction = organic debris.		CL			3	SS	8.0	9.5				18	
	No hydrocarbon odor detected at greater than 9.0 feet							9.5	11.0				18	
10														
						4	SS	14.5	16.0				18	
	green soft, very plastic clay; very moist; abundant clam shells, grasses, roots.		CL		14.5									
15														
20	Bottom of Boring at 20 feet													
25														
30														
35														

Field Log of Boring No. **MW-3** By: **G. Eiche** Page **1** of **1**

BRUNSING ASSOCIATES
Consulting Engineers

Project Name **PACIFIC SUPPLY**

Project No. **029**

Boring Location **MW-4 1735 24th Street, Oakland**

Surface Elevation **9.30 feet** Driller **ASE** Date **9/14/88**

Depth	SOIL DESCRIPTION AND REMARKS	Lithology	U.S.C.S Soil Type	qu TSF	Contact Depth	SAMPLE No.	SAMPLE Type	SAMPLE Interval From	SAMPLE Interval To	BLOW COUNT 0	BLOW COUNT 6	BLOW COUNT 12	Recovery In Inches	Piezometer
	3" asphalt cover													
5	green, fine to medium grained, well-sorted sand; moist; abundant quartz; well-rounded; green color the result of chlorite? NO ODOR		SW			1	SS	4.0	5.5	1	1	2	12	
	dark brown/black silty sandy clay; wet; very abundant organic debris (i.e. peachpit?, leaves, grass, etc.). NO ODOR		CL			2	SS	7.0	8.5	2	1	1	4	
10	dark brown/black extremely organic silt? (resembles spahnum moss, i.e. marsh deposit?). no odor wet		Pt			3	SS	9.5	11.0	1	2	1	4	
15	light green, soft clay; very plastic, wet; abundant organic debris - clam shells, grass, etc. SO4 odor.		CL			4	SS	14.5	16.0	1	3	2	18	
20	black soft clay; very plastic; wet, abundant grass. SO4 odor.		CL			5	SS	19.5	21.0				18	
	Bottom of Boring at 21.0 feet													
25														
30														
35														

Field Log of Boring No. **MW-4** By: **Greg Eiche** Page **1** of **1**

BRUNSING ASSOCIATES
Consulting Engineers

Project Name **PACIFIC SUPPLY**

Project No. **029**

Boring Location **MW-5 1735 24th Street, Oakland**

Surface Elevation **9.31 feet** Driller **ASE** Date **9/14/88**

Depth	SOIL DESCRIPTION AND REMARKS	Lithology	U.S.C.S Soil Type	qu TSF	Contact Depth	SAMPLE No.	SAMPLE Type	SAMPLE Interval From	SAMPLE Interval To	BLOW COUNT 0 to 6	BLOW COUNT 6 to 12	BLOW COUNT 12 to 18	Recovery In Inches	Piezometer
	3" asphalt cover													
5	highly variable fill and base aggregate: sand, gravel, clay... some organic debris					1	SS	4.0	5.5	1	1	3	12	
						2	SS	6.5	8.0	1	1	1	12	
	dark brown/black silt with very abundant organic material; wood, clamshells, grass; very wet; no odor		CL			3	SS	8.0	9.5	1	1	1	0	
10														
15	black-gray clay; very plastic, very wet abundant organic debris (grass, shells, etc.)		CL			4	SS	14.5	16.0	1	1	1	18	
	as above					5	SS	19.5	21				18	
20	Bottom of boring at 21 feet		CL											
25														
30														
35														

Field Log of Boring No. **MW-5** By: **G. Eiche** Page **1** of **1**

BRUNSING ASSOCIATES, INC.

Project Name: PACIFIC SUPPLY COMPANY
1735 24TH STREET, OAKLAND, CALIFORNIA

Project No.: 029.2

Boring Location: MW-6; Yellow Cab Co. Driveway, Willow Street

Surface Elevation: 6.13 feet Driller: Aqua Science Engineers Date: December 19, 1989

Depth	SOIL DESCRIPTION AND REMARKS	Lithology	U.S.C.S Soil Type	qu TSF	Contact Depth	SAMPLE No.	SAMPLE Type	SAMPLE Interval From	SAMPLE Interval To	BLOW COUNT 0 to 6	BLOW COUNT 6 to 12	BLOW COUNT 12 to 18	Recovery In Inches	Piezometer
	Asphalt													
	Black/green/brown/grey mottled soft clayey sand and sandy clay; abundant brick, glass, and organic debris; moist; oily odor		SC	< 0.5		1	ss	2.0	3.5	2	2	2	4	
5.0	As above, but saturated with abundant water and oily substance; heavy hydrocarbon or solvent odor.		SC	< 0.5		2	ss	4.5	6.0	2	2	2	8	
	Black clayey slurry; very abundant oily substance; heavy has or solvent odor; abundant debris	?				3	ss	6.0	7.5	1	1	1	2	
10.0	Grey/green soft clayey silt; trace organic material; Hydrogen sulfide odor	?	ML	< 0.5		4	ss	10.0	11.5	2	3	3	18	
15.0	Grey/green/brpwm spft c;aueu so;f abundant mollusc fragments; hydrogen sulfide odor		ML	< 0.5		5	ss	15.0	16.5	1	1	1	18	
20.0	Bottom of boring @ 17.0 ft.													

Sampled collected for chemical analysis

MW-6 / 3.5 ft.
MW-6 / 5..0 ft.
MW-6 / 5.5 ft.

Field Log of Boring No. MW-6 By: Greg Eiche Page 1 of 1

BRUNSING ASSOCIATES, INC.

Project Name: PACIFIC SUPPLY COMPANY
1735 24TH STREET, OAKLAND, CALIFORNIA

Project No. 029.2

Boring Location: MW-7; C & L Trucking, Inc. Driveway, 24th Street

Surface Elevation: 5.03 feet | Driller: Aqua Science Engineers | Date: December 19, 1989

Depth	SOIL DESCRIPTION AND REMARKS	Lithology	U.S.C.S Soil Type	qu TSF	Contact Depth	SAMPLE No.	SAMPLE Type	SAMPLE Interval From	SAMPLE Interval To	BLOW COUNT 0–6	BLOW COUNT 6–12	BLOW COUNT 12–18	Recovery In Inches	Piezometer
	Asphalt													
	Green slightly dense quartz-rich sand interfingered with thin veins of black, highly organic clayey material; moist; no odor		SC			1	ss	2.0	3.5	7	7	6	12	
5.0	Black/grey mottled soft clay; highly organic; abundant grasses and roots; hydrogen sulfide odor; wet		CL	< 0.5		2	ss	4.5	6.0	2	2	2	18	
10.0	Grey/green soft clayey silt; some organic matter; grasses and roots; wet		ML	< 0.5		3	ss	10.0	11.5	2	5	7	18	
15.0	Grey/black stiff clayey silt; some organic matter (grasses and roots); trace of mollusc shells; moist; hydrogen sulfide odor		ML	3.0		4	ss	15.0	16.5	7	7	8	18	
20.0	Tan/brown stiff silty clay; no organic material; mottled white/green/tan zones; moist; no odor		CL	3.5		5	ss	18.0	19.5	5	7	9	18	
	Bottom of boring @ 20.0 ft.													

Sampled collected for chemical analysis

MW-7 / 3.5 ft.
MW-7 / 5.5 ft.
MW-7 / 11.5 ft.
MW-7 / 16.5 ft.

Field Log of Boring No. MW-7 By: Greg Eiche Page 1 of 1

BRUNSING ASSOCIATES, INC.

Project Name: Pacific Supply Company

Project No.: 29.6

Boring Location: 65' northing and 185' westing of the north and east property lines

Surface Elevation: ~10 feet Driller: Bayland Drilling Date: 6/6/92

Depth	SOIL DESCRIPTION AND REMARKS	Lithology	U.S.C.S Soil Type	qu TSF	Contact Depth	SAMPLE No.	SAMPLE Type	SAMPLE Interval From	SAMPLE Interval To	BLOW COUNT 0–6	BLOW COUNT 6–12	BLOW COUNT 12–18	BLOW COUNT 18–24	Recovery In Inches
0'0"	Asphalt surface cover				0'									
0'6"	Base rock													
1'0"	Medium stiff green clay, moist, slight petroleum odor		CL		1'	1	SS	1'0"	1'9"	6	6	6	-	9
					2'									
2'6"	Medium stiff green clay, moist, slight petroleum odor					2	SS	2'6"	3'6"	4	5	7	-	12
					3'									
4'0"	Medium stiff green clay, moist, slight petroleum odor				4'	3	SS	4'6"	5'0"	5	16	14	-	16
5'0"	Very stiff black clay, moist, slight petroleum odor				5'									
5'6"	Loose green silty sand, moist, slight petroleum odor		SM			4	SS	5'6"	6'6"	5	4	5	-	12
					6'									
7'0"	Loose green silty sand, wet, slight petroleum odor				7'									
					▼ 8'	5	SS	8'0"	8'6"	2	2	2	-	2
8'4"	Soft black and green mottled clay, saturated, strong petroleum odor		CL		8'3"									
8'6"	Bottom of Boring				9'									
	Note: Converted into Vapor Extraction Well VEW-1													

Field Log of Boring No.: VEW-1 By: Jeff Stivers Page 1 of 1

BACE Environmental
a Division of
Brunsing Associates, Inc.

Project Name: Pacific Supply Company
1735 24th Street, Oakland, Ca

Project No.: 029.9

Boring Location: 21' North and 13' West of NW corner of driveway

Surface Elevation: 5 feet MSL (approx.) Driller: Precision Sampling Date: 3-5-93

Depth	SOIL DESCRIPTION AND REMARKS	Lithology	U.S.C.S Soil Type	qu TSF	Contact Depth	SAMPLE No.	SAMPLE Type	SAMPLE Interval From	SAMPLE Interval To	BLOW COUNT 0–6	BLOW COUNT 6–12	BLOW COUNT 12–18	Recovery In Inches	Piezometer
0'	Asphalt													
9"	Soft grey fine sand with gravel. Dry.		SP		1									
2'	Grades to medium stiff grey silty clay. Dry.		CL		2	1	CR	2.5	3.0	—	—	—		
3'	Very soft black organic clay. Moist to wet.		OH		3									
3.5'	No Recovery				▼ 4									
					5									
					6									
7'	Bottom of Boring				7									
					8									
					9									
	Note: Boring continuously cored with a driven double wall sampler													

Field Log of Boring No. B-1 By: Joel Bruxvoort Page 1 of 1

BACE Environmental
a Division of
Brunsing Associates, Inc.

Project Name: Pacific Supply Company
1735 24th Street, Oakland, Ca

Project No.: 029.9

Boring Location: 21.5' North and 42.5' East of NW corner of driveway

Surface Elevation: 5 feet MSL (approx.) Driller: Precision Sampling Date: 3-5-93

Depth	SOIL DESCRIPTION AND REMARKS	Lithology	U.S.C.S Soil Type	qu TSF	Contact Depth	SAMPLE No.	SAMPLE Type	SAMPLE Interval From	SAMPLE Interval To	BLOW COUNT 0	BLOW COUNT 6	BLOW COUNT 12	Recovery In Inches	Piezometer
0'	Asphalt													
9"	Soft to medium stiff grey silty clay with some gravel. Dry.		CL		1									
2'	Very soft black organic clay. Moist.		OH		2									
3'	No Recovery				3									
					▼4 =									
5.5'	Soft grey clay. Moist.		CL		5									
					6	1	CR	6.0	6.5	—	—	—		
7'	Bottom of Boring				7									
					8									
					9									

Note: Boring continuously cored with a driven double wall sampler

Field Log of Boring No. B-2 By: Joel Bruxvoort Page 1 of 1

BACE Environmental
a Division of
Brunsing Associates, Inc.

Project Name: Pacific Supply Company
1735 24th Street, Oakland, Ca

Project No.: 029.9

Boring Location: 21' North and 88' East of NW corner of driveway

Surface Elevation: 5 feet MSL (approx.) Driller: Precision Sampling Date: 3-5-93

Depth	SOIL DESCRIPTION AND REMARKS	Lithology	U.S.C.S Soil Type	qu TSF	Contact Depth	SAMPLE No.	SAMPLE Type	SAMPLE Interval From	SAMPLE Interval To	BLOW COUNT 0	BLOW COUNT 6	BLOW COUNT 12	Recovery In Inches	Piezometer
0'	Asphalt													
6"	Soft to medium stiff dark grey silty clay with sand. Slightly moist. Gravel layer observed.		CL		1									
2'	Medium stiff dark grey clay and organic material. Slightly moist.		OH		2									
3'	Very soft to soft grey clay. Moist.		CL		3									
4'	No Recovery				4									
					5 ▼									
					6									
6.5'	Soft dark grey to black clay and organic material. Wet.		OH											
7'	No Recovery				7									
8'	Soft to Medium stiff grey clay. Moist.		CL		8	1	CR	8.0	8.5	—	—	—		
9'	Bottom of Boring Note: Boring continuously cored with a driven double wall sampler				9									

Field Log of Boring No. B-3 By: Joel Bruxvoort Page 1 of 1

BACE Environmental
a Division of
Brunsing Associates, Inc.

Project Name: Pacific Supply Company
1735 24th Street, Oakland, Ca

Project No.: 029.9

Boring Location: 27' South and 93' East of NW corner of driveway

Surface Elevation: 8 feet MSL (approx.) Driller: Precision Sampling Date: 3-5-93

Depth	SOIL DESCRIPTION AND REMARKS	Lithology	U.S.C.S Soil Type	qu TSF	Contact Depth	SAMPLE No.	SAMPLE Type	SAMPLE Interval From	SAMPLE Interval To	BLOW COUNT 0 to 6	BLOW COUNT 6 to 12	BLOW COUNT 12 to 18	Recovery In Inches	Piezometer
0'	Asphalt													
6"	Medium stiff silty clay with trace gravel (base rock). Dry		CL		1									
2'	No Recovery. Gravel blocked sampler.				2									
					3									
4'	Medium stiff to soft grey-green clay. Gravel at top of core. Mottled patches of silt and sand. Slightly moist.		CL		4									
5'	Loose to medium dense green fine sand with HC odor (1,000 ppm PID). Slightly Moist.		SP		5									
5.5'	No Recovery				6									
7'	Soft grey-green clay with black silt and organic material at bottom of core. Slightly moist.		CL		7	1	CR	7.0	7.5	—	—	—		
8'	No Recovery				▼ 8									
					9									
10'	Bottom of Boring													

Note: Boring continuously cored with a driven double wall sampler

Field Log of Boring No. B-4 By: Joel Bruxvoort Page 1 of 1

BACE Environmental
a Division of
Brunsing Associates, Inc.

Project Name: Pacific Supply Company
1735 24th Street, Oakland, Ca

Project No.: 029.9

Boring Location: 99' South and 32' East of NW corner of driveway

Surface Elevation: 8 feet MSL (approx.) Driller: Precision Sampling Date: 3-5-93

Depth	SOIL DESCRIPTION AND REMARKS	Lithology	U.S.C.S Soil Type	qu TSF	Contact Depth	SAMPLE No.	SAMPLE Type	SAMPLE Interval From	SAMPLE Interval To	BLOW COUNT 0	BLOW COUNT 6	BLOW COUNT 12	Recovery In Inches	Piezometer
0'	Asphalt													
6"	Medium stiff light grey sand with some gravel (base rock at top). Green mottling in places. Dry.		SP		1									
2.3'	No Recovery				2									
					3									
4'	As above.		SP		4									
4.3'	No Recovery													
					5									
					6									
7'	Loose green-grey fine sand. Slightly moist.		SP		7	1	CR	7.0	7.5	—	—	—		
7.5'	No Recovery				▼ 8									
					9									
10'	Bottom of Boring													

Note: Boring continuously cored with a driven double wall sampler

Field Log of Boring No. B-5 By: Joel Bruxvoort Page 1 of 1

BACE Environmental
a Division of
Brunsing Associates, Inc.

Project Name: Pacific Supply Company
1735 24th Street, Oakland, Ca

Project No.: 029.9

Boring Location: 125' South and 32' East of NW corner of driveway

Surface Elevation: 8 feet MSL (approx.) Driller: Precision Sampling Date: 3-5-93

Depth	SOIL DESCRIPTION AND REMARKS	Lithology	U.S.C.S Soil Type	qu TSF	Contact Depth	SAMPLE No.	SAMPLE Type	SAMPLE Interval From	SAMPLE Interval To	BLOW COUNT 0	BLOW COUNT 6	BLOW COUNT 12	Recovery In Inches	Piezometer
0'	Asphalt													
6"	Medium stiff brown sandy silt with some gravel (base rock at top). Dry		SM		1									
2'	Medium stiff grey-green silty sand and some mottled red clay. No HC odor. Dry.				2									
					3									
4'	HC odor.				4									
					5									
6'	No Recovery				6									
7'	Soft green silty clay. Black silt and organic material at the bottom. HC odor (1,000 ppm PID). Wet.		CL		7	1	CR	7.0	7.5	—	—	—		
7.8'	No Recovery				▼ 8									
					9									
10'	Bottom of Boring													

Note: Boring continuously cored with a driven double wall sampler

Field Log of Boring No. B-6 By: Joel Bruxvoort Page 1 of 1

BACE Environmental
a Division of
Brunsing Associates, Inc.

