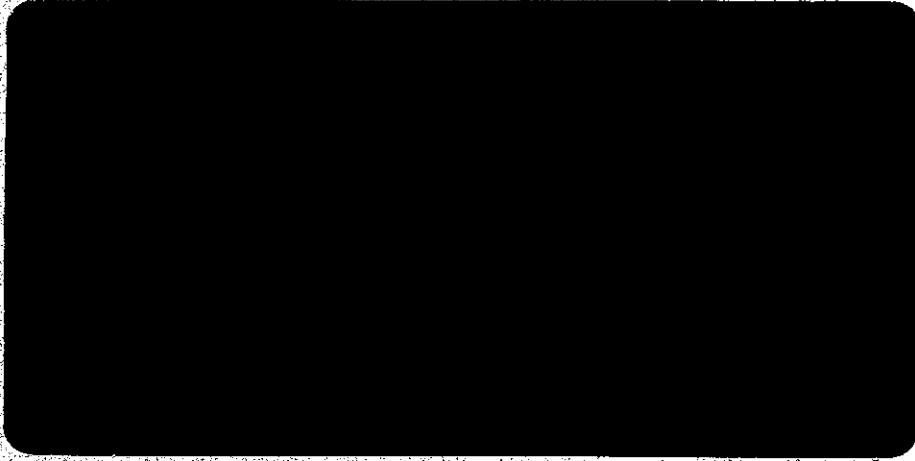


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SUBSURFACE INVESTIGATION ✓.1

at the

07/26/94

**New Century Beverage Company Facility
1150 Park Avenue, Emeryville, California**

Volume 1: Text, Figures, Tables, Appendices A & C

prepared for

New Century Beverage Co.
1150 Park Avenue
Emeryville, California 94618

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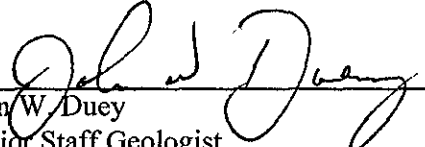
SUBSURFACE INVESTIGATION

at the

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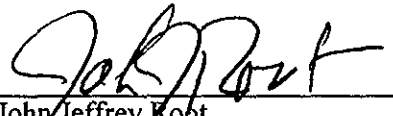
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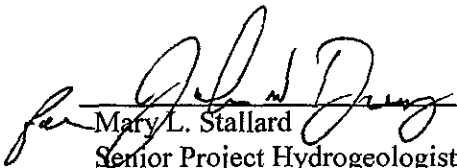


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The data, findings, recommendations, specifications and/or professional opinions presented in this report are intended for the sole use of the New Century Beverage Co., and are prepared in accordance with generally accepted professional engineering geology and environmental assessment practice. We make no other warranty, either expressed or implied, and are not responsible for the use or interpretation of the information contained in this report by others.



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SUMMARY

Weiss Associates (WA) conducted a subsurface investigation at the New Century Beverage Company facility, 1150 Park Avenue, Emeryville, California between March and June 1994. The assessment included a parcel immediately west of the property, which the company leases from the Del Monte Corporation, Inc. for use as a parking lot.

Before completing the investigation, WA conducted background research of the site and surrounding property history to identify potential sources of hazardous materials which may have impacted the subsurface from both offsite and onsite locations. We identified four potential onsite source areas where hazardous fuels or volatile organic compounds have been used or stored:

- 1) A former diesel underground storage tank (UST) at the southwest corner of the property;
- 2) An existing but inactive UST which stored gasoline and diesel near the western boundary;
- 3) A vehicle maintenance area in the warehouse in the northwest part of the site; and
- 4) A hazardous materials storage area near the southeast corner of the site.

Several potential offsite sources of hazardous materials were also identified. Of these, four sites were found to have the greatest potential for impacting the subject site:

- 1) The Standard Brands retail paint store to the northeast, which is the site of a former service station with USTs and was later an Oliver Rubber and Tire Co. manufacturing plant;
- 2) The former Emeryville Fire Department (EFD) which presently has a diesel UST at the site;
- 3) The Emeryville Redevelopment Agency -US Postal Service (ERDA-USPS) site which has a known gasoline and diesel leak beneath the site which impacted ground water and migrated offsite; and
- 4) The "Corner Site," located at the northwest corner of Park Avenue and San Pablo Avenue, a former service station with USTs that is now occupied by a fast-food store.

Based on the history of the site and surrounding properties, WA collected soil samples from 39 soil borings drilled throughout the property and adjacent leased parking area. Open-borehole water samples were also collected from each soil boring and analyzed along with 67 soil samples for gasoline,

mineral spirits, kerosene, diesel, hydraulic fluid, motor oil, benzene, toluene, ethylbenzene, xylenes and halogenated volatile organic compounds (HVOCs). Nine ground water monitoring wells were installed at the site to collect ground water samples for chemical analysis and determine the shallow ground water flow direction.

Ground water elevation data indicate that shallow ground water beneath the site flows southwestward. This is consistent with the topographic slope and with the ground water flow direction reported at the Del Monte property west of the subject facility. Ground water beneath the ERDA-USPS site reportedly flows west-southwestward to northwestward, with a northwestward gradient in 1990 and 1991, and a more westward gradient in 1994. The northwestward gradient reported at the ERDA-USPS site may result from the differing topographic slope, which is gently northwestward toward Temescal Creek on the north end of the site, while it is gently southwestward on the south end. During a drought such as in 1990 and 1991 in this region, falling ground water levels may induce flow toward high-permeability materials which may be found in the vicinity of Temescal Creek.

Analytic results of the soil and open-borehole ground water samples identified four areas where hydrocarbons occur in ground water beneath the site:

- 1) Gasoline compounds up to 22 ppm were detected in open-borehole water samples collected downgradient of the existing onsite UST.
- 2) Diesel and motor oil compounds were detected in the backfill of the former onsite diesel tank and in borings up to 60-ft to the southwest.

Fuel compounds detected at the upgradient property boundary indicate that two of the hydrocarbon occurrences originate offsite.

- 3) A sheen was noted on the ground water at one sampling location adjacent to the EFD property, and diesel at 220 ppm was detected in an open-borehole water sample. Although no diesel compounds were detected in surrounding borings, gasoline was detected at concentrations as high as 20 ppm in open-borehole water samples from borings near the EFD site. This portion of the site is also downgradient of the ERDA-USPS fuel leak site and the Standard Brands UST site.
- 4) The last ground water hydrocarbon occurrence is in the southeast corner of the property, adjacent to the Corner Site. The fact that onsite unsaturated soil samples did not contain any hydrocarbons, and the open-borehole water samples from all borings drilled adjacent to the Corner Site contained detectable gasoline compounds, indicates these hydrocarbons also originate offsite.

Although HVOCs at relatively low concentrations were detected in unsaturated samples in the vehicle maintenance and hazardous materials storage areas, No HVOCs were detected in ground water samples from the monitoring wells in these areas.

Analytic results of the ground water samples from the wells were generally consistent with the open-borehole water sample results, although the reported concentrations were generally lower. The generally higher hydrocarbon concentrations in the open-borehole samples may result from hydrocarbons adhering to the significant suspended silt and clay typically contained in those samples. Therefore, the open-borehole samples are not representative of actual ground water conditions.

1 INTRODUCTION

This report presents the results of a subsurface investigation conducted by Weiss Associates (WA) at the New Century Beverage Co. Facility at 1150 Park Avenue in Emeryville, California, a canner and distributor of Pepsi-Cola and other soft-drink products (Figure 1). The objectives of this investigation were to determine whether organic compounds are present in the subsurface, and if so, to identify the source and define the extent in shallow soil and ground water beneath the site. Prior to beginning the field work, WA researched the hazardous materials use history of the site and surrounding properties by conducting site inspections and interviews, and reviewing agency and other records, historical maps, aerial photographs, and previous environmental investigations at surrounding properties.

WA used the site and surrounding property history to design the initial subsurface sampling, and conducted additional sampling based on the initial sampling results. Soil and open-borehole water samples from 39 borings were analyzed for potential contaminants of concern, and based on the results of these analyses, nine ground water monitoring wells were installed and sampled.

Background information on the subject facility and surrounding sites is summarized in Section 2. Section 3 presents the subsurface investigation results, and Section 4 presents WA's conclusions regarding discovered hazardous materials releases.

2 BACKGROUND

2.1 SITE HISTORY AND CURRENT USE

Soft drink production began at 1150 Park Avenue in 1958, in a newly constructed bottling plant on a 2.9-acre site. The plant was constructed on the site of the Oakland Ball Park, a semi-professional baseball facility. Based on aerial photograph and fire insurance map review, the site was undeveloped except for a residence prior to its use as a ball park beginning in about 1913.

The main building on the 2.9-acre site houses the administrative offices, a quality control laboratory, a production area which includes soft drink canning, a packaging area, and product storage (Figure 2). The warehouse north of the main building is used to store products packaged for distribution, and also contains the vehicle maintenance shop. Operations at the plant include treatment of incoming municipal water; formulation and canning of soft drinks; packaging and warehousing of canned products for distribution; and vehicle and other equipment maintenance.

Since November 1992, the company has also leased the adjacent 2.1-acre unpaved parcel west of the property from Del Monte Foods (Figure 2). This area is used for delivery truck and employee parking, as Del Monte did prior to the lease arrangement. Based on aerial photograph review, this leased parcel has never been paved and was undeveloped prior to the Oakland Ball Park construction.

2.2 POTENTIAL SOURCE AREAS

Based on the subject site history, WA identified four areas where organic compounds were used or stored warranting subsurface investigation:

- 1) The existing, inactive underground storage tank (UST) and associated piping and pump islands.

This 10,000-gallon, single-walled steel UST is located along the northwest side of the main building and feeds two dispenser islands inside the building (Figure 2). Approximately one year ago, an underground break in the plant's high-pressure fire sprinkler system caused significant soil displacement and formed a cavity in the ground near the tank. Since personnel identified a potential for future damage to the tank system, the tank contents were removed and the tank was temporarily decommissioned at that time. According to plant personnel, the tank may have been installed when the building was constructed in 1958, contained gasoline until 1987, and contained diesel from 1987 until it was taken out of service in 1993. This tank is scheduled for removal in July, 1994.

- 2) The former diesel UST.

This 10,000-gallon UST was removed from the front of the main entrance at Park Avenue in early 1987 (Figure 2). The tank was removed with oversight of the Alameda County Health Care Services Agency (ACHA), and no diesel was detected in either of two soil samples taken from the bottom of the excavation pit (RJM, 1987).

- 3) The vehicle maintenance shop.

Petroleum products associated with vehicle maintenance such as motor oil are used and stored in this shop located at the west end of the warehouse (Figure 2).

- 4) The outside hazardous materials storage shed/area.

Organic chemicals such as lubricating and hydraulic oils, grease and degreasers are stored in this area along the southeast side of the main building.

2.3 SURROUNDING LAND USE HISTORY

The City of Emeryville was incorporated in 1896. At that time, the area around the subject site was primarily agricultural; however, some industrialization of the area had already begun. Presently, the area is dominated by commercial, light industrial, and residential uses. Adjacent properties to the northwest are residential. To the north is a Standard Brands Paint store, and to the east are the former Emeryville Fire Department (EFD) Station #1, a restaurant, meeting hall, cafe, and a fast-food store. South of Park Avenue from the subject site is the Oaks Club card room, Fantasy Junction vintage car dealers, and New Logic Designs, a filtration systems designer. Immediately to the west is the unpaved parcel which is leased from the Del Monte Corporation for fleet and employee parking. Further west is the vacant Del Monte Plant 35, which operated from 1918 until 1989 (Figure 2).

2.4 POTENTIAL OFFSITE CONTAMINANT RELEASES

WA identified a number of sites in the vicinity where contaminant releases that could impact the subject site may have occurred. The four sites identified as most likely to have impacted the subject site (Figure 2) are:

1) Standard Brands.

This paint retail store, located immediately to the north of the subject site (Figure 2), was formerly a gas station and later an Oliver Rubber & Tire Company manufacturing facility. USTs are shown at this site on 1950 and 1967 fire insurance maps. In addition, organic compounds may have been used and stored at the site during Oliver Rubber Co. operations.

2) Former Emeryville Fire Department (EFD) Station.

A gasoline and/or diesel UST is presently located at this site, which is immediately to the east of the subject site (Figure 2). Although the present building and existing UST is located on the southern portion of the EFD lot, aerial photographs show an earlier EFD building occupying the northern portion of the lot. According to EFD officials, at least one UST has been associated with this earlier facility location; however, the location of the tank is not known, and the EFD does not know if the tank has been removed (ERDA, 1994).

3) The Corner Site.

Although no significant hazardous materials use is suspected by the present fast-food operation located at the northwest corner of Park Avenue and San Pablo Avenue, this adjacent property was formerly a gas station, and USTs are shown on 1950 and 1967 fire insurance maps. We have found no evidence that the tanks were removed from the property when the gas station was razed.

4) Emeryville Redevelopment Agency - U.S. Post Office (ERDA-USPS).

This site is located about 220 ft east of the subject property on the east side of San Pablo Avenue. A gasoline and diesel release is known to have impacted ground water near former USTs at this site, and these compounds have migrated to the west-southwest or northwest.

2.5 REGIONAL SETTING

The subject site is located about 40 ft above mean sea level (MSL), on an alluvial plain that gently slopes toward San Francisco Bay, which is located about one-half mile to the west. The north-northwest trending Berkeley Hills are about two miles to the east. The topography at the site slopes southwest, while north of the site the land slopes locally northwest towards Temescal Creek, which is about 1,500 ft north of the site. Surface water drainage on the concrete-covered property is controlled by

storm drains connected to the municipal storm sewers; however, the parking area leased from Del Monte is unpaved.

The site is about two miles west of the active, northwest-trending right-lateral Hayward Fault Zone of the San Andreas Fault System. Helley et al. (1972) indicate that the uppermost sediments beneath the site are 15 ft or less of Quaternary fluvial deposits consisting primarily of fine sand, silt and silty clay. Underlying the fluvial deposits are interfluvial basin deposits consisting of plastic silty clay and clay, with interfingering fluvial and alluvial fan deposits.

Two different shallow ground water flow directions have been reported in the site vicinity. At the neighboring Del Monte site, southwestward ground water flow was reported (CH₂M Hill, 1992), while the ground water elevations at the ERDA-USPS site indicate a generally west-southwestward to northwestward flow direction (Subsurface Consultants, 1993a,b). These reported flow directions are generally consistent with the topographic slope in the area, which is generally to the southwest at the site, and to the northwest toward Temescal Creek north of the site. Additionally, the ERDA-USPS flow direction was apparently northwestward during the preceding 1990 and 1991 drought years, while more recent 1993 data indicates a generally westward flow direction. When water levels are falling as in a drought, ground water tends to flow toward relatively high-permeability materials which might be found near Temescal Creek.

3 SUBSURFACE INVESTIGATION

Between March 14 and June 1, 1994, WA conducted a subsurface investigation at the subject facility to evaluate whether soil or ground water beneath the site has been impacted by possible onsite or offsite hazardous materials releases. Based on the findings of our background research, we drilled 22 soil borings and installed seven ground water monitoring wells at the facility near onsite hazardous materials storage areas and along the inferred upgradient (eastern) property boundary (Figure 3). Based on initial findings from these earlier borings and wells, we drilled 17 additional borings and installed two additional monitoring wells to further define the extent of compounds found in the soil and ground water. Soil and ground water samples from the borings and wells were analyzed for potential hazardous constituents in the subsurface as identified in the background research.

Prior to performing any field work, WA prepared a site safety plan that addressed all potential hazards related to the field activities, and outlined preventive measures and procedures to protect site workers. Borings and wells on the leased portion of the site were completed with the permission of the Del Monte Corporation. The Alameda County Flood Control and Water Conservation District - Zone 7 issued Permit No. 94176 for the soil borings and monitoring wells.