Project Name: Pacific Supply Company
1735 24th Street, Oakland, Ca

Project No.: 029.9

Boring Location: 27' South and 130' East of NW corner of driveway

Surface Elevation: 8 feet MSL (approx.) Driller: Precision Sampling Date: 3-5-93

Depth	SOIL DESCRIPTION AND REMARKS	Lithology	U.S.C.S Soil Type	qu TSF	Contact Depth	SAMPLE No.	SAMPLE Type	SAMPLE Interval From	SAMPLE Interval To	BLOW COUNT 0–6	BLOW COUNT 6–12	BLOW COUNT 12–18	Recovery In Inches	Piezometer
0'	Asphalt													
6"	Medium stiff brown silty clay with some gravel (base rock). Dry		CL		1									
2'	Loose green fine sand. HC odor. Dry.		SP		2									
3.5'	No Recovery				3									
4'	Soft-medium stiff black silt, organic material. Wet at bottom.		OH		4									
5.2'	No Recovery				5									
7'	Soft-medium stiff brown clayey silt with gravel. Wet.		ML		6 ▼ =7	1	CR	7.0	7.5	—	—	—		
8'	No recovery				8									
10'	Bottom of Boring				9									

Note: Boring continuously cored with a driven double wall sampler

Field Log of Boring No. B-7 By: Joel Bruxvoort Page 1 of 1

BACE Environmental
a Division of
Brunsing Associates, Inc.

Project Name: Pacific Supply Company
1735 24th Street, Oakland, Ca

Project No.: 029.9

Boring Location: 71' South and 69' East of NW corner of driveway

Surface Elevation: 8 feet MSL (approx.) Driller: Precision Sampling Date: 3-5-93

Depth	SOIL DESCRIPTION AND REMARKS	Lithology	U.S.C.S Soil Type	qu TSF	Contact Depth	SAMPLE No.	SAMPLE Type	SAMPLE Interval From	SAMPLE Interval To	BLOW COUNT 0-6	BLOW COUNT 6-12	BLOW COUNT 12-18	Recovery In Inches	Piezometer
0'	Asphalt													
6"	Medium stiff brown silty clay with some gravel (base rock at top). Dry		CL		1									
					2									
					3									
4'	Medium dense to loose green fine sand, HC odor (240 ppm PID). Dry.		SP		4									
					5									
6'	No Recovery				6									
7'	As above with soft black silt, dry. Wet organic material at bottom.		SP		7	1	CR	7.0	7.5	—	—	—		
8'	No Recovery		OH		▼ 8									
					9									
10'	Bottom of Boring													

Note: Boring continuously cored with a driven double wall sampler

Field Log of Boring No. B-8 By: Joel Bruxvoort Page 1 of 1

BACE Environmental
a Division of
Brunsing Associates, Inc.

Project Name: Pacific Supply Company
1735 24th Street, Oakland, Ca

Project No.: 029.9

Boring Location: 37.5' South and 8' East of NW corner of driveway

Surface Elevation: 8 feet MSL (approx.) Driller: Precision Sampling Date: 3-5-93

Depth	SOIL DESCRIPTION AND REMARKS	Lithology	U.S.C.S Soil Type	qu TSF	Contact Depth	SAMPLE No.	SAMPLE Type	SAMPLE Interval From	SAMPLE Interval To	BLOW COUNT 0-6	BLOW COUNT 6-12	BLOW COUNT 12-18	Recovery In Inches	Piezometer
0'	Asphalt													
6"	Medium stiff brown silt and sand with some gravel (base rock at top). Dry		SM		1									
2.5'	No Recovery				2									
4'	Soft grey clay with bands of organic material with green mottling, HC odor at 6' (1,000 ppm PID). Slightly moist.		OH		3									
6'	No Recovery				4									
7'	Soft grey organic clay, HC odor at 8' (350 ppm PID). Wet.		OH		5									
					6									
					▼ =7									
					8	1	CR	8.5	9.0	—	—	—		
9'	Soft black organic clay, wet.				9									
9.5'	No Recovery													
10'	Bottom of Boring													

Note: Boring continuously cored with a driven double wall sampler

Field Log of Boring No. B-9 By: Joel Bruxvoort Page 1 of 1

BACE Environmental
a Division of
Brunsing Associates, Inc.

Project Name: Pacific Supply Company
1735 24th Street, Oakland, Ca

Project No.: 029.9

Boring Location: 71' South and 105.5' East of NW corner of driveway

Surface Elevation: 8 feet MSL (approx.) Driller: Precision Sampling Date: 3-5-93

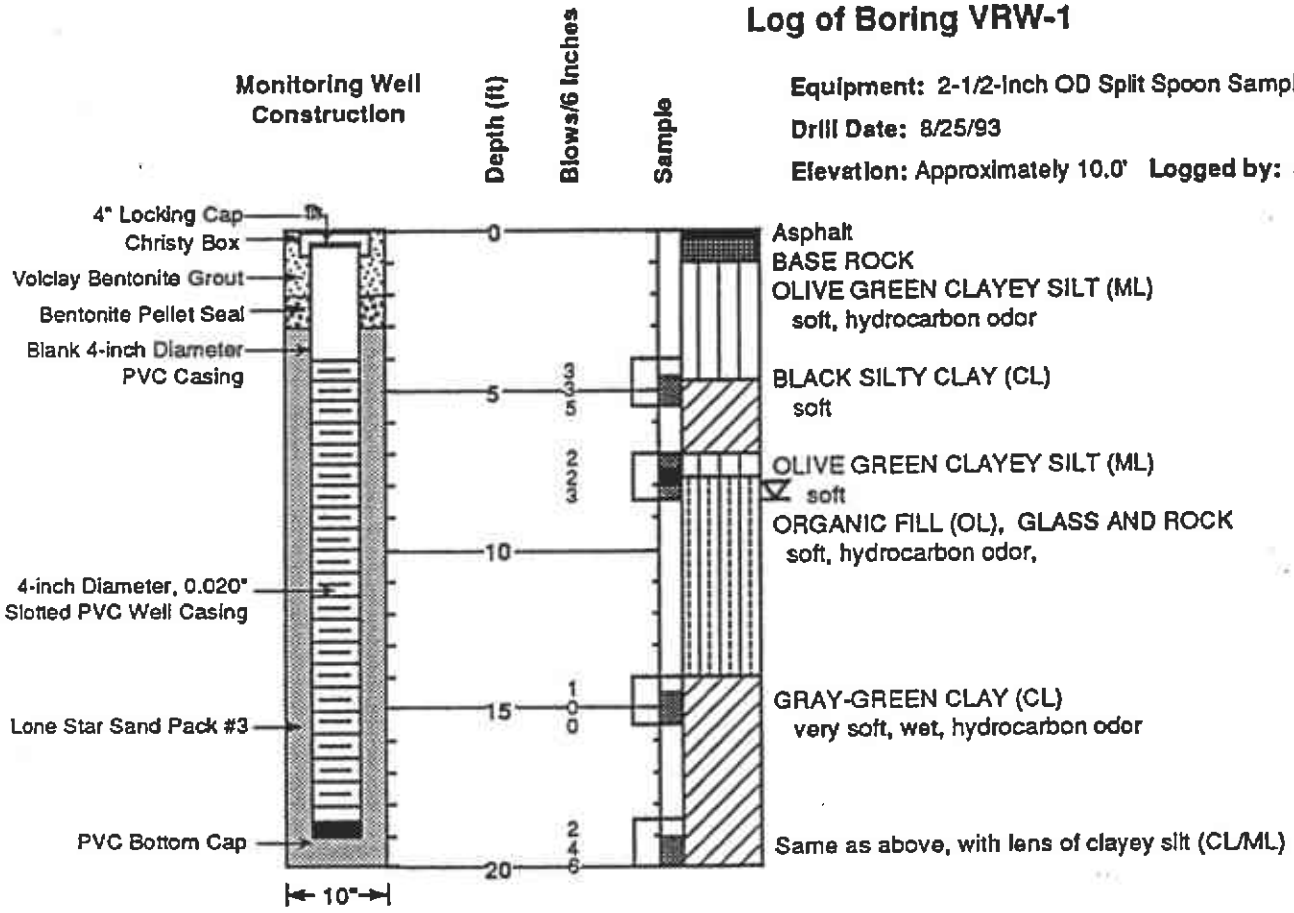
Depth	SOIL DESCRIPTION AND REMARKS	Lithology	U.S.C.S Soil Type	qu TSF	Contact Depth	SAMPLE No.	SAMPLE Type	SAMPLE Interval From	SAMPLE Interval To	BLOW COUNT 0–6	BLOW COUNT 6–12	BLOW COUNT 12–18	Recovery In Inches	Piezometer
0'	Asphalt													
6"	Soft to medium stiff grey-black silty clay with some gravel (base rock at top). Dry		CL		1									
					2									
					3									
3.8'	Medium dense green fine sand. HC odor. Dry.		SP		4									
4.5'	No Recovery				5									
6'	Medium dense to loose green fine sand. Wet.		SP		6	1	CR	6.0	6.5	—	—	—		
6.8'	Soft black organic clay. Moist.		OH		▼									
7'	No Recovery				7									
8'	Bottom of Boring				8									
					9									

Note: Boring continuously cored with a driven double wall sampler

Field Log of Boring No. B-10 By: Joel Bruxvoort Page 1 of 1

Log of Boring VRW-1

Equipment: 2-1/2-Inch OD Split Spoon Sampler
Drill Date: 8/25/93
Elevation: Approximately 10.0' **Logged by:** JB



LEGEND:

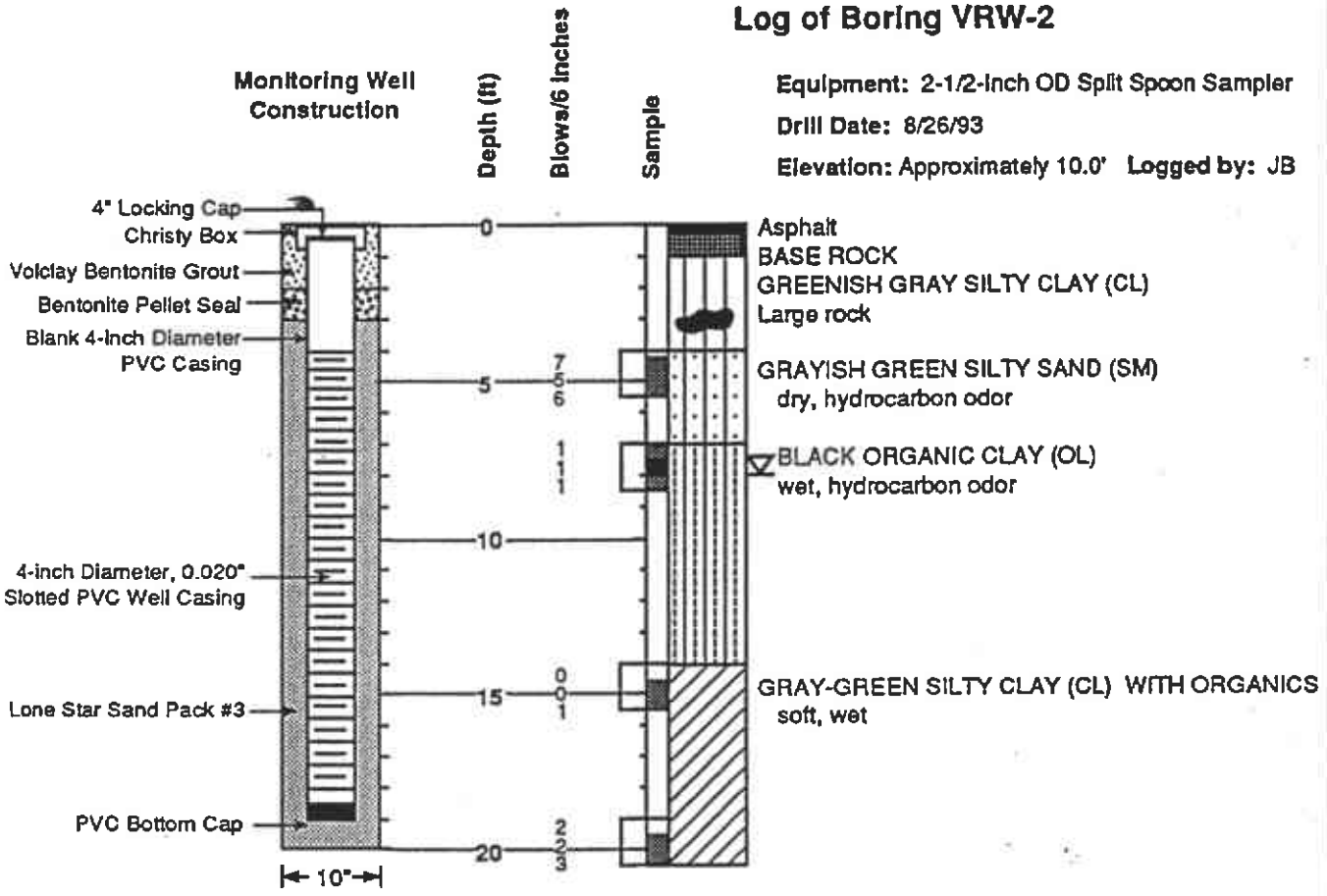
PROJECT NO.: 29.11		
DRAWN BY:	DD	11/15/93
APPROVED BY:	JB	12/14/93

BACE Environmental
A Division Of
Brunsing Associates, Inc.

PLATE 1
LOG AND WELL CONSTRUCTION DETAILS, VRW-1
Pacific Supply
1735 24th Street
Oakland, California

Log of Boring VRW-2

Equipment: 2-1/2-Inch OD Split Spoon Sampler
Drill Date: 8/26/93
Elevation: Approximately 10.0' **Logged by:** JB



LEGEND:

Length Of Drive
Sample Recovered
Sample Retained

PROJECT NO.: 29.11		
DRAWN BY:	DD	11/15/93
APPROVED BY:	JB	12/1/93

BACE Environmental
A Division Of
Brunsing Associates, Inc.

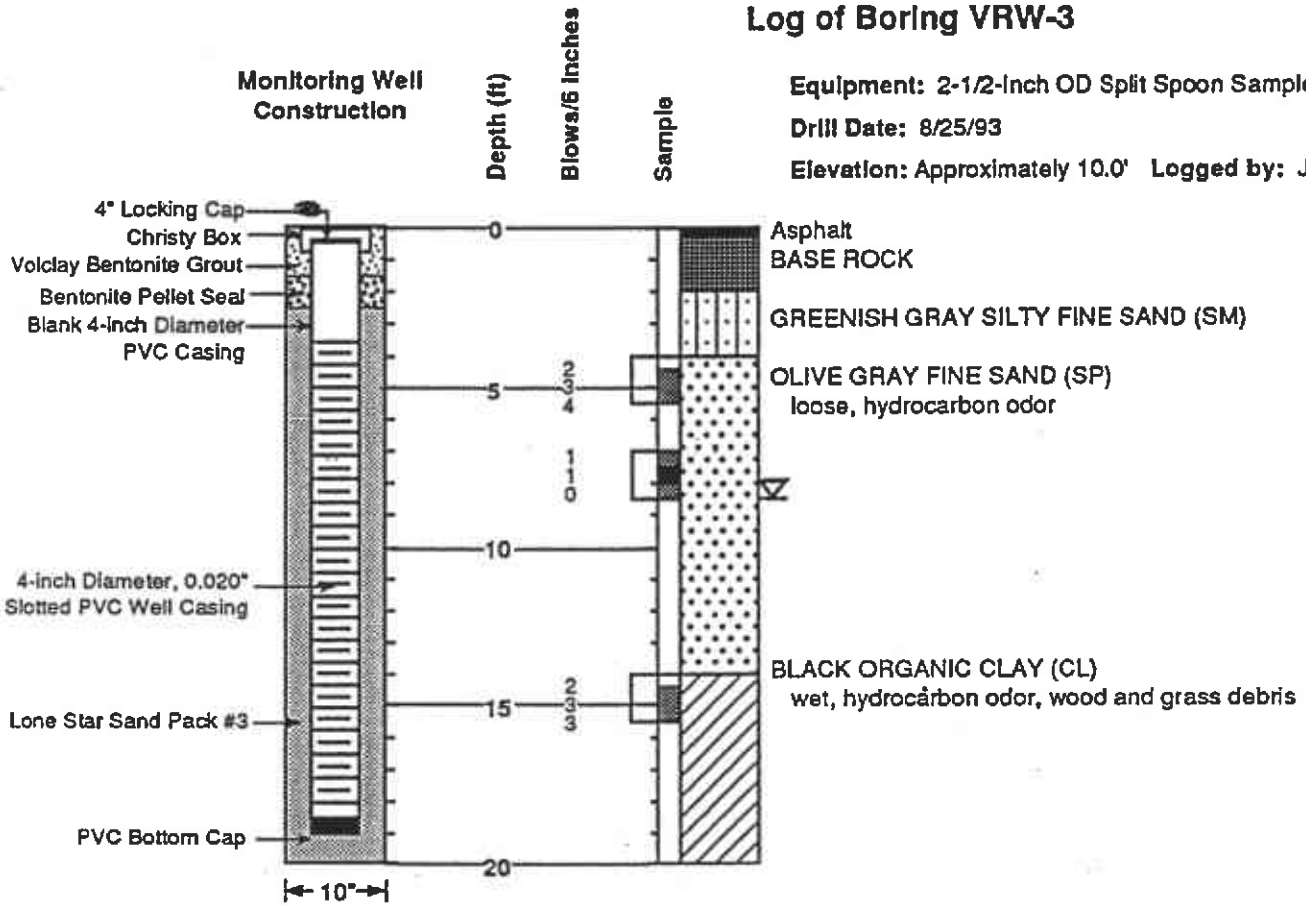
PLATE 2
LOG AND WELL CONSTRUCTION DETAILS, VRW-2
Pacific Supply
1735 24th Street
Oakland, California

Log of Boring VRW-3

Equipment: 2-1/2-Inch OD Split Spoon Sampler

Drill Date: 8/25/93

Elevation: Approximately 10.0' **Logged by:** JB



LEGEND:

Length Of Drive
Sample Recovered
Sample Retained

PROJECT NO.: 29.11		
DRAWN BY:	DD	11/15/93
APPROVED BY:	JB	12/14/13

BACE Environmental
A Division Of
Brunsing Associates, Inc.