3.1 SOIL BORINGS

WA initially drilled 22 soil borings at the site, including eight borings (B-19, B-20, B-23, B-24, B-25, B-34, B-35, and B-36) in the fleet parking lot leased from Del Monte. Eleven soil borings (B-1 through B-4, B-8 through B-12, B-21 and B-22) were located along the northern and eastern property boundaries to evaluate whether upgradient hazardous materials releases have impacted the property. Boring B-3 was also located near the hazardous materials storage area at the southeast corner of the property. Seven borings (B-5, B-6 and B-15 through B-19) were located near the one existing and one former UST located west of the main building to evaluate whether fuel compounds are in soil and ground water in these areas. Boring B-7 was located northeast of the existing UST to evaluate ground water quality upgradient of the tank. Two borings (B-13 and B-14) were located in the vehicle maintenance area to evaluate the underlying soils. Borings B-19 and B-20 were located in the fleet parking lot to evaluate general soil and ground water conditions on the leased parcel.

Based on the analytic results of the initial borings and ground water elevations which indicated a southwestward shallow ground water flow beneath the site (discussed in Sections 3.1.2 and 3.2.2), 17 additional soil borings were drilled to determine the extent of detectable hydrocarbon compounds in the subsurface near potential onsite and offsite sources. Nine of these borings (B-26 through B-31 and B-37 through B-39) were drilled downgradient of the EFD property. These borings are also west of the

ERDA-USPS fuel leak site east of the EFD site on San Pablo Avenue. Two of the borings (B-32 and B-33) were drilled southwest of the Corner Site, a former service station. Six borings (B-23 through B-25 and B-34 through B-36) were drilled on the fleet parking lot southwest of the onsite USTs and vehicle maintenance area.

All borings were drilled using hollow-stem auger drilling rigs with 5-in. to 8-in. diameter augers operated by California-licensed well-drilling contractors. The top four to five ft of each boring was hand-augered to prevent possible damage to subsurface utilities. Soil samples were collected every 2.5-ft for hydrogeologic description and possible chemical analysis using 1.5- or 2-ft length, 1.5- to 2.5-in. inside diameter split-barrel samplers lined with steam-cleaned brass or stainless steel tubes. Drilling equipment was steam-cleaned prior to use in each boring and sampling equipment was washed with Alconox detergent and rinsed between samples to prevent cross-contamination. Upon removal from the sampler, one sample tube was immediately sealed with Teflon tape and plastic caps, and labeled and refrigerated for delivery under chain of custody to the analytical laboratory.

All borings were drilled until ground water was encountered in the borings. Since previous sampling at the Del Monte site reported static ground water levels at about 10-ft below ground surface (CH2MHill, 1992), the field geologists allowed time for ground water to collect in the borings between sampling locations below this depth. When ground water was encountered, the augers were pulled above the water level and an open-borehole water sample was collected using steam-cleaned Teflon bailers or certified-clean, disposable polyethylene bailers. Each sample was decanted into appropriate containers and immediately refrigerated for delivery under chain-of-custody to the analytical laboratory. Bailer blanks were collected for possible analysis to assure that no cross-contamination occurred during the sampling, and travel blanks prepared by the laboratory accompanied each shipment from sample collection until analysis at the laboratory.

The soil and open-borehole water samples were shipped to Curtis & Tompkins, Ltd. of Berkeley, California, a State-certified analytical laboratory. Two split open-borehole ground water samples were also sent to GTEL Environmental Laboratories of Concord, California (also State-certified) as a further quality control check. After sampling, all borings were backfilled using grout consisting of Portland cement with 3-5 percent bentonite powder, installed through a tremie pipe. Boring logs are presented in Appendix A. Copies of the chain-of-custody documents are included with the certified analytic reports in Appendix B.

3.1.1 Hydrogeologic Conditions

The sediments encountered in the soil borings varied from low permeability silty clay, clayey silt and sandy silt to moderate permeability silty sand and gravel. Although some relatively high-permeability deposits were encountered, the permeable layers in the saturated zone are relatively thin,

moderate permeability layers that may not be continuous across the site. A low-permeability unit was encountered at or near the ground water surface in most borings, and because of this, ground water often did not collect in the soil borings until drilling to about 15- to 20-ft depth, then subsequently rose in the borings.

3.1.2 Analytic Results for Soil and Open-borehole Water Samples

Soil samples were surveyed in the field with a photoionization detector (PID) to qualitatively evaluate whether volatile hydrocarbons were present. The field PID is used for qualitative assessment only, because the correlation between the volume-based measurement of the PID and mass-based measurement of a laboratory analysis is not well defined, and because field measurement procedures are less precise than laboratory procedures. Field PID readings are shown on the boring logs in Appendix A.

WA also checked the sediment samples for odor and staining which would indicate the presence of organic compounds. A sheen with an associated fuel odor characterized in the field as moderate was noted in the saturated sediment sample at 10-ft depth in boring B-10, located downgradient of the EFD property. A strong gasoline-like odor and possible separate-phase fuel product was noted at 7.5-ft depth in boring B-22, also downgradient of the EFD property. The sediments at about 7.5 ft depth in borings B-22 and B-29 were stained gray-green, with an associated gasoline-like odor.

Based on the field observations and the field PID measurements, a total of 67 soil samples were selected for chemical analysis. Soil samples were selected for analysis to profile contaminant concentrations in the unsaturated zone near potential source areas, and to characterize soil concentrations near the water table or in permeable units in areas downgradient of the potential sources. Based on the subject site and surrounding property chemical use history, all soil samples were analyzed for the following compounds:

- Total volatile hydrocarbons (TVH) by the California Department of Health Services (DHS) method using gas chromatography (GC) and flame ionization detection (FID), with detected hydrocarbons compared to typical gasoline and mineral spirits chromatograms,
- Total extractable hydrocarbons (TEH) by the DHS method using solvent extraction and GC/FID, with the detected hydrocarbons compared to typical kerosene, diesel, hydraulic fluid and motor oil chromatograms,
- Benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8020, GC with a PID, and,
- Halogenated volatile organic compounds (HVOCs) by EPA Method 8010, GC with halide-specific detection.

Analytic results of the soil and open-borehole ground water samples are presented in Table 1. Copies of the certified analytic reports are included in Appendix B.

A letter from Curtis & Tompkins clarifying the interpretation of TVH and TEH results is also included in Appendix B. Due to the nature of the various hydrocarbon/fuel products, precise identification of TEH and TVH compounds detected by the DHS method is not always feasible. For example, the TEH analysis reports kerosene-range compounds in several samples. However, the laboratory has indicated that this class of hydrocarbons is more likely a portion of the gasoline which was also detected in the samples using the TVH extraction method.

Fuel hydrocarbons were detected in four different areas, and HVOCs were detected in two areas of the property. A discussion of the results for each of these areas follows.

Northeast Property Boundary

Borings B-1 through B-4, B-8 through B-12, B-21, B-22, B-26 and B-29 were located near the northern and eastern property boundaries. No analytes were detected in any samples from B-8 or B-9, drilled adjacent to the Standard Brands property near the north property boundary. Additionally, no analytes were detected in any unsaturated soil samples in this area.

Relatively high concentrations of gasoline- and diesel-range compounds were detected in saturated soil and open-borehole water samples from borings B-10, B-22 and B-29, directly downgradient of the EFD and ERDA-USPS properties. The diesel was detected only in boring B-22, at 340 ppm in the saturated soil sample and at 220 ppm in the open-borehole water sample. Gasoline was detected at 130 ppm in the saturated soil sample at B-22. The open-borehole water samples from B-10, B-22 and B-29 had 15, 6 and 20 ppm of gasoline, respectively. Lower concentrations of gasoline-range compounds were detected in the open-borehole water samples from borings B-1, B-2, B-11 and B-26, which are all in the same general vicinity. BTEX were detected in open-borehole ground water samples from borings B-2, B-10, B-11, B-22, B-26 and B-29, including 0.34 ppm benzene in boring B-10.