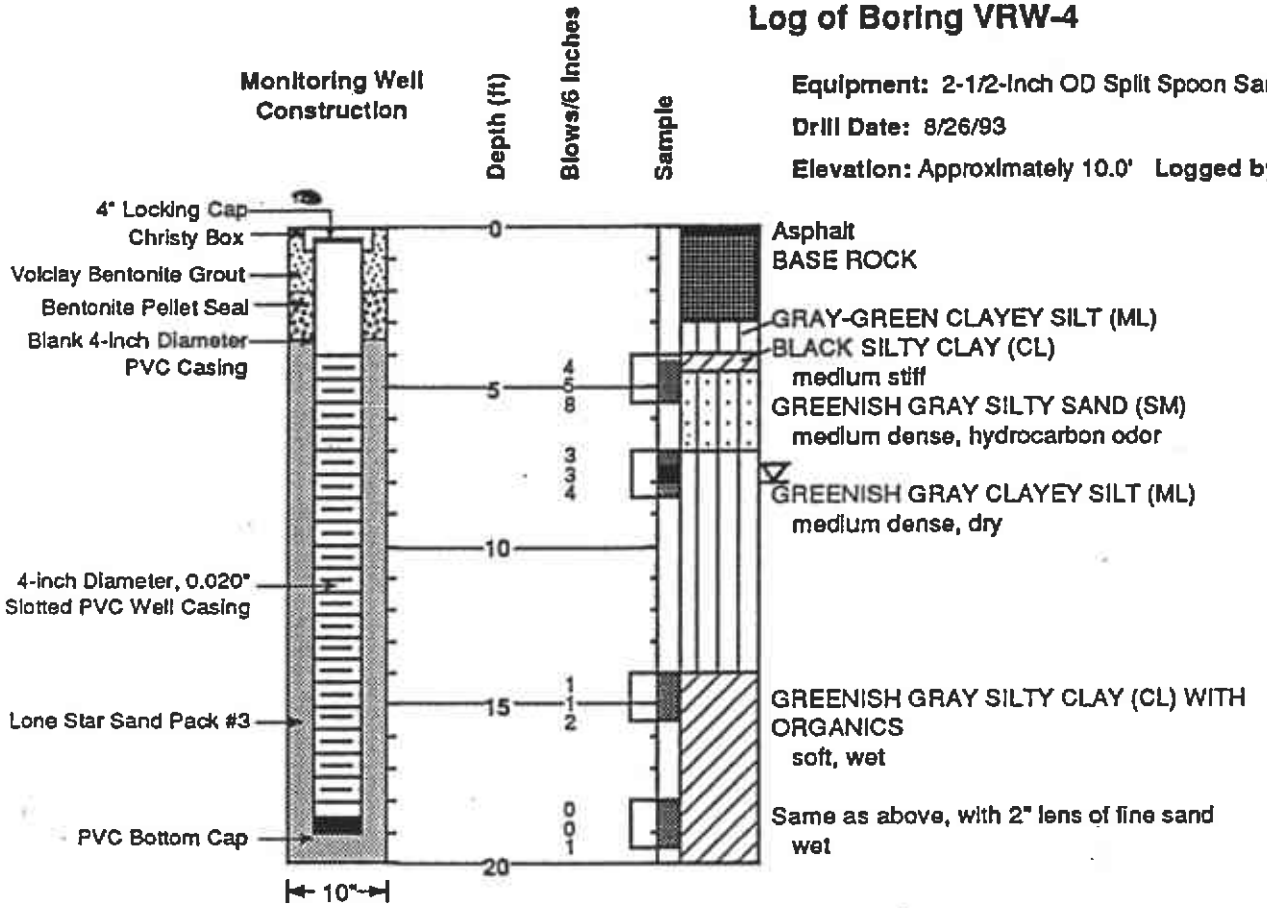
PLATE 3
LOG AND WELL CONSTRUCTION DETAILS, VRW-3
Pacific Supply
1735 24th Street
Oakland, California

Log of Boring VRW-4

Equipment: 2-1/2-Inch OD Split Spoon Sampler

Drill Date: 8/26/93

Elevation: Approximately 10.0' **Logged by:** JB



LEGEND:

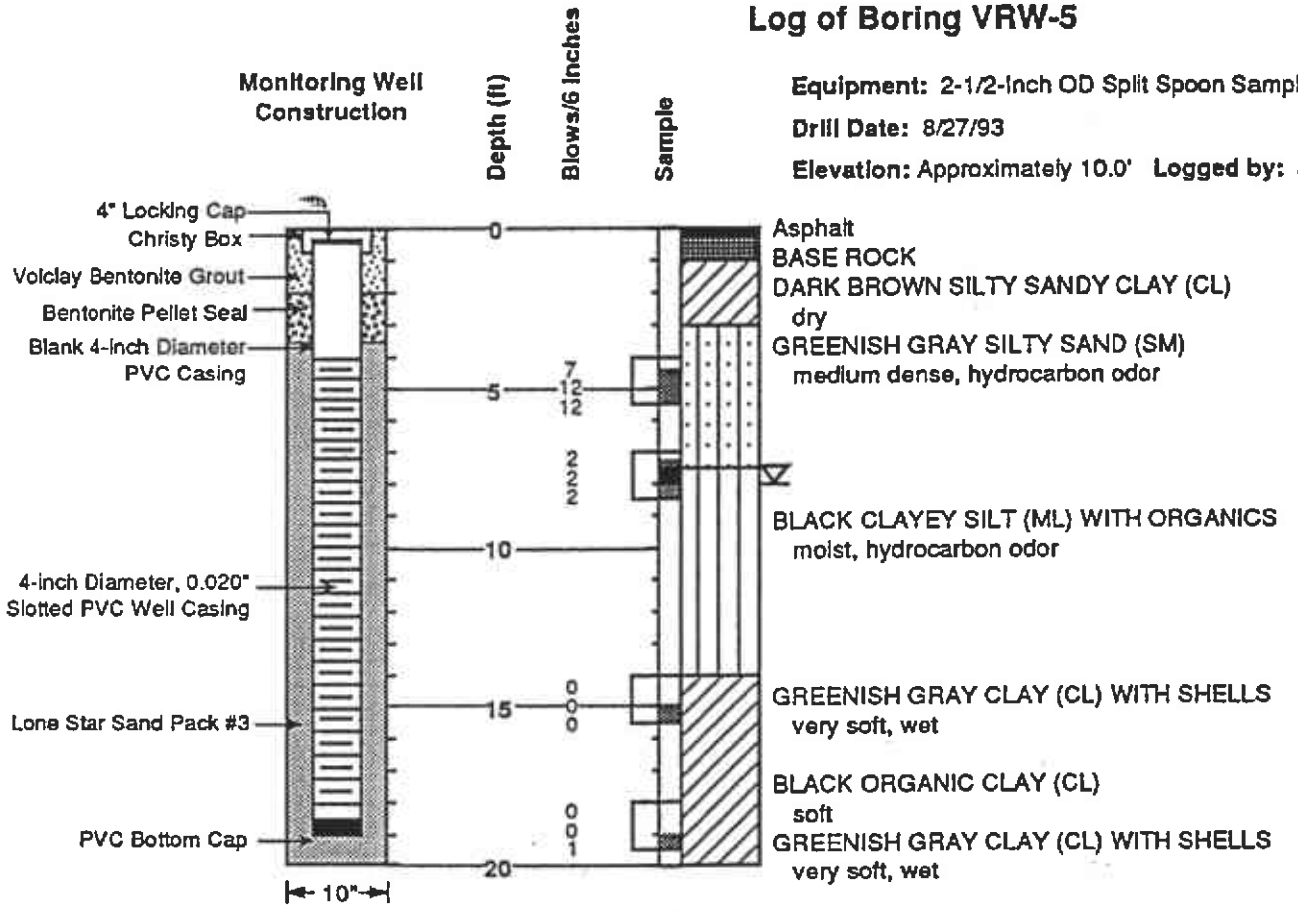
PROJECT NO.:	29.11	
DRAWN BY:	DD	11/15/93
APPROVED BY:	JB	12/14/93

BACE Environmental
A Division Of
Brunsing Associates, Inc.

PLATE 4
LOG AND WELL CONSTRUCTION DETAILS, VRW-4
Pacific Supply
1735 24th Street
Oakland, California

Log of Boring VRW-5

Equipment: 2-1/2-Inch OD Split Spoon Sampler
Drill Date: 8/27/93
Elevation: Approximately 10.0' **Logged by:** JB



LEGEND:

PROJECT NO.: 29.11		
DRAWN BY:	DD	11/15/93
APPROVED BY:	JB	12/14/93

BACE Environmental
A Division Of
Brunsing Associates, Inc.

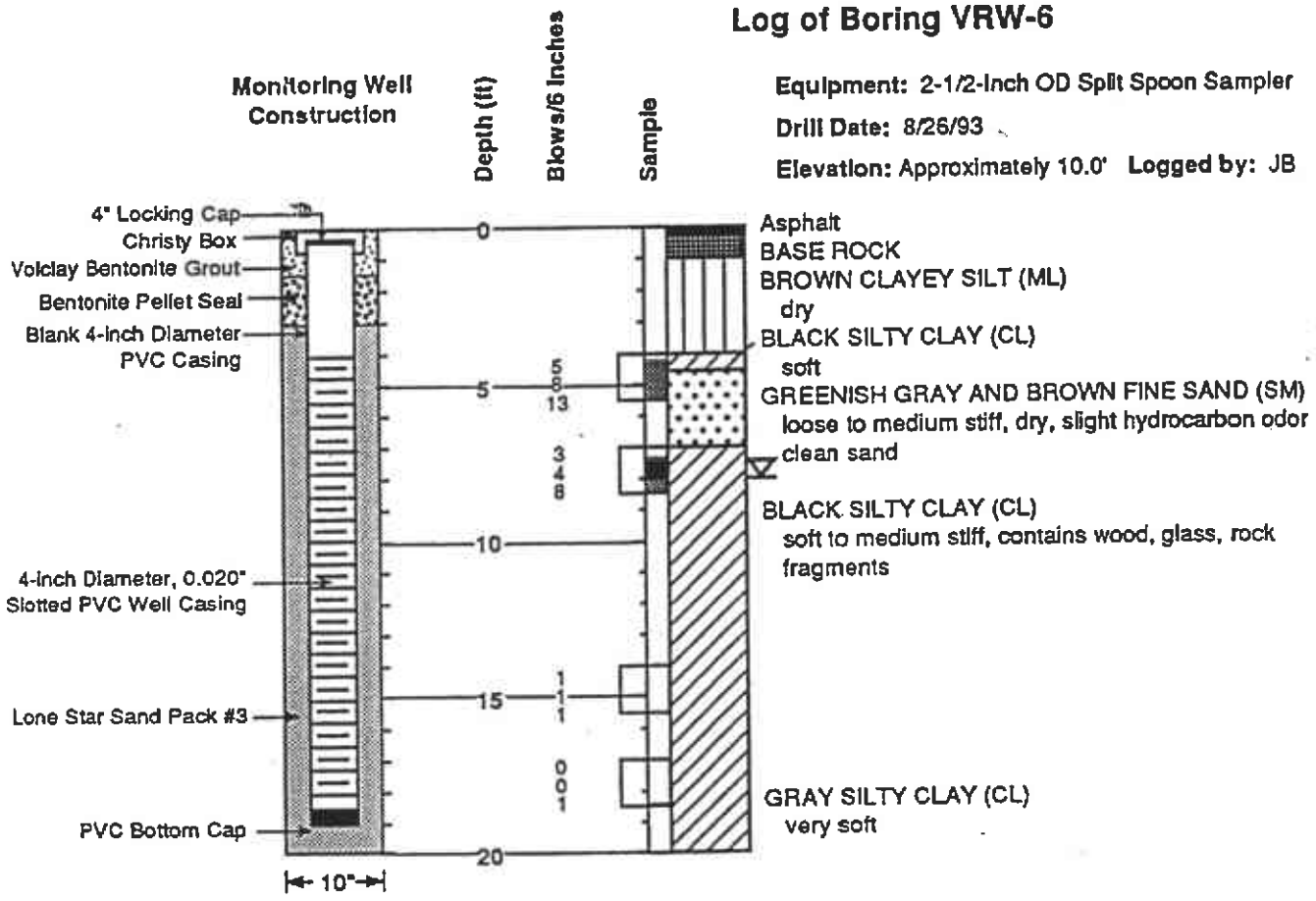
PLATE 5
LOG AND WELL CONSTRUCTION DETAILS, VRW-5
Pacific Supply
1735 24th Street
Oakland, California

Log of Boring VRW-6

Equipment: 2-1/2-Inch OD Split Spoon Sampler

Drill Date: 8/26/93

Elevation: Approximately 10.0' **Logged by:** JB



LEGEND:

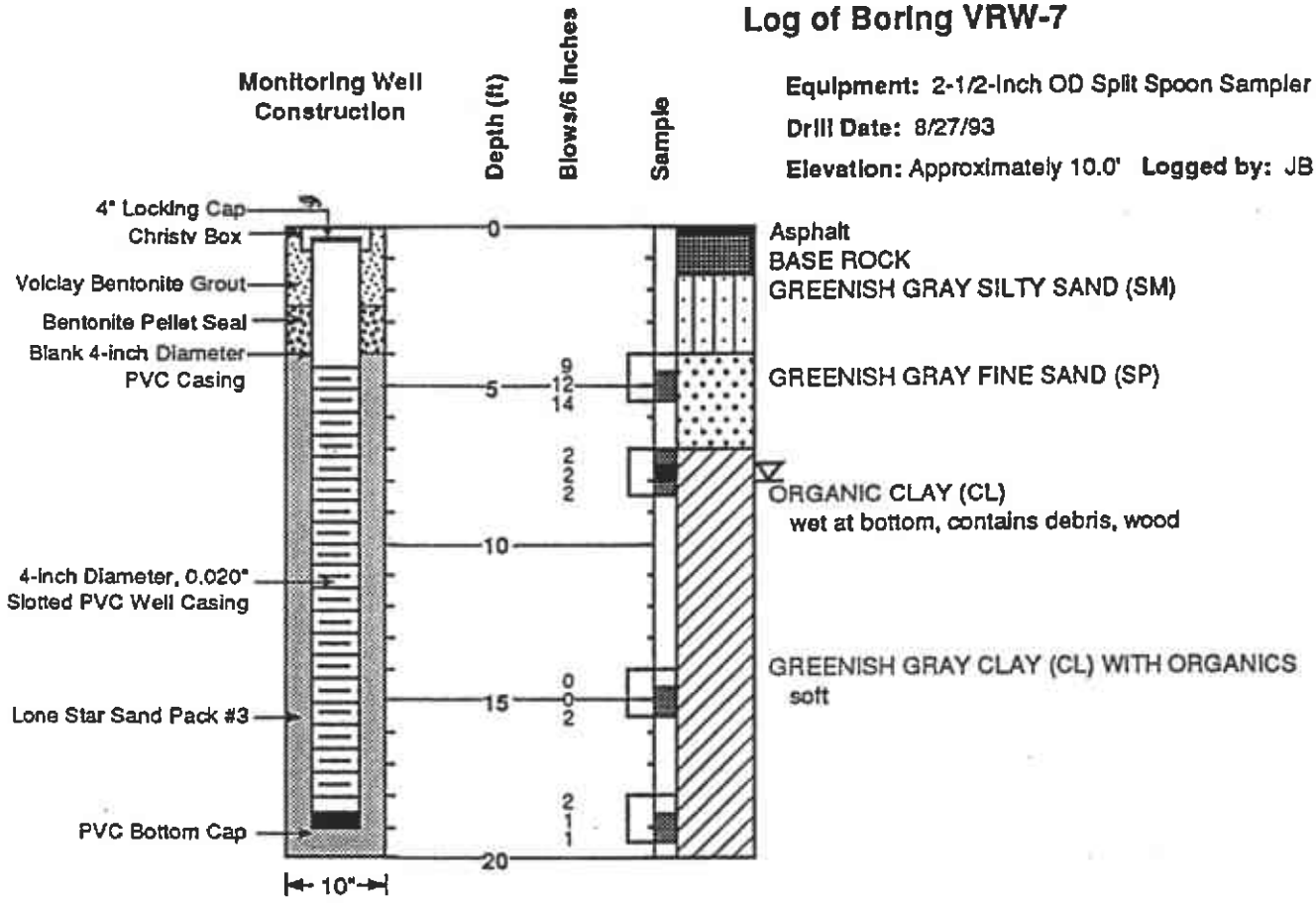
PROJECT NO.: 29.11		
DRAWN BY:	DD	11/15/93
APPROVED BY:	JB	12/14/93

BACE Environmental
A Division Of
Brunsing Associates, Inc.