The open-borehole water sample from boring B-7, about 150-ft southwest of Borings B-2 and B-10, contained gasoline-range hydrocarbons near the 0.05-ppm detection limit. Because of this, borings B-38 and B-39 were drilled further to the southwest to evaluate the extent of detectable hydrocarbons originating at the northeast property boundary. Although 0.01 ppm xylenes was detected in the saturated 10-ft depth soil sample from B-39, no other hydrocarbons were detected in any of the soil or open-borehole ground water samples from these borings.

Southeast Property Boundary

No fuel compounds were detected in any unsaturated soil samples from borings B-3, B-4, B-12 or B-21. The 2.5-ft depth soil sample from B-3, drilled in the hazardous materials storage area, contained 0.28 ppm of perchloroethylene (PCE). However, no HVOCs were detected in the 7.5-ft depth sample, which was also unsaturated (Table 1).

Gasoline-range hydrocarbons were detected in saturated sediment and open-borehole water samples from borings B-3, B-4 and B-21, which are all directly southwest of the USTs known to have been located at the Corner Site. The open-borehole water sample from boring B-3 contained BTEX, including 0.001 ppm benzene and 0.046 ppm xylenes,

Vehicle Maintenance Area

Xylenes were detected in two unsaturated soil samples collected beneath the maintenance area (B-13 and B-14), but no hydrocarbon compounds were detected in any saturated soil or open-borehole ground water samples from these borings. Xylenes were detected in a saturated sediment sample from B-36 about 80-ft west-southwest of the maintenance area, however, no hydrocarbons were detected in the open-borehole ground water sample. No hydrocarbons were detected in boring B-20, more directly downgradient of the maintenance area than B-36.

Although trichloroethylene (TCE), methylene chloride and 1,1-dichloroethane (1,1-DCA) were detected in the 2.5-ft depth sample from B-13, none of these compounds or other HVOCs were detected in any other samples from boring B-13, or from B-14, B-20 or B-36.

Existing UST

Six unsaturated soil samples from borings B-15, B-16 and B-17, drilled adjacent to the existing UST, were analyzed for TVH, TEH, BTEX and HVOCs. Only the two unsaturated samples in B-17 contained detectable hydrocarbons. The 7.5-ft depth sample in B-17 contained 130 ppm gasoline-range hydrocarbons and 230 ppm kerosene-range hydrocarbons, which the laboratory also identified as a gasoline fraction. The open-borehole ground water samples from all three of these borings contained detectable hydrocarbons. However, B-15 just northwest of the UST had significantly lower concentrations than B-16 and B-17.

Borings B-5 and B-18, drilled west and south of the tank, respectively, contained up to 0.95 ppm gasoline-range hydrocarbons in the open-borehole water samples. BTEX was also detected in these open-borehole water samples, including 0.18 ppm of benzene in B-5. An unsaturated soil sample from B-5 at 5-ft depth also contained 2,200 ppm motor oil-range hydrocarbons. However, no motor oil was detected in any other surrounding borings, indicating that this is an isolated occurrence.

Former UST

Up to 230 ppm diesel-range hydrocarbons were detected in unsaturated soil samples and up to 110 ppm diesel-range hydrocarbons were detected in the open-borehole ground water sample from boring B-6, located in the backfill from the 1987 tank removal, and boring B-19, 50 ft to the northwest. Motor-oil range hydrocarbons were also reported in the B-6 soil samples in concentrations up to 1,200 ppm. Ethylbenzene and xylenes (diesel components) were also reported in some of these samples, including 7 ppm in the 7.5-ft depth sediment sample from B-6. Boring B-23, located further to the southwest, had no detectable hydrocarbons. In addition, no soil or open-borehole water samples from borings B-32 and B-33, 70-ft northeast of the former UST, contained any detectable hydrocarbons.

South Side of Site

Although PCE was detected at the 2.5-ft depth soil sample from boring B-3, no PCE or related compounds were detected in the deeper soil sample or the open-borehole water sample from this boring. Open-borehole ground water samples from B-32, B-33, B-6 and B-23 contained one or more HVOCs including PCE, TCE, cis-1,2-dichloroethylene (c-1,2-DCE) and vinyl chloride (VC). TCE, c-1,2-DCE and VC are breakdown products of PCE. Reported concentrations were 0.006 ppm or less for each compound, where detected.

3.2 GROUND WATER MONITORING WELLS

Between March 14 and March 18, 1994, WA installed seven ground water monitoring wells on the subject property. Wells MW-1, MW-2, MW-3 and MW-4 were installed along the north and east property boundaries to monitor ground water migrating from potential upgradient contaminant sources, including the EFD, ERDA-USPS, Standard Brands and the Corner sites. Although we initially proposed to install well MW-2 in boring B-2, initial analytic reports and field observations, including potential free-phase fuel product, suggested that B-22 was a more appropriate location. Well MW-4 was installed adjacent to boring B-21 rather than B-4 based on open-borehole water sample results and the location of the former USTs at the Corner Site. Well MW-3 was installed at the hazardous materials storage area. That portion of the property was also previously part of the Corner Site when it operated as a service station.

MW-5 was installed adjacent to boring B-5 rather than B-18 based on higher hydrocarbon concentrations in the open-borehole ground water samples, and the presence of motor-oil range hydrocarbons in unsaturated soil at B-5. Well MW-6, southwest of the former diesel tank, was moved southwest of boring B-6 to avoid sampling in the high-permeability backfill from the tank excavation,

which is not representative of the surrounding ground water conditions. Well MW-7 was positioned about 75-ft northeast of the existing onsite UST to determine upgradient ground water quality.

Ground water elevations from wells MW-1 through MW-7, measured on March 27, indicated that shallow ground water flows southwestward beneath the site (see Section 3.2.2). Therefore, well MW-8 was installed in boring B-34, directly downgradient of MW-5 and the existing onsite UST. In addition, well MW-9 was installed to monitor ground water quality downgradient of the vehicle maintenance area and to better estimate the ground water flow direction.

3.2.1 Well Construction and Development

Each new well is screened in the first water-bearing zone identified during drilling. The wells are generally less than 20-ft deep with 3- to 12-ft long screen lengths. Each well screen was extended above the static ground water level, unless a shallower relatively high permeability layer was identified in the boring. In those instances, the well was constructed to prevent ground water migration between the higher permeability zones. A minimum 4-ft surface seal was installed in each well to prevent infiltration of surface water into the well along the casing.

All monitoring wells were constructed in 7.5- to 8-in. diameter boreholes with 2-inch diameter, 0.01-inch factory slotted, flush-threaded PVC well screen and blank casing. Number 2/16 Monterey sand was placed between the casing and borehole wall, from the bottom of the well to 0.5-ft to 2 ft above the well screen, depending on the length of the screen. Six-in. to 1-ft of bentonite pellets separate the sand pack from the annular surface seal, which was constructed of Portland cement with 3-5 percent bentonite powder in each well, installed through a tremie pipe. All wells were completed at grade with traffic-rated watertight vaults and locking, watertight well caps.

After waiting at least three days after well construction to allow the annular grout seal to cure properly, WA environmental technicians developed each well using surge agitation and bailing. At least ten well volumes of water were bailed from each well. Because wells MW-1 and MW-2 had low yield, we injected 3- to 12-gal of deionized water into each well to expedite development. The ground water pH, temperature and electrical conductivity were monitored during development. In wells with sufficient yield, development continued until all three measured parameters stabilized and the technician noted that the amount of suspended solids removed during bailing stabilized as well.

3.2.2 Surveying and Ground Water Elevations

On March 27, PLS Surveys of Alameda, California, surveyed the wellhead and ground surface elevations of wells MW-1 through MW-7. The elevations were reported relative to MSL using the

United States Coast and Geodetic Survey benchmark on the north face of the old Emeryville Town Hall building at Park Avenue and Hollis Street (Elevation 24.514 ft above MSL). On April 8, the wellhead elevations of MW-8 and MW-9 were surveyed by PLS using the same benchmark. The wellhead elevations are shown on Table 2, and the ground surface elevations are shown on the well logs in Appendix A.