PLATE 6
LOG AND WELL CONSTRUCTION DETAILS, VRW-6
Pacific Supply
1735 24th Street
Oakland, California

Log of Boring VRW-7

Equipment: 2-1/2-Inch OD Split Spoon Sampler
Drill Date: 8/27/93
Elevation: Approximately 10.0' **Logged by:** JB



LEGEND:

Length Of Drive
Sample Recovered
Sample Retained

PROJECT NO.: 29.11		
DRAWN BY:	DD	11/15/93
APPROVED BY:	[illegible]	12/14/93

BACE Environmental
A Division Of
Brunsing Associates, Inc.

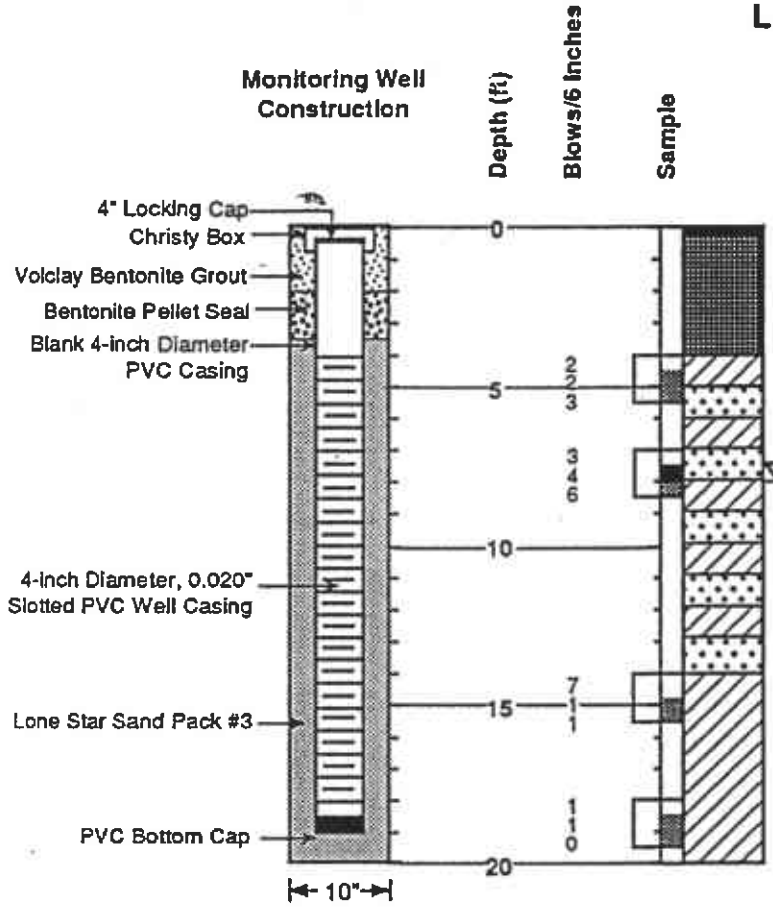
PLATE 7
LOG AND WELL CONSTRUCTION DETAILS, VRW-7
Pacific Supply
1735 24th Street
Oakland, California

Log of Boring VRW-8

Equipment: 2-1/2-inch OD Split Spoon Sampler

Drill Date: 8/26/93

Elevation: Approximately 10.0' **Logged by:** JB



Asphalt
BASE ROCK

BLACK AND GRAY-BROWN SILTY CLAY AND FINE SAND (CL/SP) (FILL)
dry, contains wood, brick, rock, little fines
same as above, no wood

ORGANIC CLAY (CL)
wet at bottom, contains debris, wood

GRAY-GREEN SILTY CLAY (CL) WITH ORGANICS
soft, wet

LEGEND:

Length Of Drive
Sample Recovered
Sample Retained

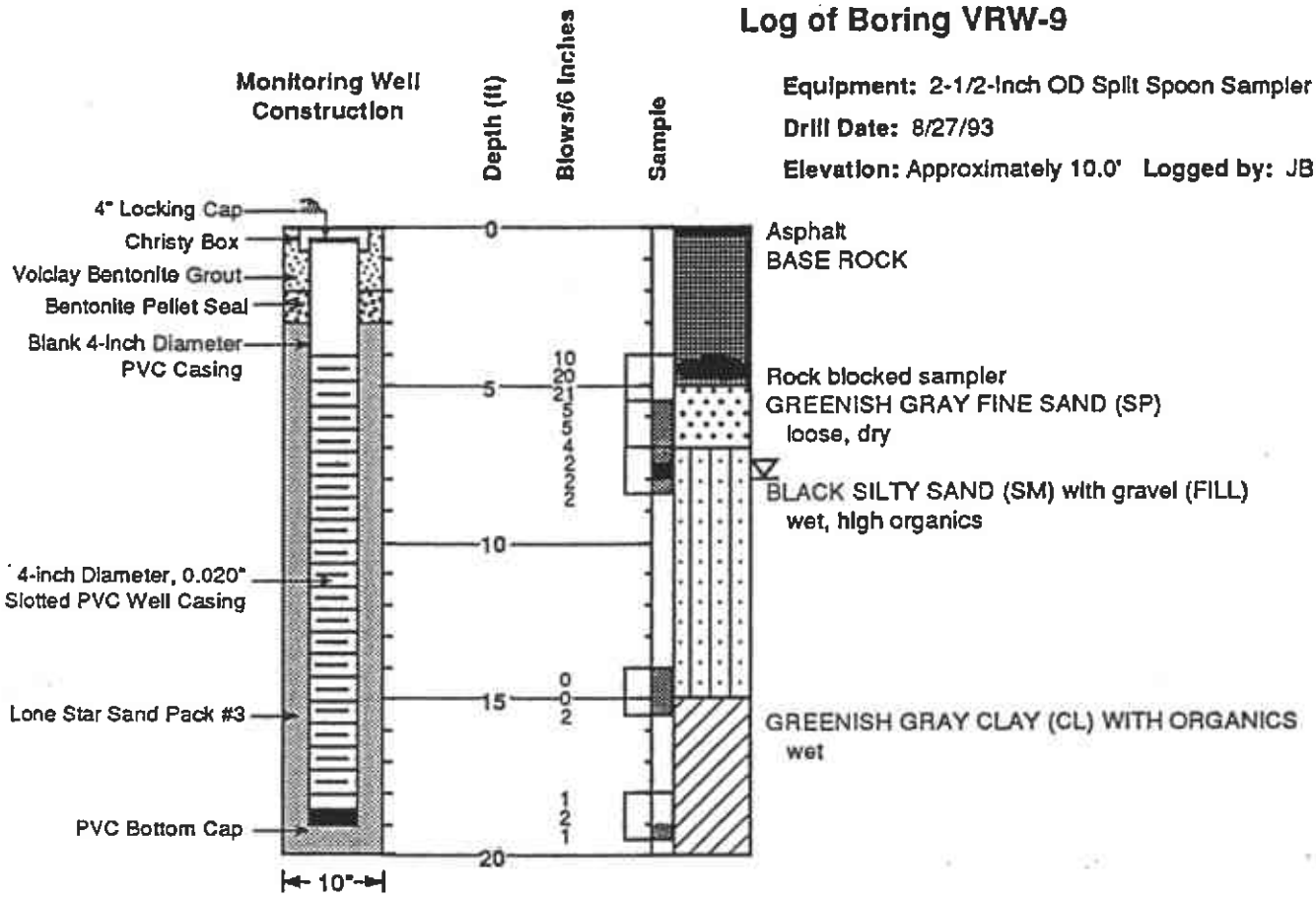
PROJECT NO.:	29.11	
DRAWN BY:	DD	11/15/93
APPROVED BY:	JB	12/14/93

BACE Environmental
A Division Of
Brunsing Associates, Inc.

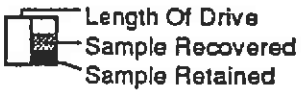
PLATE 8
LOG AND WELL CONSTRUCTION DETAILS, VRW-8
Pacific Supply
1735 24th Street
Oakland, California

Log of Boring VRW-9

Equipment: 2-1/2-Inch OD Split Spoon Sampler
Drill Date: 8/27/93
Elevation: Approximately 10.0' **Logged by:** JB



LEGEND:



PROJECT NO.:	29.11	
DRAWN BY:	DD	11/15/93
APPROVED BY:	JB	12/14/93

BACE Environmental
A Division Of
Brunsing Associates, Inc.

PLATE 9
LOG AND WELL CONSTRUCTION DETAILS, VRW-9
Pacific Supply
1735 24th Street
Oakland, California

Log of Boring B-10

Equipment: Power Probe 9600, Direct Push

Drill Date: 8/29/00

Elevation: **Logged By:** CES

Hydrocarbon Odor	Blows/foot	Depth (ft) Sample	
		0	Asphalt Baserock Green Gray SANDY CLAY (CL) moist, soft, no odor, grades to medium stiff
None			FILL, mixed debris and soil
None		5	Mottled Dark Gray and Brown CLAY (CH) moist, soft, abundant organic debris Green Gray SILTY CLAY (CL) moist to wet, soft
None		10	Dark Gray SANDY CLAY (CL) wet, soft Green Gray SILTY CLAY (CL) wet, soft
None		15	

NOTES:
1) Hand auger through first five feet for utility clearance.
2) Water enters boring slowly.
3) Set temporary well casing before collecting groundwater sample.
4) Abandoned boring with bentonite chips and tremie grouting.

LEGEND:

- Sample Recovered
- Sample Retained
- No Recovery
- Length Of Drive
- Bulk Sample

Equivalent "Standard Penetration" blow counts

Water encountered

PROJECT NO.: 029		
DRAWN BY:	CES	10/24/00
CHECKED BY:		
APPROVED BY:		
REVISED BY:		

BACE Environmental
A Division Of
Brunsing Associates, Inc.

PLATE C2
Log of Boring B-10
Pacific Coast Building Products
1735 24th Street
Oakland, California

Log of Boring B-11

Equipment: Power Probe 9600, Direct Push

Drill Date: 8/29/00

Elevation:

Logged By: CES

Hydrocarbon Odor	Blows/foot	Depth (ft) Sample	
		0	Asphalt Baserock
None			Orange Brown SILTY SAND (SM) moist, loose, orange mottling
			Green Gray SANDY CLAY (CL) moist, medium stiff, abundant roots
		5	Green Gray SILTY SAND (SM) wet, loose, trace clay, clay increasing with depth
			Brown SAND (SW) wet, loose
		10	Dark Gray PEAT AND CLAY (Pt/OH)
			No recovery from 5 feet to 15 feet, soft clay observed on drill rods
		15	

NOTES:
1) Hand auger through first five feet for utility clearance.
2) Set temporary well casing before collecting groundwater sample.
3) Abandoned boring with bentonite chips and tremie grouting.

LEGEND:

- Sample Recovered
- Sample Retained
- No Recovery
- Length Of Drive
- Bulk Sample

* Equivalent "Standard Penetration" blow counts

Water encountered

PROJECT NO.: 029		
DRAWN BY:	CES	10/24/00
CHECKED BY:		
APPROVED BY:		
REVISED BY:		

BACE Environmental
A Division Of
Brunsing Associates, Inc.

PLATE C3
Log of Boring B-11
Pacific Coast Building Products
1735 24th Street
Oakland, California

Log of Boring B-12

Equipment: Power Probe 9600, Direct Push

Drill Date: 8/29/00

Elevation:

Logged By: CES

Hydrocarbon Odor	Blows/foot	Depth (ft) Sample
		0
None		
		5
None		
		10
		15

Asphalt
Baserock
Dark Green Gray SILTY CLAY (CL)
moist, medium stiff
Dark Gray SILTY SAND (SM)
wet, medium dense, trace clay
Gray Green SANDY CLAY (CL)
moist, medium stiff, <10% sand
Dark Gray PEAT AND CLAY (Pt/OH)
saturated, loose
Gray Green SILTY CLAY (CL)
moist, soft, abundant roots

No recovery from 8 to 15 feet, soft clay (Bay Mud) observed on drill rods

NOTES:
1) Hand auger through first five feet for utility clearance.
2) Set temporary well casing before collecting groundwater sample.
3) Abandoned boring with bentonite chips and tremie grouting.

EGEND:

- Sample Recovered
- Sample Retained
- No Recovery
- Length Of Drive
- Bulk Sample

Equivalent "Standard Penetration" blow counts

Water encountered

ROJECT NO.: 029		
DRAWN BY:	CES	10/24/00
HECKED BY:		
PPROVED BY:		
REVISED BY:		

BACE Environmental
A Division Of
Brunsing Associates, Inc.

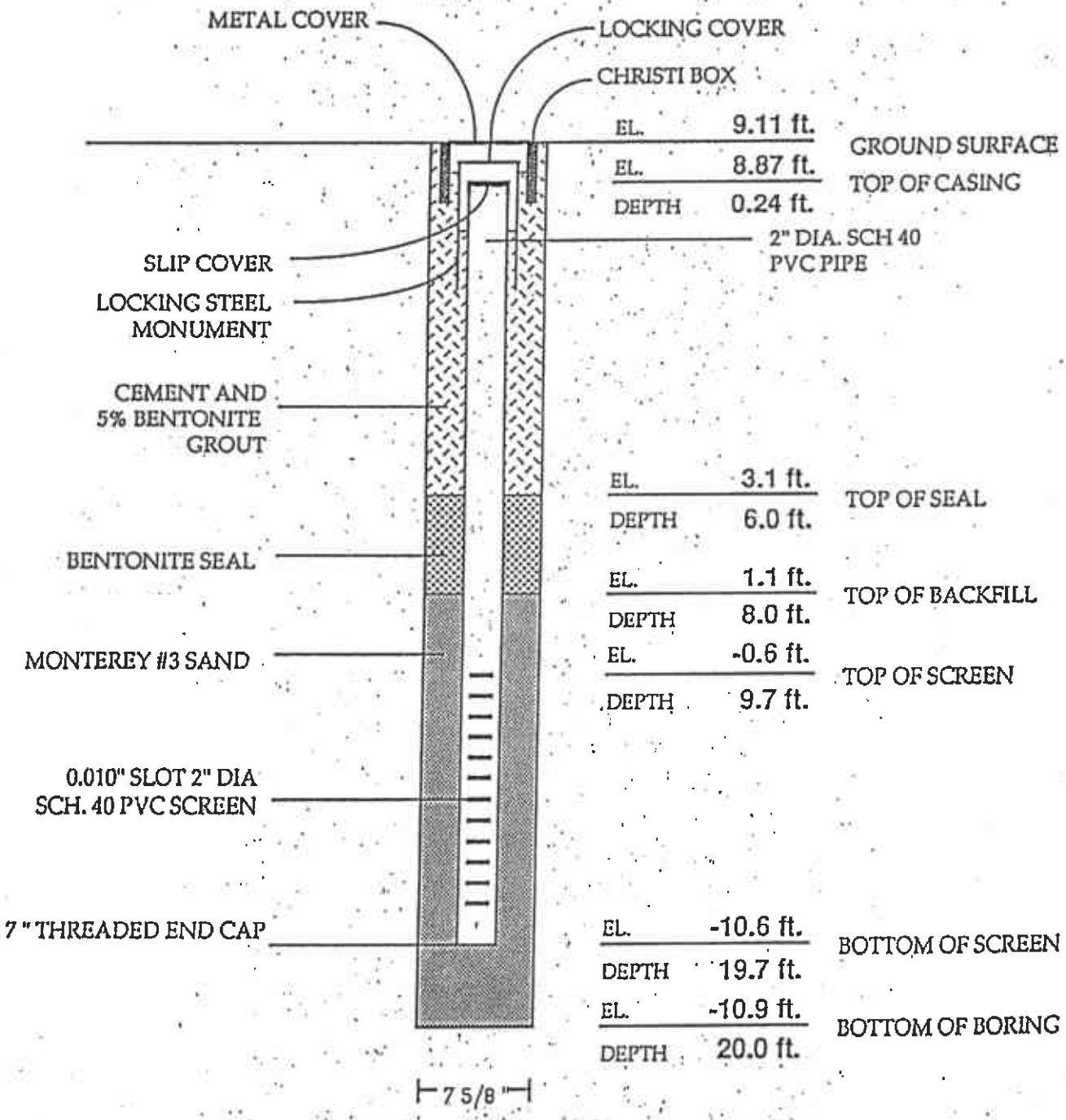
PLATE C4
Log of Boring B-12
Pacific Coast Building Products
1735 24th Street
Oakland, California

APPENDIX D
Historical Well Completion Logs

WELL COMPLETION DETAIL

PROJECT NAME: PACIFIC SUPPLY COMPANY PROJECT NO. 029

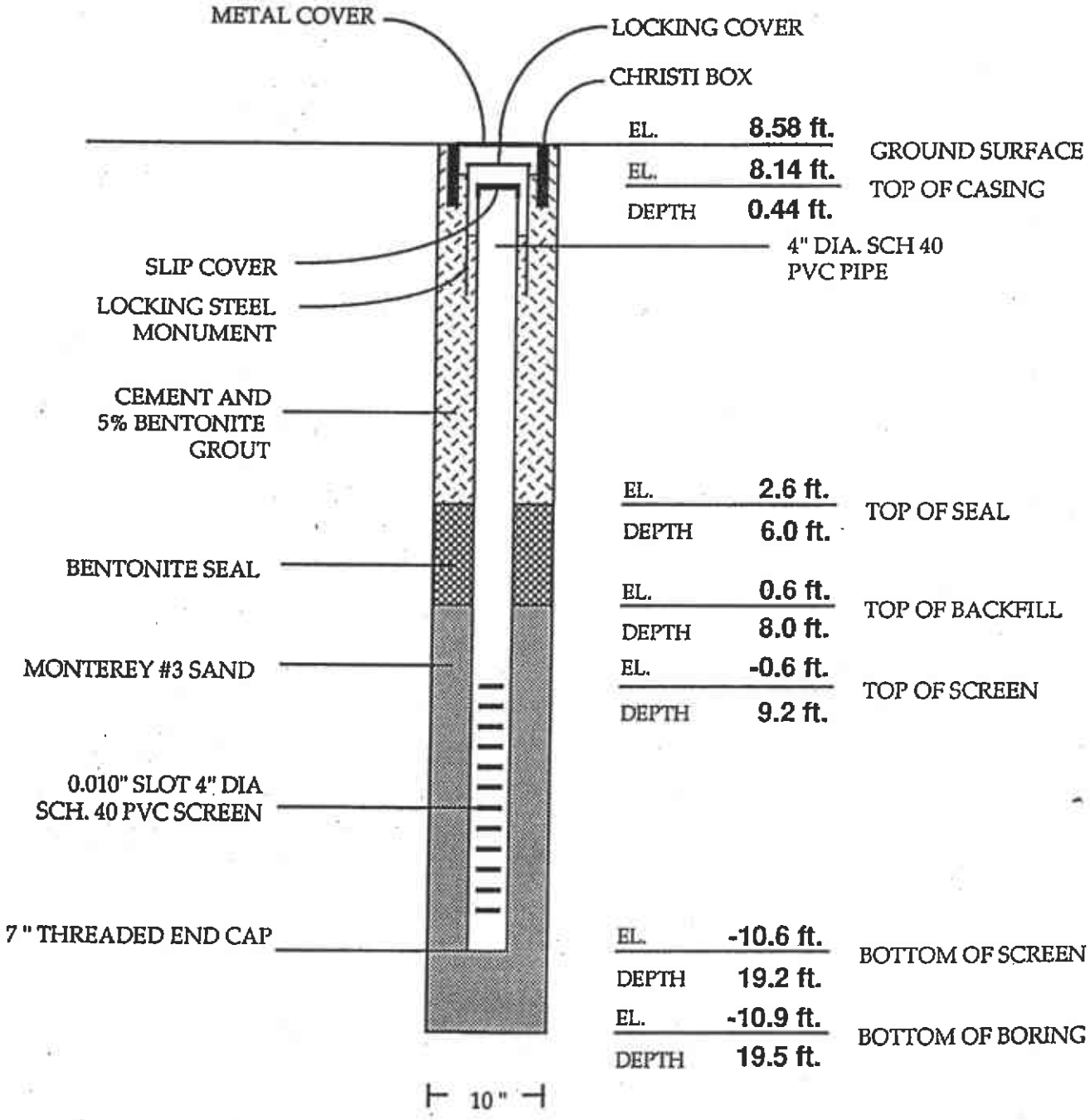
BORING LOCATION: MW-1 DATE: 9/13/88 BY: GE



WELL COMPLETION DETAIL

PROJECT NAME: **PACIFIC SUPPLY COMPANY** PROJECT NO. **029**

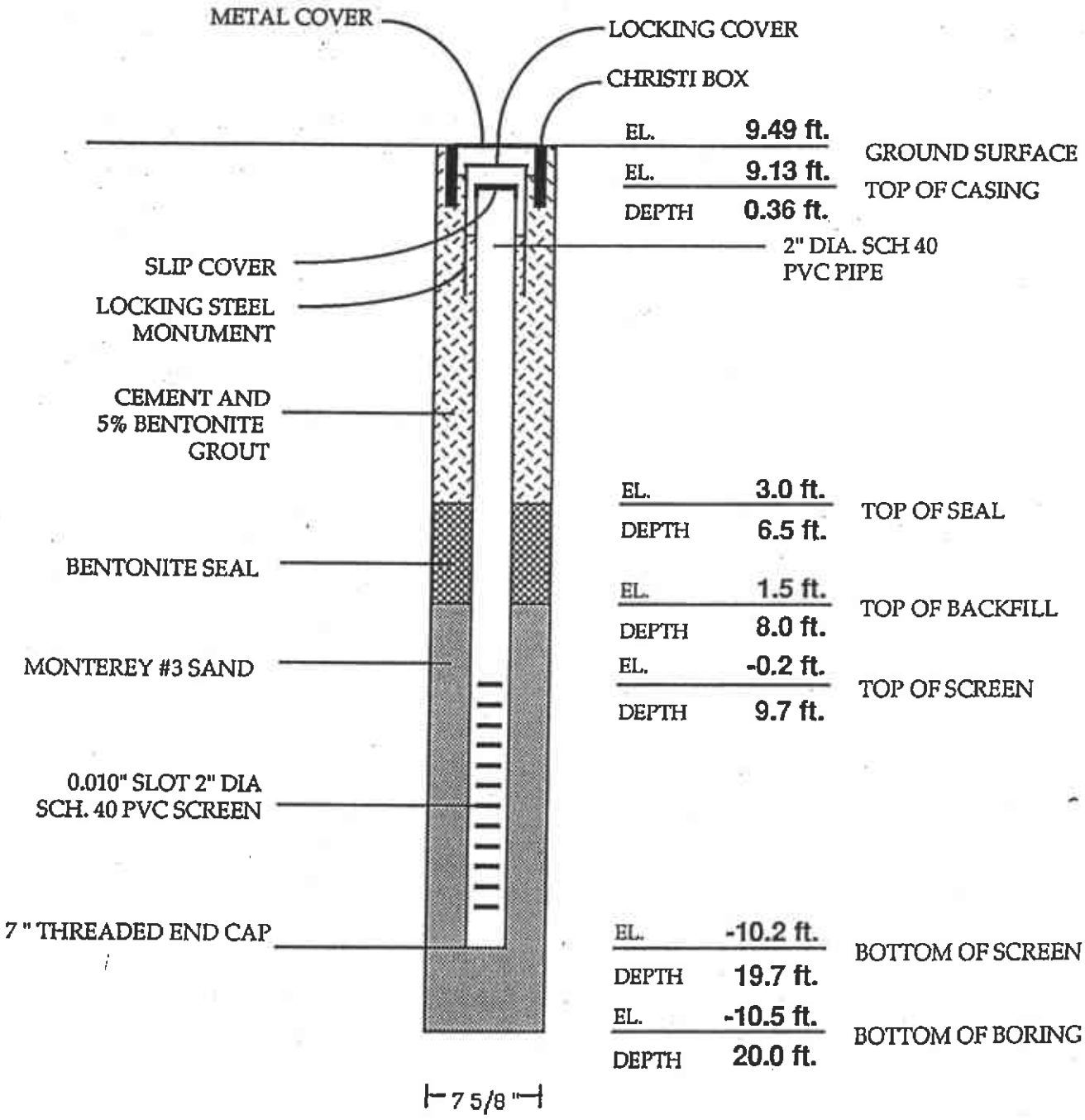
BORING LOCATION: **MW-2** DATE: **9/13/88** BY: **GE**



WELL COMPLETION DETAIL

PROJECT NAME: **PACIFIC SUPPLY COMPANY** PROJECT NO. **029**

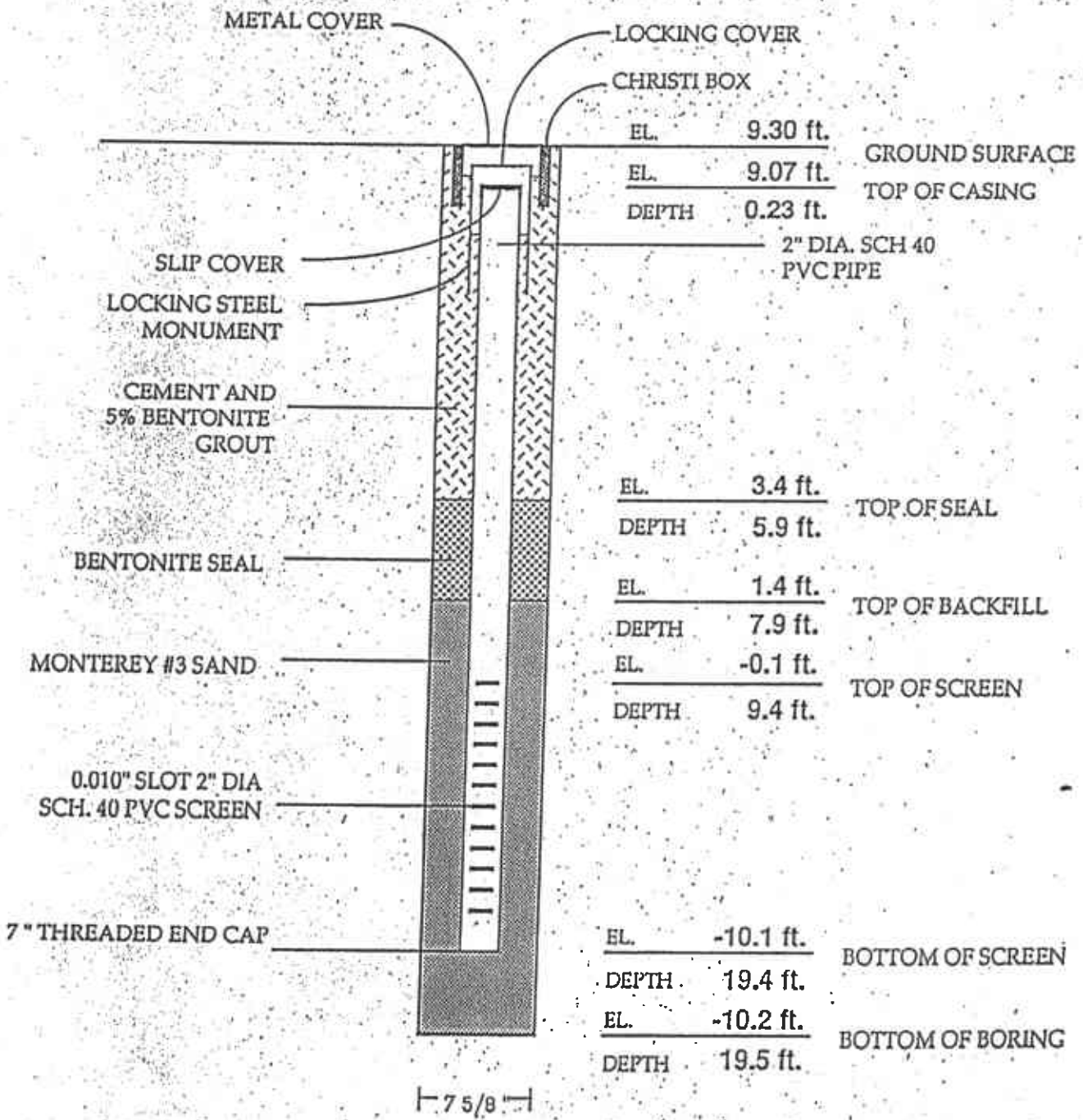
BORING LOCATION: **MW-3** DATE: **9/13/88** BY: **GE**



WELL COMPLETION DETAIL

PROJECT NAME: PACIFIC SUPPLY COMPANY PROJECT NO. 029

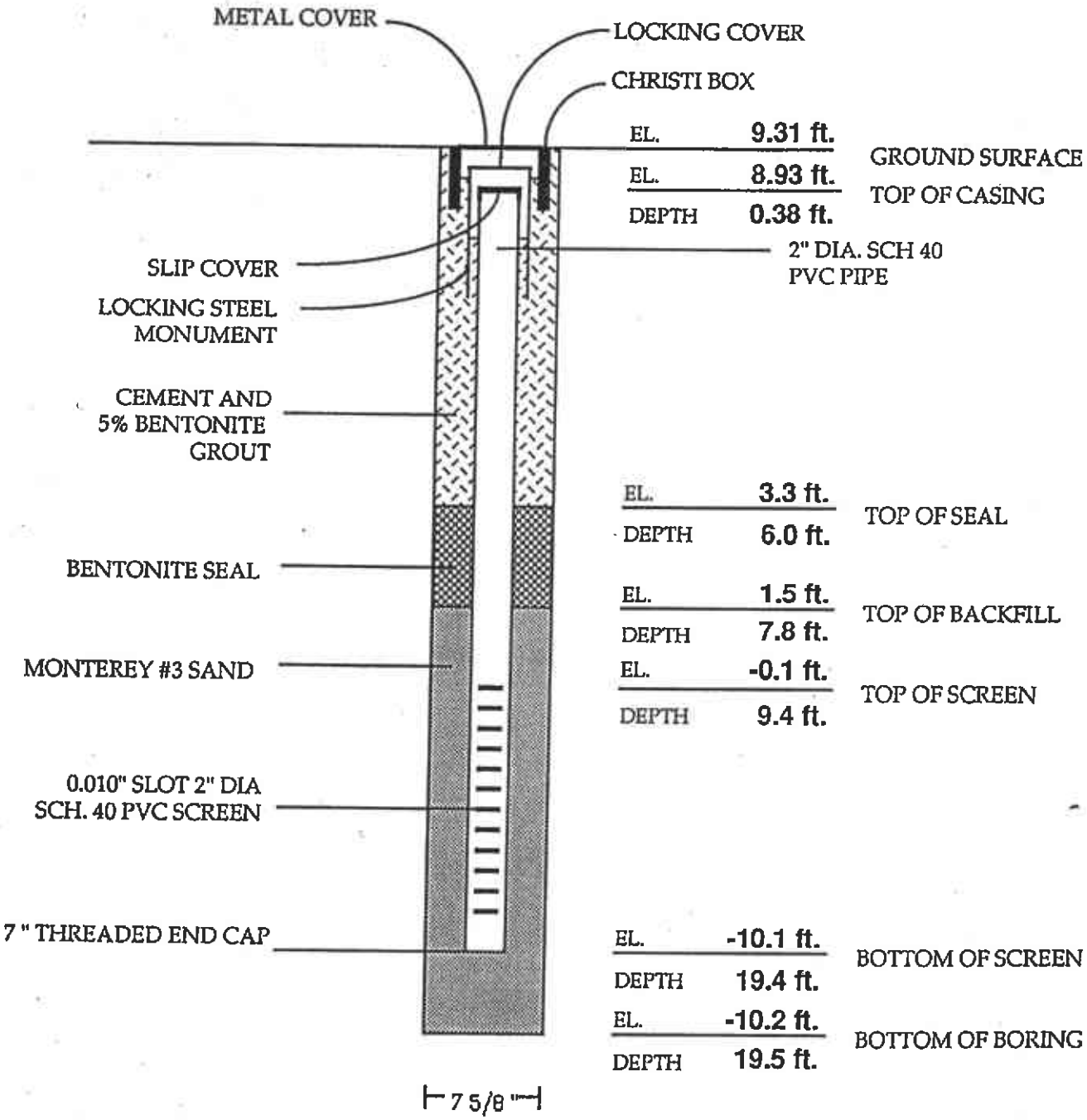
BORING LOCATION: MW-4 DATE: 9/13/88 BY: GE