Water levels were measured in MW-1 through MW-7 on March 27, and in all nine wells on April 15 and May 20. Water levels were also measured in each well prior to ground water sampling. These measurements and the calculated ground water elevations are shown on Table 2. The ground water elevation contours for all three dates indicate a consistent, generally southwestward flow direction beneath the subject facility, with a gradient of about 0.01 to 0.02 ft/ft. The ground water contours and estimated flow direction on April 15 are shown on Figure 4. The ground water elevation at well MW-4, triple-checked to ensure there was no measurement error, was 2-ft higher than that in well MW-3, only 50-ft to the north. This suggests an infiltration source such as a leaking water-supply line is near well MW-4, since the well MW-3 elevation was closely consistent with elevations of the remaining site wells.

3.2.3 Ground Water Sampling

WA technicians collected ground water samples from each well at least three days after well development to ensure that the sample condition was not affected by the development process. All nine wells were resampled between May 20 and June 1 for comparison of the initial analytic results, to ensure the ground water analytical data was not affected by the well installation process. Each well was purged of standing water using a steam-cleaned PVC bailer, and the ground water pH, temperature and electrical conductivity were monitored. To ensure the samples were representative of in-situ ground water, samples were collected after the three measured parameters stabilized and a minimum of three well volumes of ground water were purged from each well. Well MW-1 was purged dry during the initial sampling, and was therefore sampled after the water level recovered to more than 80 percent of the static level. No wells were purged dry during the May 20 sampling.

The ground water samples were collected using a separate steam-cleaned Teflon bailer or a certified-clean disposable polyethylene bailer for each well to prevent cross-contamination. Samples were decanted into appropriate containers and immediately refrigerated for transport to the laboratory for analysis. Travel blanks accompanied each sample shipment from collection until analysis at the laboratory to ensure that the samples were not contaminated during handling. A bailer blank was also collected for analysis to ensure that the sampling equipment did not contaminate the samples.

The WA environmental technician noted a sheen on the ground water during initial purging of wells MW-2 and MW-6, suggesting that a fuel compound was floating on the ground water in these areas. The sheen was too thin for measurement with a bailer or an electronic interface probe in both

wells. This is consistent with observations of odor and visual staining on the soil made during drilling of these wells. During the subsequent May 20 sampling, no sheen was noted in either well.

3.2.4 Analytic Results of Ground Water Samples

Ground water samples from all wells were analyzed at Curtis & Tompkins, including blind duplicate samples collected from well MW-7 as a laboratory quality control check. A split duplicate sample collected from well MW-8 on April 5 and from Well MW-7 on May 20 was analyzed by GTEL Laboratories for additional quality control. Each ground water sample was analyzed for:

- TVH by the DHS method, with detected hydrocarbons compared to typical gasoline and mineral spirits chromatograms,
- TEH by the DHS method, with the detected hydrocarbons compared to typical kerosene, diesel, hydraulic fluid and motor oil chromatograms,
- BTEX by EPA Method 8020, and
- HVOCs by EPA Method 8010.

The analytic results are shown on Table 3. Detected compounds in water samples from the May 20 sampling of each well are plotted on Figure 5, and the analytic reports and chain-of-custody documents are included in Appendix C.

Analytic results of the ground water samples were generally consistent between sampling episodes and with the open-borehole water sample results. Gasoline and diesel-range hydrocarbons were detected in well MW-2, downgradient of the EFD and ERDA-USPS sites. Gasoline-range hydrocarbons were also detected in well MW-4, downgradient of the Corner Site, and although no BTEX was reported in the initial sample from MW-4, the sample collected on May 20 contained 0.0067 ppm total BTEX. Diesel-range hydrocarbons were detected in well MW-6 downgradient of the former onsite diesel tank, and gasoline range-hydrocarbons were detected in well MW-5 downgradient of the existing onsite tank, as in the open-borehole samples. Although no diesel-range compounds were detected in well MW-5 during the March sampling, TEH as diesel at 2.7 ppm was reported during the May 20 sampling. Diesel may not have been identifiable with the TEH analysis during the March sampling due to interference with the volatile-range compounds reported as kerosene on the analytical report.

Actual detected concentrations of the analyzed compounds varied somewhat between the well samples and open-borehole water samples from the borings. For example, hydrocarbon concentrations detected in wells MW-2 (2.4 ppm gasoline, 37 ppm diesel, 0.017 ppm benzene) and MW-6 (5 ppm diesel) were lower than those in the open-borehole samples, while the concentrations reported in well

MW-5 (2.1 ppm gasoline, 30 ppm kerosene, 0.39 ppm benzene on March 29) were higher than that in the open-borehole sample. No analytes were detected in well MW-1 at the northeast corner of the site, in well MW-3 in the southeast corner, or in well MW-8 downgradient of well MW-5, although relatively low concentrations of gasoline compounds were detected in the open-borehole water samples from the respective borings. The generally higher hydrocarbon concentrations in the open-borehole samples may result from hydrocarbons adhering to the significant suspended silt and clay typically contained in those samples. Therefore, the open-borehole samples are not representative of actual ground water conditions.

In MW-7, 0.16 ppm gasoline was detected in one sample with no detectable hydrocarbons in the other during the initial sampling. The laboratory method blank had no detectable gasoline, and surrogate recoveries were within acceptable limits. During sampling, the technician noted that the water samples contained suspended silt, and differing amounts in the sample vials may account for the analytical difference. No gasoline or other hydrocarbons were detected in samples from the May-June sampling. Although the split duplicate sample from well MW-8 analyzed at GTEL contained toluene at 0.0004 ppm, this is consistent with the Curtis & Tompkins result, which reports nothing detected at a higher detection limit of 0.0005 ppm.

Benzene was above the 0.001-ppm maximum contaminant level for drinking water (MCL) established by the California Department of Toxic Substances Control in well MW-2 (0.017 ppm on March 29, 0.021 ppm on May 20) and well MW-5 (0.39 ppm on March 29, 0.49 ppm on May 20). No other compounds analyzed exceeded established MCLs in any wells. No HVOCs were detected in any of the well samples except chlorobenzene (CB) at 0.017 ppm and 1,2-dichlorobenzene (1,2-DCB) at up to 0.005 ppm in well MW-4. Both CB and 1,2-DCB are components of gasoline, which was also detected in this well.

Analytic results of the May 20 sampling reported TEH as diesel in the bailer blank, and in the ground water samples from well MW-4 and MW-7, all at similar concentrations (Table 3). Since no TEH was reported in any previous samples from these locations or in either the blind duplicate or split duplicate from well MW-7, the bailer blank result indicated that the well MW-4 and MW-7 samples were contaminated by the sampling equipment. Therefore, WA resampled these two wells on June 1 and analyzed the samples for TEH. Neither sample had any detectable TEH, confirming that the May 20 TEH results were caused by sample contamination and were not indicative of ground water conditions.

4 CONCLUSIONS

Analytic results of 67 soil samples, 39 open-borehole ground water samples and ground water samples from nine monitoring wells collected at the site indicate that fuel hydrocarbons occur in ground water at four areas beneath the subject facility. Two of these locations may be associated with onsite fuel sources, while the other two appear to be associated with offsite, upgradient sources. The estimated extent of each occurrence is discussed below.

1) Existing gasoline/diesel UST

Borings B-15, B-16 and B-17 were drilled in the immediate area of the existing gasoline UST. Although no hydrocarbons were detected in the unsaturated samples at B-15 and B-16, the unsaturated sample from B-17 had detectable gasoline-range hydrocarbons.

Samples from borings B-5 (well MW-5) and B-18, downgradient of the tank and piping, also had detectable gasoline at concentrations up to 30 ppm (reported as TEH) and benzene at concentrations up to 0.39 ppm, above the MCL. The open-borehole water sample from B-24, further downgradient, had 20 ppm gasoline hydrocarbons. Although gasoline hydrocarbons were reported near detection limits in the open-borehole water sample from B-34 (well MW-8) furthest downgradient, only 0.0004 ppm toluene was detected in the ground water sample from the developed well. This suggests that MW-8 is located near the furthest downgradient extent of dissolved hydrocarbons in this area.