WELL COMPLETION DETAIL

PROJECT NAME: **PACIFIC SUPPLY COMPANY** PROJECT NO. **029**

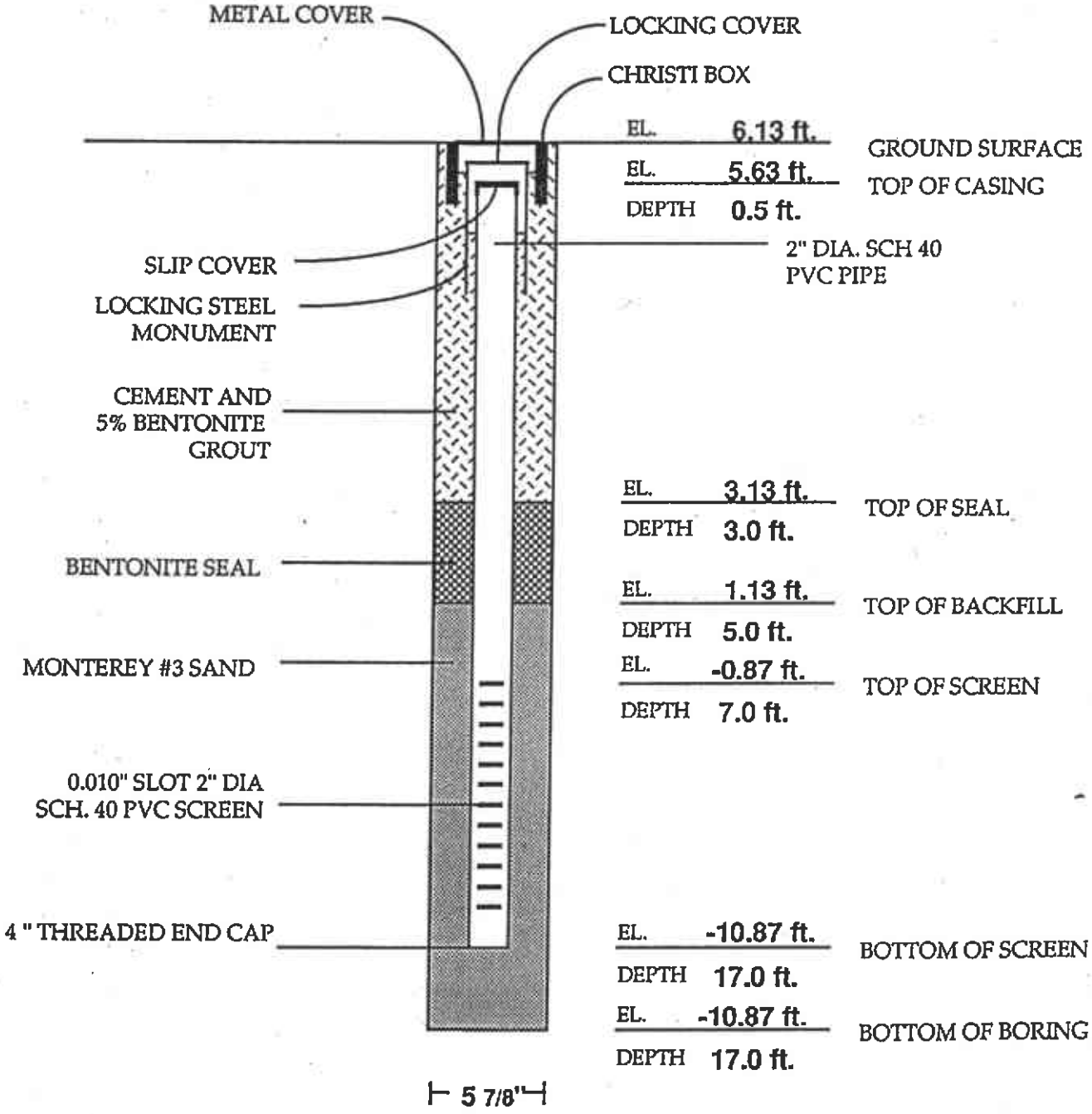
BORING LOCATION: **MW-5** DATE: **9/13/88** BY: **GE**



WELL COMPLETION DETAIL

PROJECT NAME: PACIFIC SUPPLY CO. 1735 24th STREET, OAKLAND, CALIFORNIA PROJECT NO. 029.2

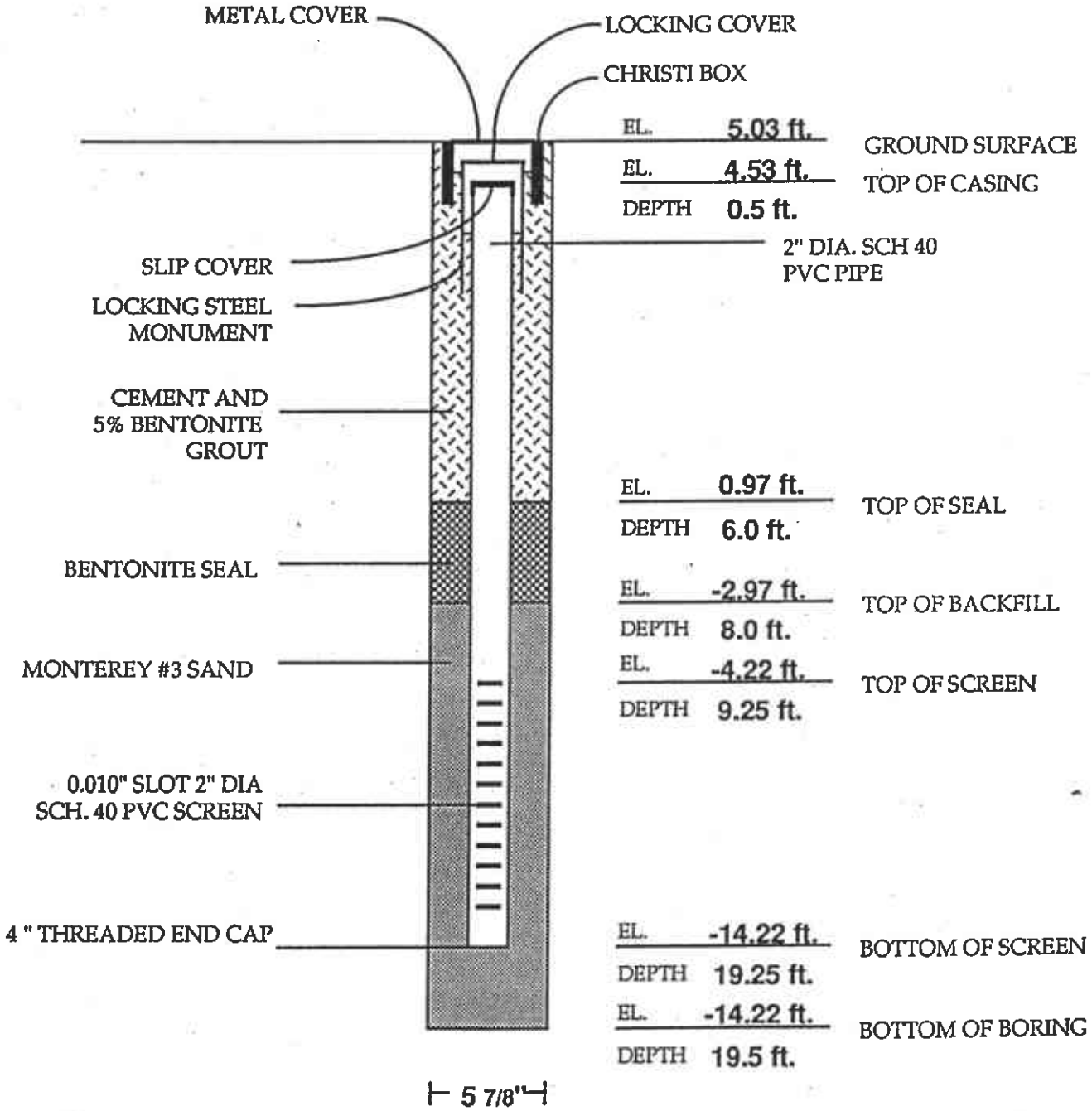
BORING LOCATION: MW-6 DATE: December 19,1989 BY: G. Eiche



WELL COMPLETION DETAIL

PROJECT NAME: PACIFIC SUPPLY CO. 1735 24th STREET, OAKLAND, CALIFORNIA PROJECT NO. 029.2

BORING LOCATION: MW-7 DATE: December 19,1989 BY: G. Elche

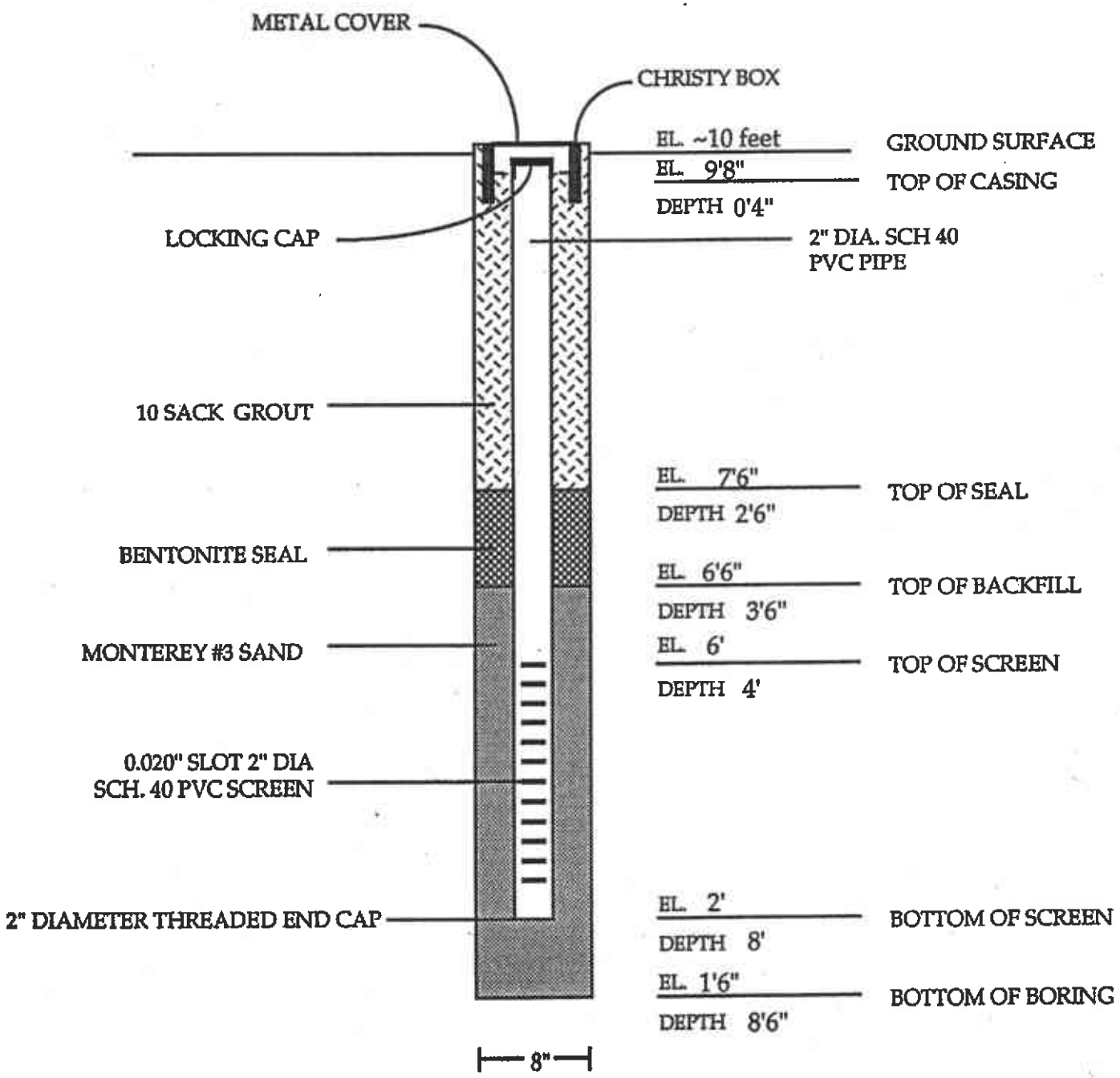


WELL COMPLETION DETAIL

PROJECT NAME: Pacific Supply Company PROJECT NO. 29.6

BORING LOCATION: 65' northing and 185' westing of the north & east property lines

WELL NUMBER: VEW-1 DATE: 6/6/92 BY: Jeff Stivers

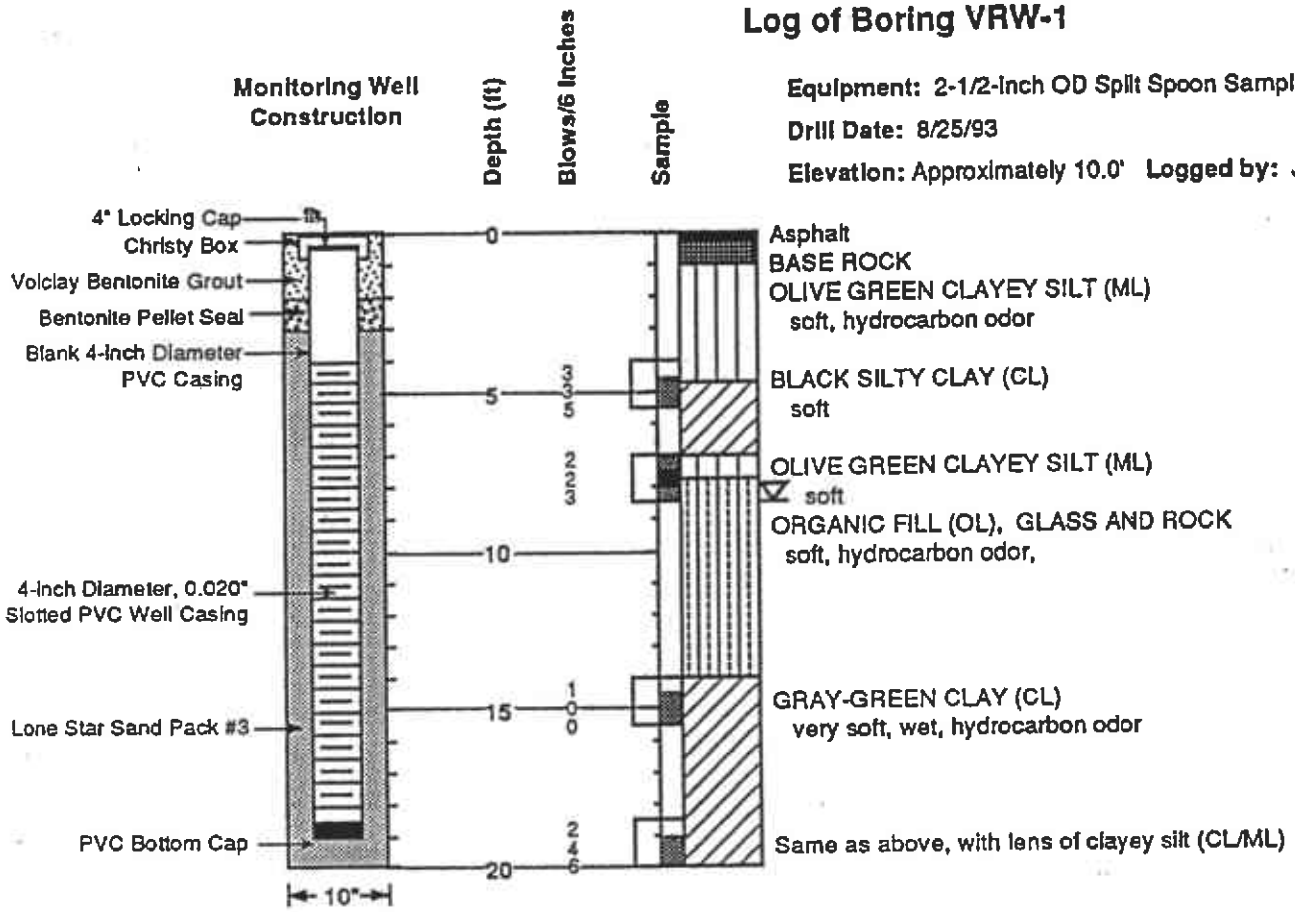


Log of Boring VRW-1

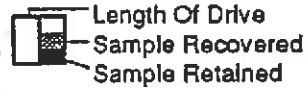
Equipment: 2-1/2-Inch OD Split Spoon Sampler

Drill Date: 8/25/93

Elevation: Approximately 10.0' **Logged by:** JB



LEGEND:



PROJECT NO.: 29.11		
DRAWN BY:	DD	11/15/93
APPROVED BY:	JB	12/14/93

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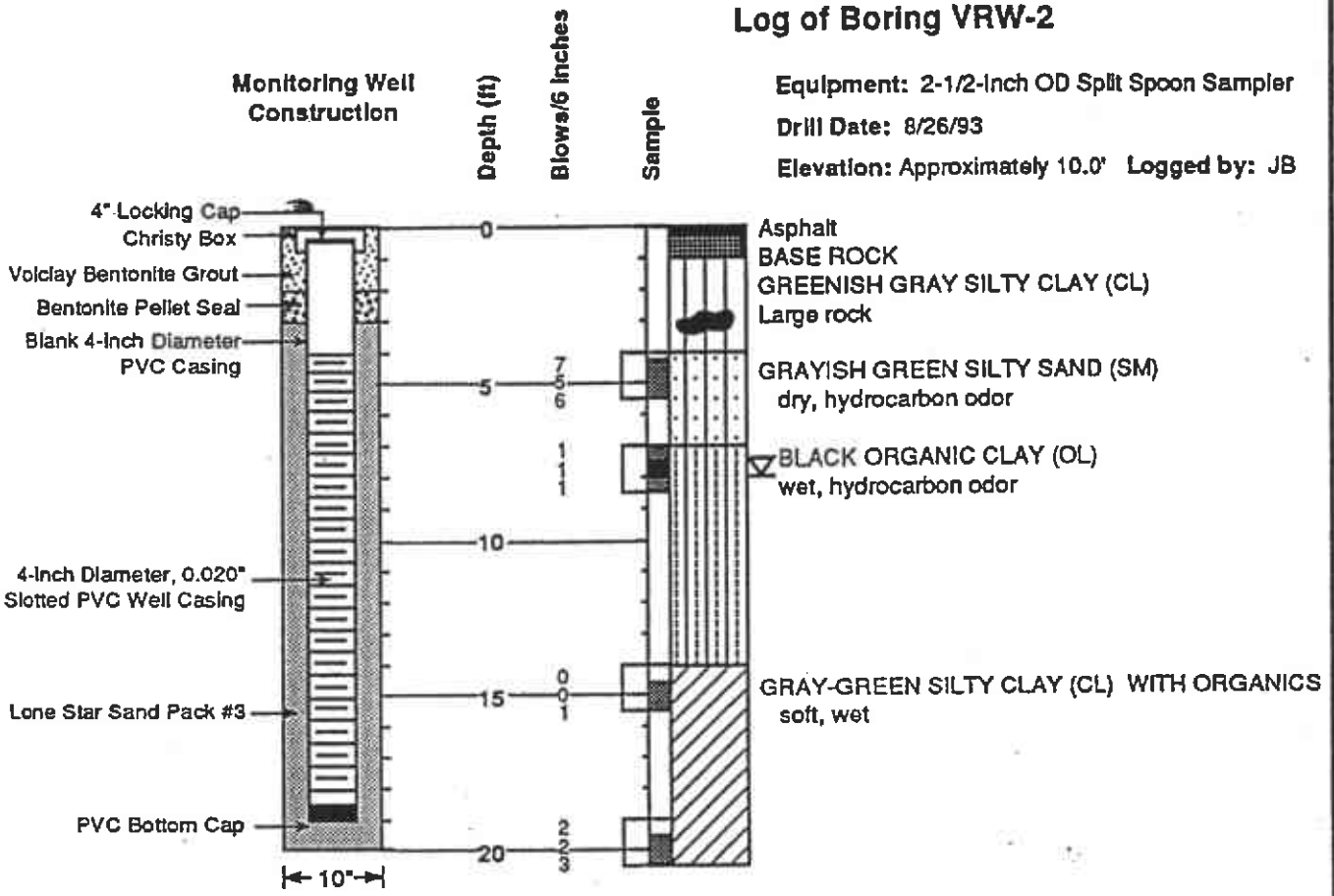
PLATE 1
LOG AND WELL CONSTRUCTION DETAILS, VRW-1
Pacific Supply
1735 24th Street
Oakland, California

Log of Boring VRW-2

Equipment: 2-1/2-Inch OD Split Spoon Sampler

Drill Date: 8/26/93

Elevation: Approximately 10.0' **Logged by:** JB



LEGEND:

Length Of Drive
Sample Recovered
Sample Retained

PROJECT NO.:	29.11	
DRAWN BY:	DD	11/15/93
APPROVED BY:	JB	12/1/93

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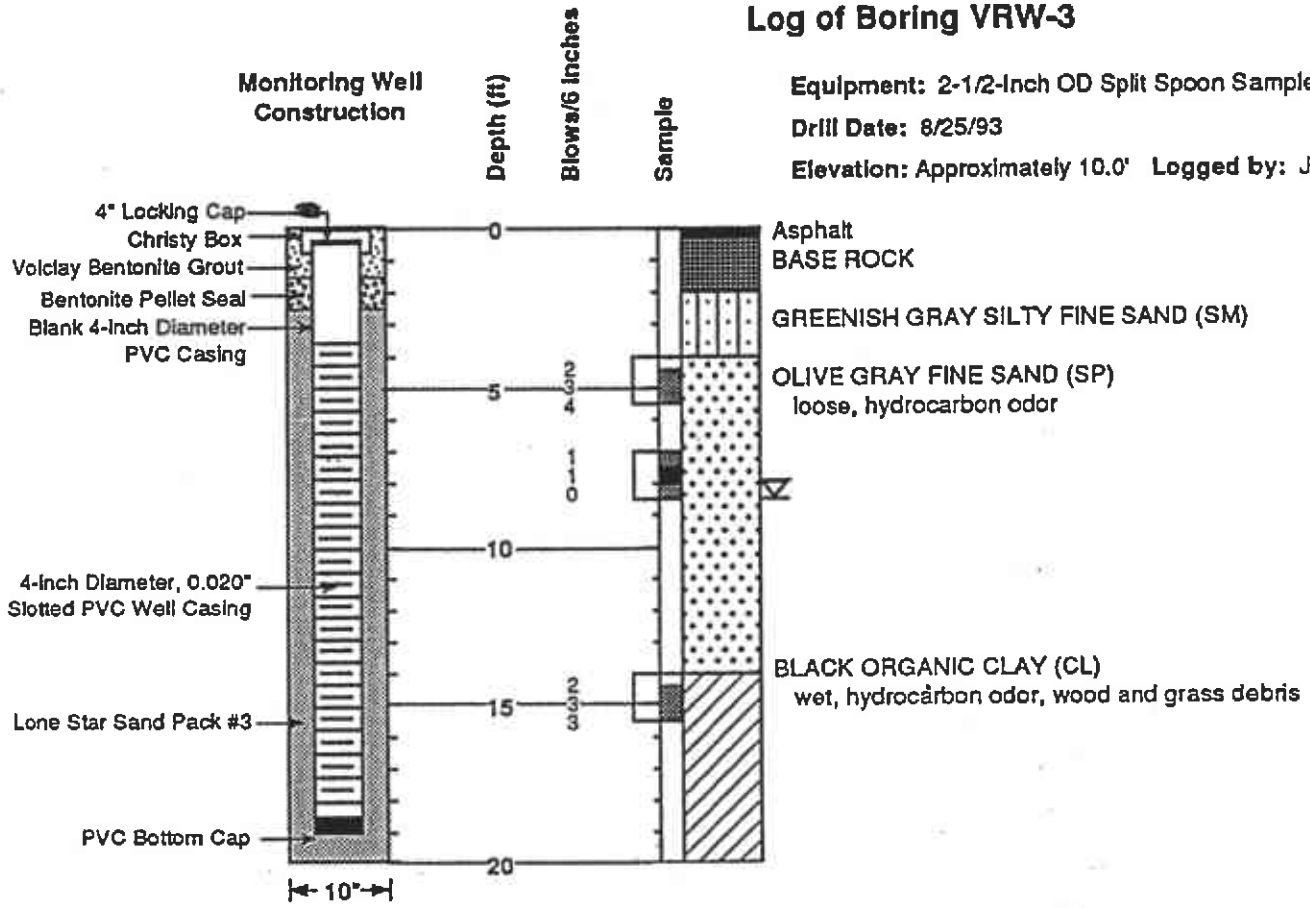
Brunsing Associates, Inc.

PLATE 2
LOG AND WELL CONSTRUCTION DETAILS, VRW-2
Pacific Supply
1735 24th Street
Oakland, California

Log of Boring VRW-3

Equipment: 2-1/2-Inch OD Split Spoon Sampler
Drill Date: 8/25/93
Elevation: Approximately 10.0' **Logged by:** JB



LEGEND:

Length Of Drive
Sample Recovered
Sample Retained

PROJECT NO.: 29.11		
DRAWN BY:	DD	11/15/93
APPROVED BY:	[illegible]	12/14/93

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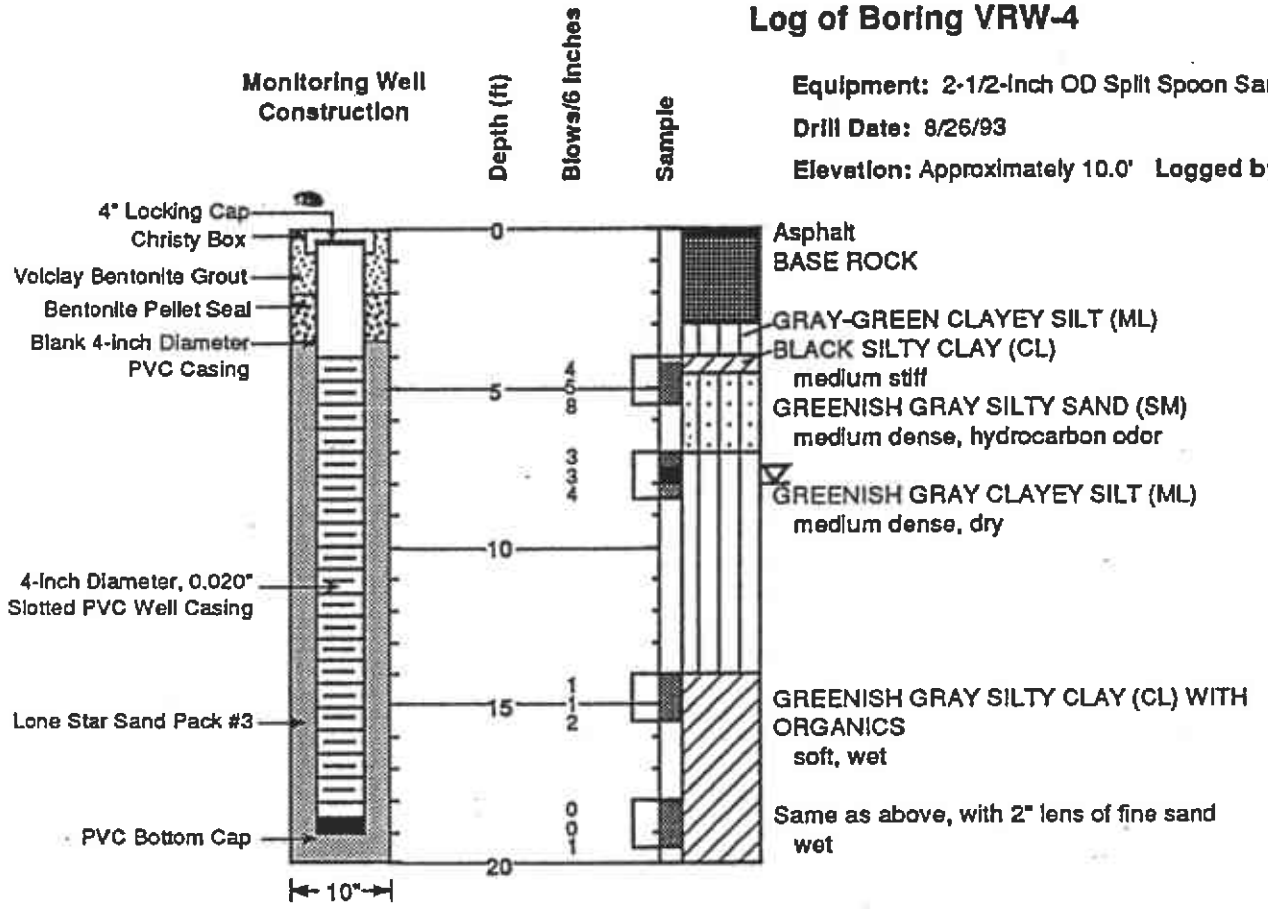
PLATE 3
LOG AND WELL CONSTRUCTION DETAILS, VRW-3
Pacific Supply
1735 24th Street
Oakland, California

Log of Boring VRW-4

Equipment: 2-1/2-Inch OD Split Spoon Sampler

Drill Date: 8/26/93

Elevation: Approximately 10.0' **Logged by:** JB



LEGEND:

Length Of Drive
Sample Recovered
Sample Retained

PROJECT NO.: 29.11		
DRAWN BY:	DD	11/15/93
APPROVED BY:	[illegible]	12/14/93

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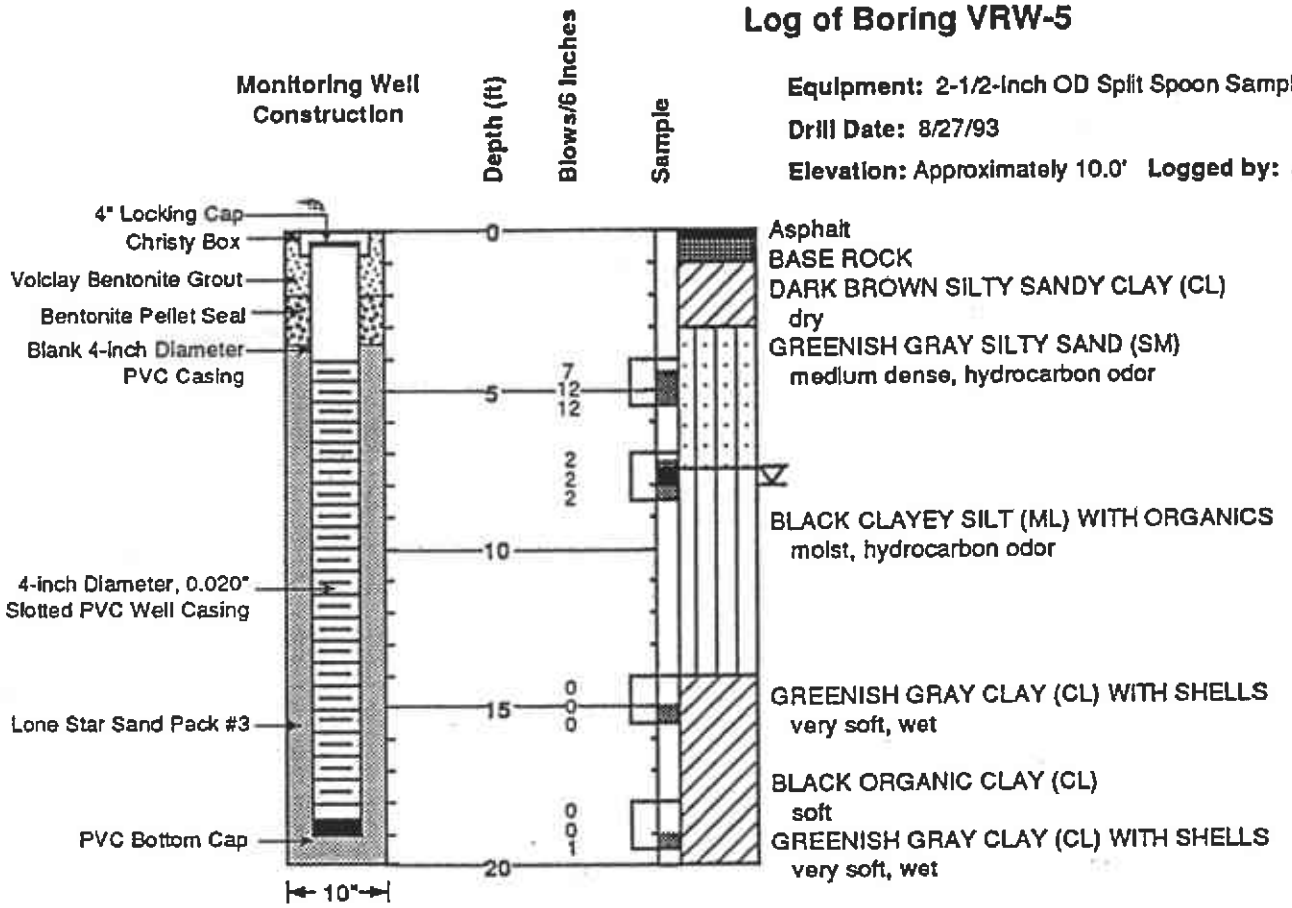
PLATE 4
LOG AND WELL CONSTRUCTION DETAILS, VRW-4
Pacific Supply
1735 24th Street
Oakland, California

Log of Boring VRW-5

Equipment: 2-1/2-inch OD Split Spoon Sampler
Drill Date: 8/27/93
Elevation: Approximately 10.0' **Logged by:** JB



LEGEND:

PROJECT NO.:	29.11	
DRAWN BY:	DD	11/15/93
APPROVED BY:	JB	12/14/93

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Brunsing Associates, Inc.