No hydrocarbons were detected in open-borehole ground water samples from borings B-38 and B-39, located upgradient of the tank, suggesting that soil and ground water near these borings have not been impacted by upgradient gasoline releases. No gasoline hydrocarbons were detected in borings B-6 or B-23 to the south, or in B-20, B-25 or B-35 to the north.

2) Former diesel UST

No hydrocarbons were reported in either sample collected beneath the former onsite diesel UST after its removal in 1987. However, during this investigation, diesel compounds were detected in the soil and/or ground water samples from boring B-6, drilled in the backfilled tank excavation, in well MW-6 about 40-ft downgradient of the tank location near the property boundary, and in B-19 near well MW-6. A very small amount of fuel product was also noted on the water while sampling well MW-6 on March 29, although no sheen was noted during the May 20 sampling. No hydrocarbons were detected in boring B-23, about 100 ft west of the tank location. The southwestward extent of this diesel occurrence could not be confirmed during this site assessment since offsite sampling was not within the work scope.

3) Upgradient gasoline/diesel release

The soil and ground water samples from well MW-2 (B-22) in the northeast part of the site had relatively high concentrations of both gasoline and diesel-range hydrocarbons, while borings B-10 and B-29 to the southwest had high gasoline hydrocarbons but no detectable diesel. The soil in these three borings was discolored near the water table, and all had a gasoline-like odor. Well MW-2 also had a very small amount of fuel product on the water during the March 29 sampling, although no sheen was noted during the May 20 sampling. Borings B-1, B-26, B-2, B-11 and B-7 (well MW-7) all contained relatively low concentrations of gasoline hydrocarbons in saturated soil and/or ground water samples.

Since none of the unsaturated samples from borings B-2, B-10, B-11 B-22, B-26 or B-29 at or near the upgradient property boundary had any detectable hydrocarbons, the analytical data indicate both the gasoline and diesel originated upgradient of the site. An UST is located about 20-ft east of B-2 on the EFD property. On 1949 and 1959 aerial photographs, a storage building on the EFD lot appears to abut the subject property adjacent to the well MW-2 location. Since the older EFD used motorized vehicles before fueling stations were prevalent in this area, it is possible that an UST was also located at the northern portion of the lot. Another possible source of the fuel is the ERDA-USPS gasoline-diesel release, which has reportedly impacted ground water to the west and northwest of that property. Since the gasoline is more widely distributed in this area than the diesel which was detected only in one boring, there may also be two separate offsite sources for the gasoline and diesel.

4) Upgradient gasoline release

Relatively low concentrations of gasoline compounds were detected in saturated soil and/or ground water samples from borings B-3 (well MW-3), B-4 and B-21. Since there is no record of possible onsite gasoline usage in this area, and no onsite unsaturated soil samples contained gasoline compounds, the source of the gasoline appears to be offsite. The most likely offsite source is the Corner Site immediately to the east, which was formerly used as a gasoline station with known USTs.

5) HVOCs

PCE was detected at 0.28 ppm in the unsaturated 2.5-ft depth sample from boring B-3 in the hazardous materials storage area, and other HVOCs at lower concentrations were detected in unsaturated soil samples from B-13 and B-14 in the vehicle maintenance area. However, no HVOCs were detected in any saturated samples or ground water samples collected from these borings. PCE and its breakdown products, TCE, c-1,2-DCE and VC, were detected in open-borehole ground water samples from borings B-32, B-33, B-6 and B-23, all at concentrations near detection limits and near the respective MCLs. However, no HVOCs were detected in the ground water sample from well MW-6. Due to the sparse distribution of these compounds in unsaturated soils, no significant source appears to be located on site.

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- Subsurface Consultants, 1993a, Plate 1 showing ground water elevation contours at 4310 San Pablo Avenue, Emeryville, CA [ERDA-USPS site in this report] on April 30 1993, May 19, 1993.
- Subsurface Consultants, 1993b, Table 1 showing historical ground water elevations at 4310 San Pablo Avenue, Emeryville, CA [ERDA-USPS site in this report], May 19, 1993.

FIGURES

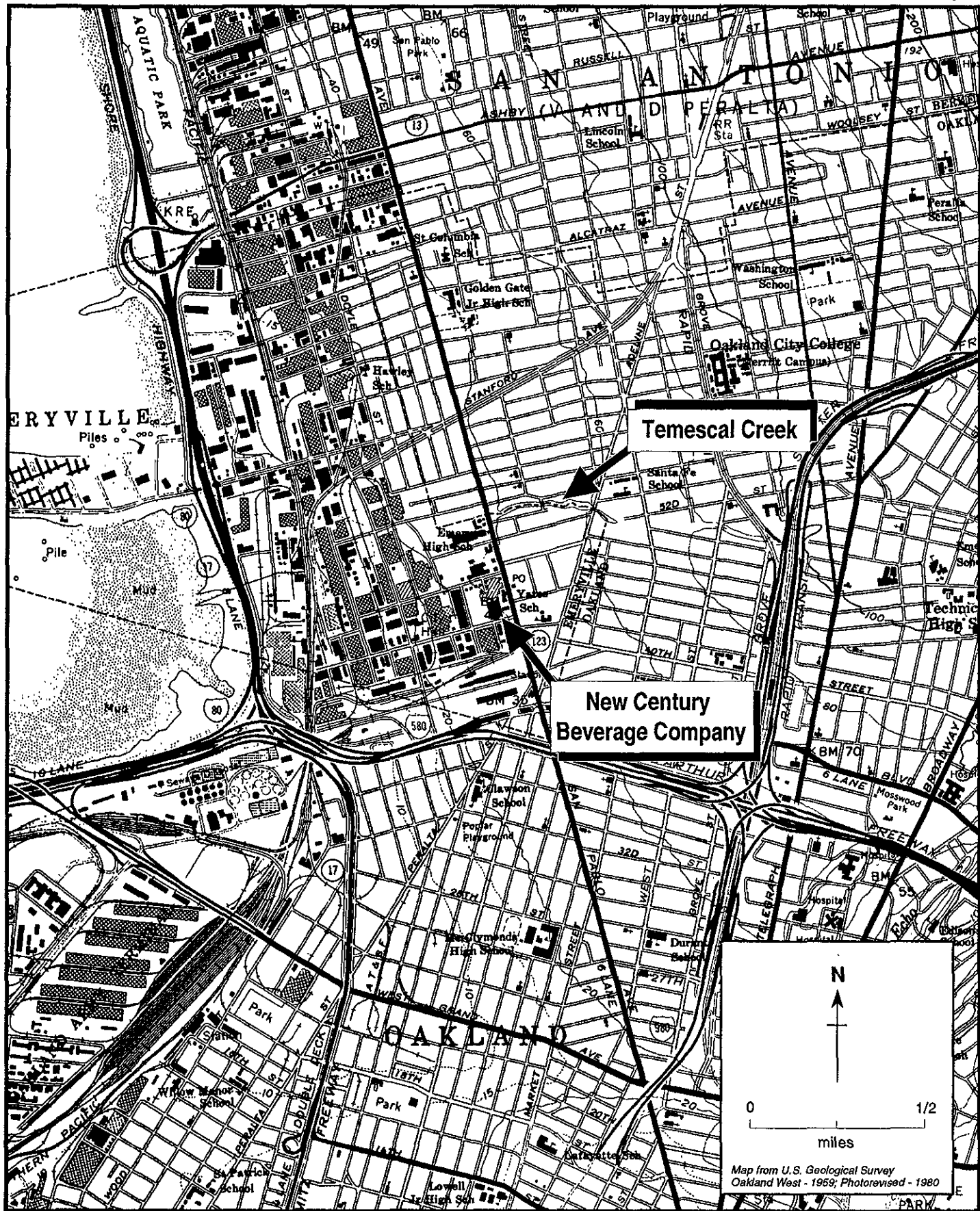


Figure 1. Site Vicinity Map - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