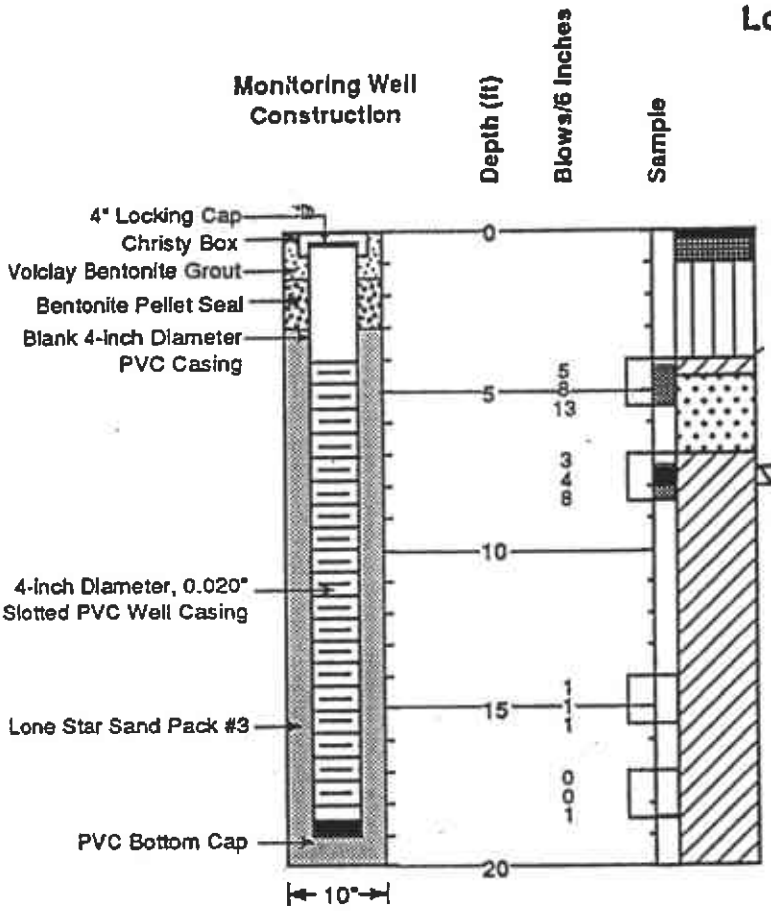
PLATE 5
LOG AND WELL CONSTRUCTION DETAILS, VRW-5
Pacific Supply
1735 24th Street
Oakland, California

Log of Boring VRW-6

Equipment: 2-1/2-Inch OD Split Spoon Sampler

Drill Date: 8/26/93

Elevation: Approximately 10.0' **Logged by:** JB



Asphalt
BASE ROCK
BROWN CLAYEY SILT (ML)
dry
BLACK SILTY CLAY (CL)
soft
GREENISH GRAY AND BROWN FINE SAND (SM)
loose to medium stiff, dry, slight hydrocarbon odor
clean sand
BLACK SILTY CLAY (CL)
soft to medium stiff, contains wood, glass, rock fragments
GRAY SILTY CLAY (CL)
very soft

LEGEND:

Length Of Drive
Sample Recovered
Sample Retained

PROJECT NO.: 29.11		
DRAWN BY:	DD	11/15/93
APPROVED BY:	JB	12/14/93

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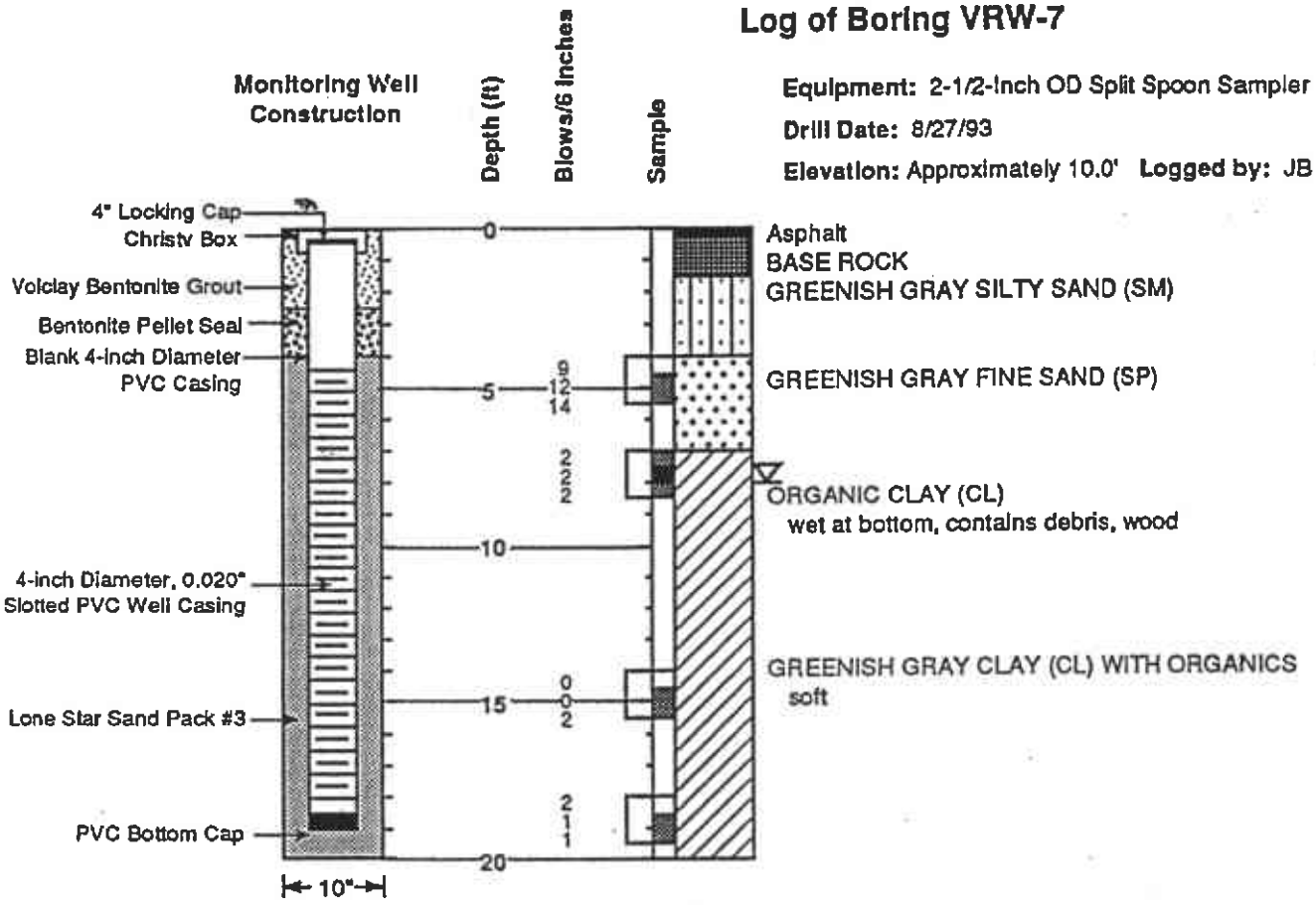
PLATE 6
LOG AND WELL CONSTRUCTION DETAILS, VRW-6
Pacific Supply
1735 24th Street
Oakland, California

Log of Boring VRW-7

Equipment: 2-1/2-Inch OD Split Spoon Sampler
Drill Date: 8/27/93
Elevation: Approximately 10.0' **Logged by:** JB



LEGEND:

Length Of Drive
Sample Recovered
Sample Retained

PROJECT NO.: 29.11		
DRAWN BY:	DD	11/15/93
APPROVED BY:	[illegible]	12/14/93

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Brunsing Associates, Inc.

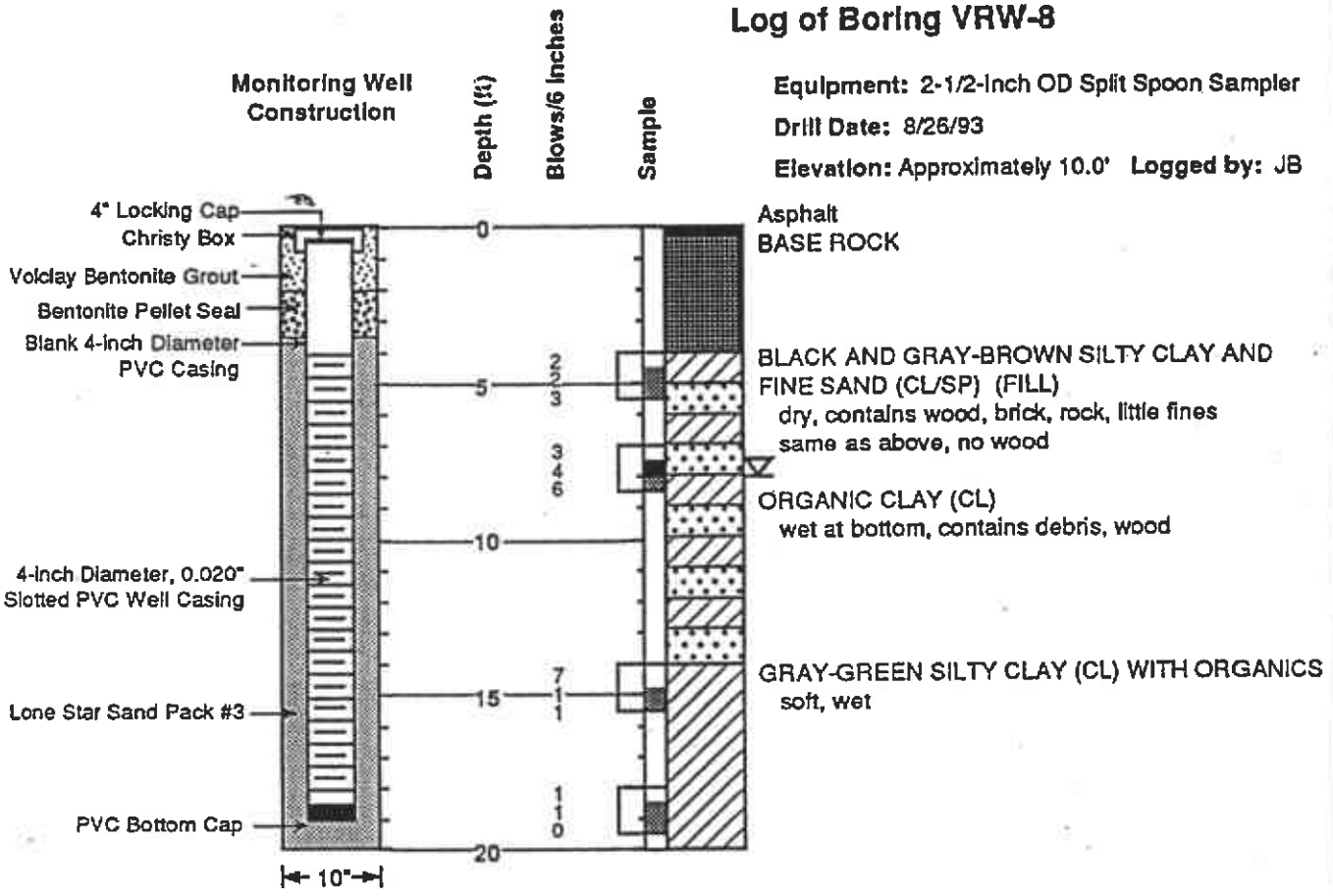
PLATE 7
LOG AND WELL CONSTRUCTION DETAILS, VRW-7
Pacific Supply
1735 24th Street
Oakland, California

Log of Boring VRW-8

Equipment: 2-1/2-Inch OD Split Spoon Sampler

Drill Date: 8/26/93

Elevation: Approximately 10.0' **Logged by:** JB



LEGEND:

PROJECT NO.:	29.11	
DRAWN BY:	DD	11/15/93
APPROVED BY:	JB	12/14/93

BACE Environmental
A Division Of
Brunsing Associates, Inc.

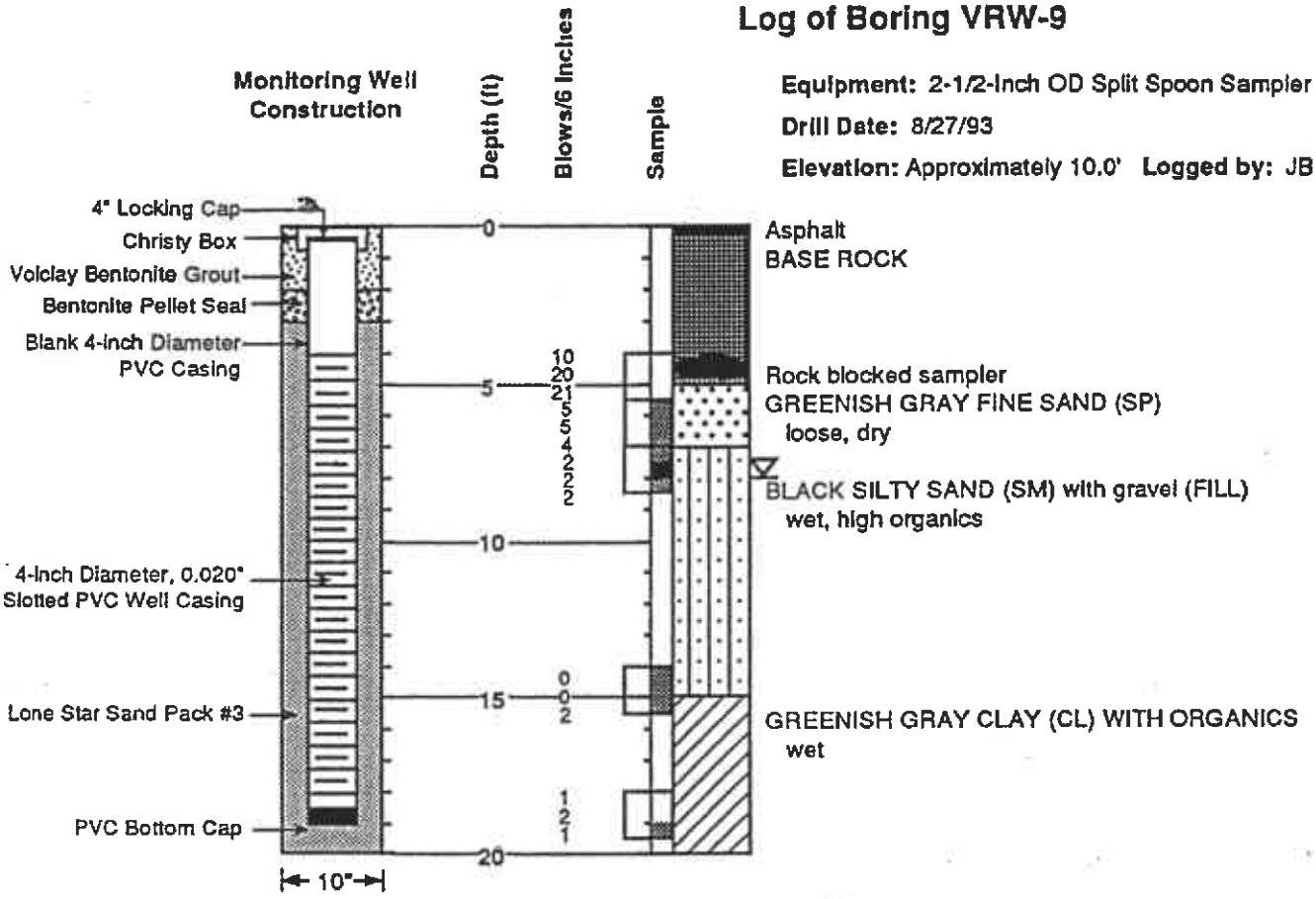
PLATE 8
LOG AND WELL CONSTRUCTION DETAILS, VRW-8
Pacific Supply
1735 24th Street
Oakland, California

Log of Boring VRW-9

Equipment: 2-1/2-Inch OD Split Spoon Sampler

Drill Date: 8/27/93

Elevation: Approximately 10.0' **Logged by:** JB



LEGEND:

Length Of Drive
Sample Recovered
Sample Retained

PROJECT NO.: 29.11		
DRAWN BY:	DD	11/15/93
APPROVED BY:	JB	12/14/93

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A Division Of
Brunsing Associates, Inc.

PLATE 9
LOG AND WELL CONSTRUCTION DETAILS, VRW-9
Pacific Supply
1735 24th Street
Oakland, California

APPENDIX E
Surveyors Data Collected June 2003

PHELPS & ASSOCIATES
LAND SURVEYORS

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

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.

Monitoring well	Elevation of 2" / 4" PVC pipe NAVD 88 Datum	North Rim Christy Box / Manhole NAVD 88 Datum
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

MONITORING well	Latitude	Longitude
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