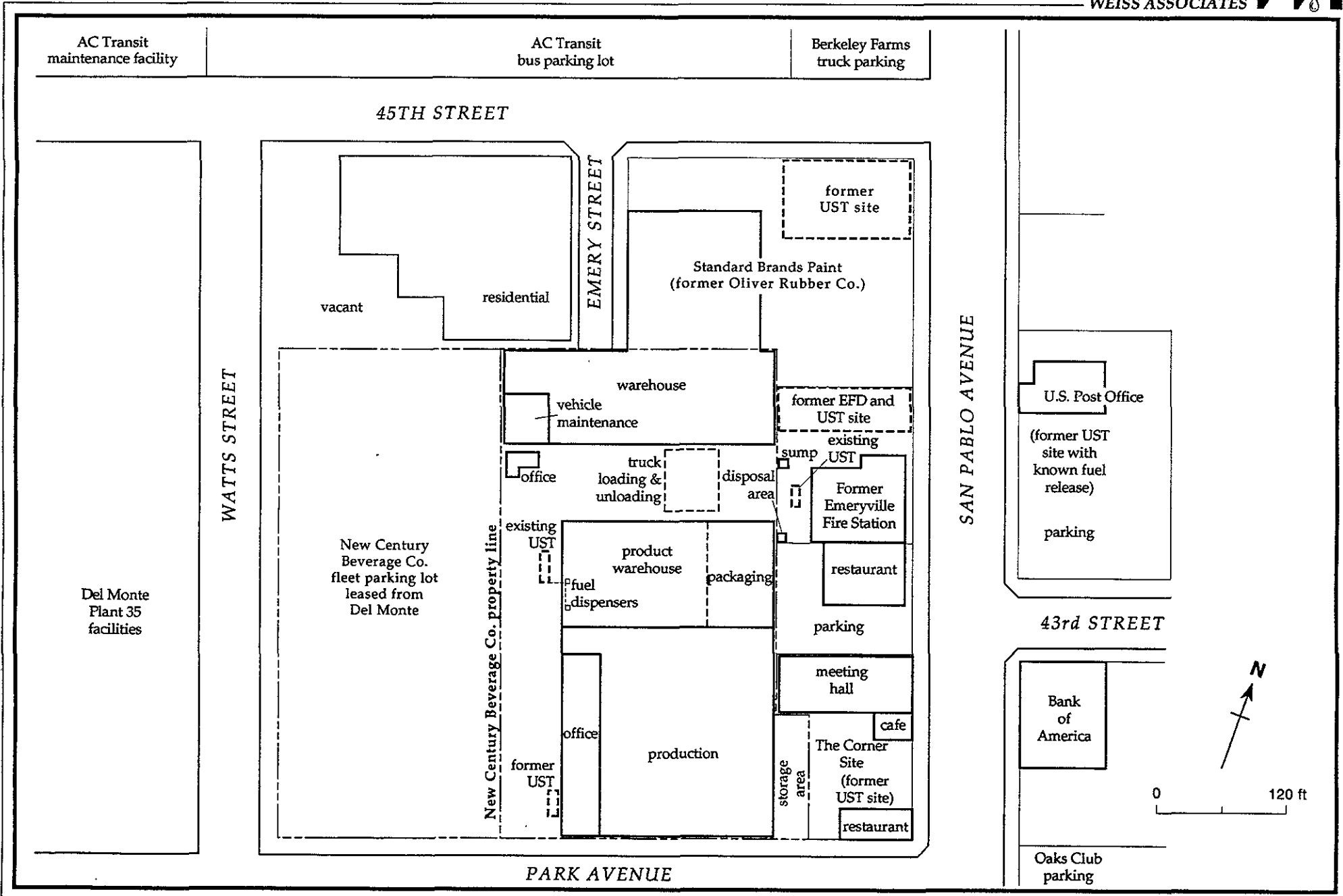


Figure 2. Facility and Surrounding Properties - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

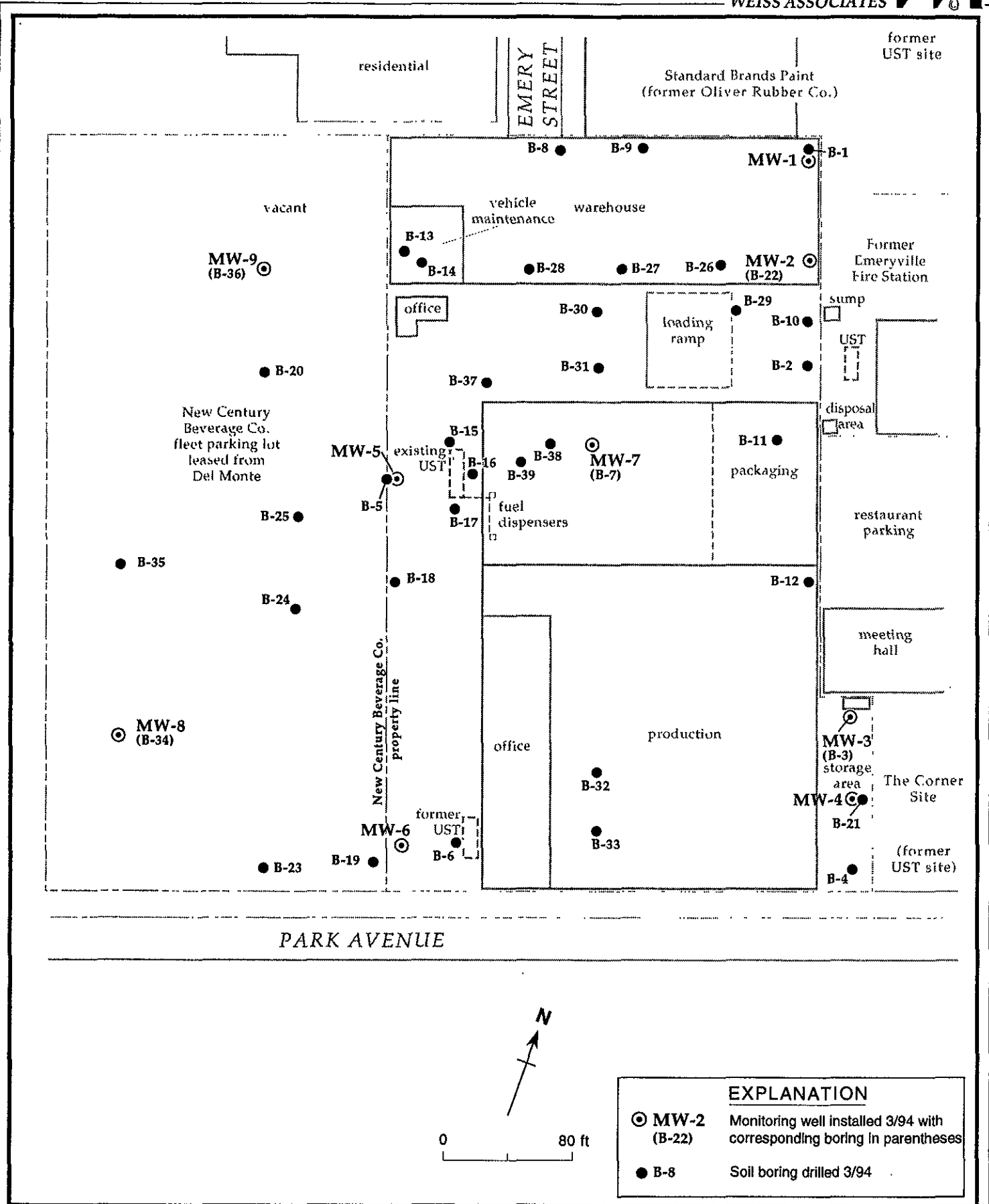


Figure 3. Soil Boring and Monitoring Well Locations - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

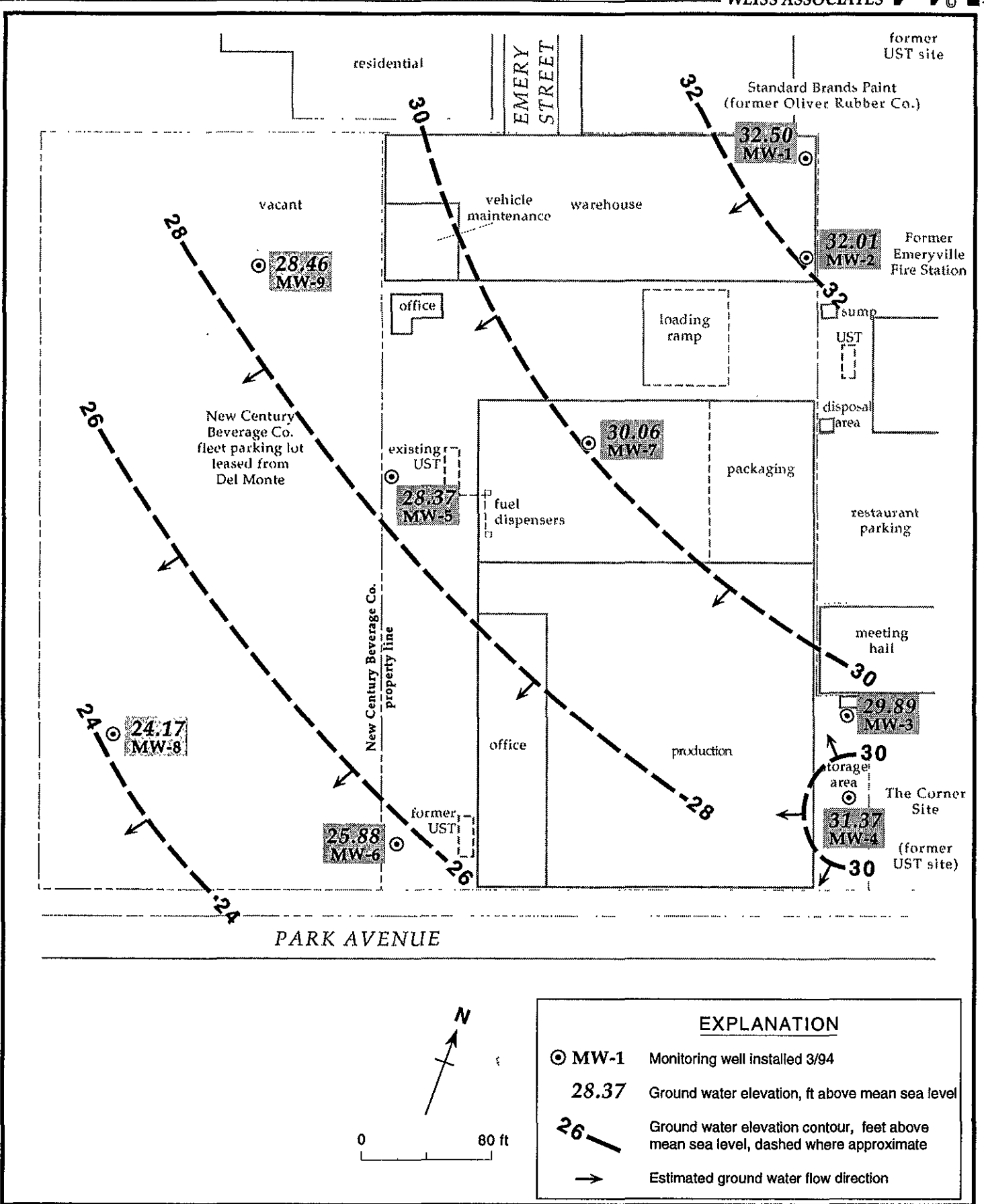


Figure 4. Ground Water Elevation Contours and Estimated Flow Direction - April 15, 1994 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

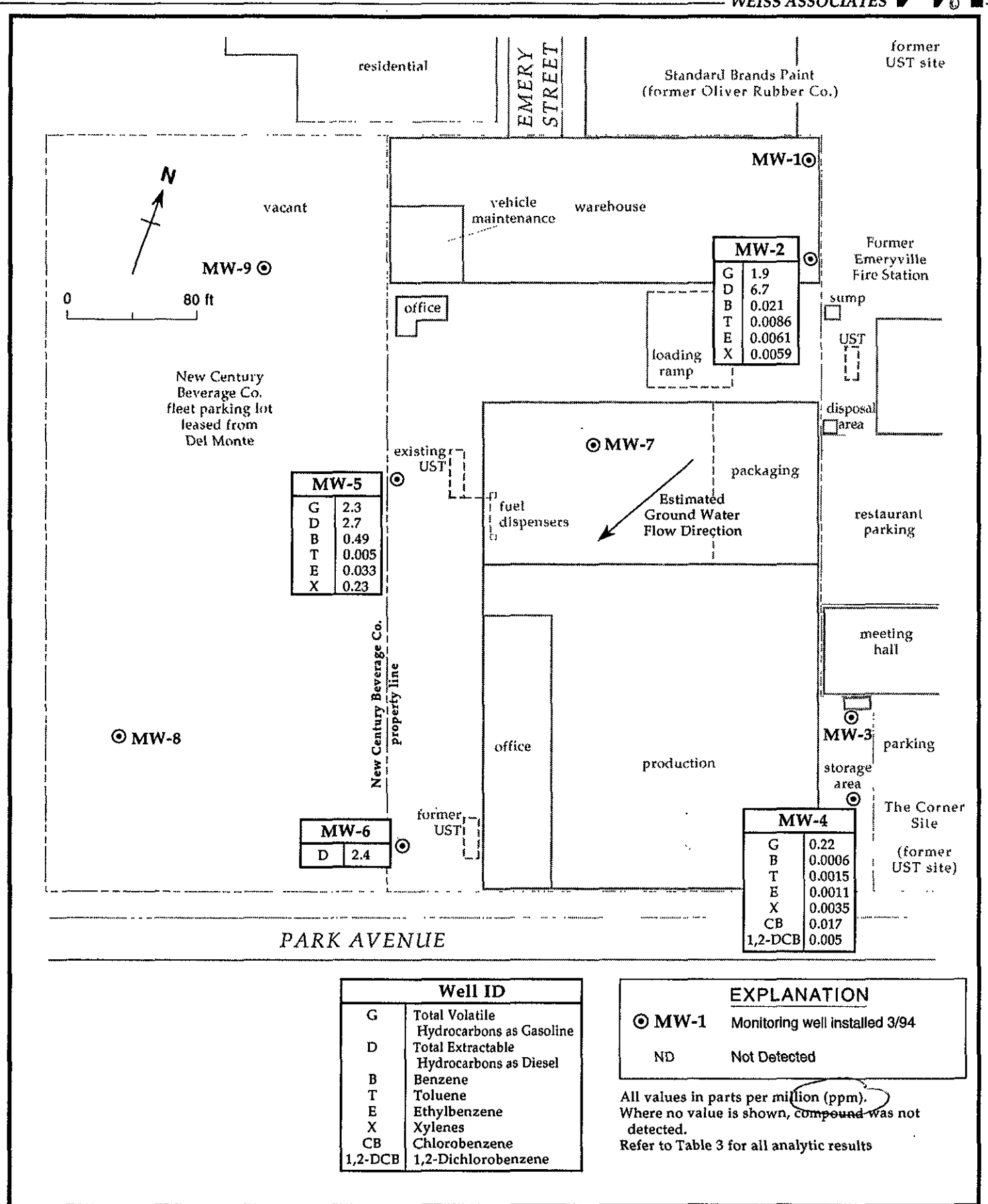


Figure 5. Fuel Compound Concentrations in Ground Water - May 20, 1994 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

TABLES

Table 1. Analytic Results for Soil and Open-borehole Water Samples - New Century Beverage Co., 1150 Park Avenue, Emeryville, California

Boring ID	Depth	Date Sampled	Sat/Unsat	TVH-G	TEH	Benzene	Toluene	Ethyl-benzene	Xylenes	1,2-DCA	PCE	Other HVOCS
B-1	6.4	3/15/94	Sat	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-1	8.9	3/15/94	Sat	ND	ND	ND	ND	ND	ND	ND	ND	ND
		3/15/94		Water	0.2	ND	ND	ND	ND	ND	ND	ND
B-2	6.0	3/16/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-2	8.5	3/16/94	Sat	ND	ND	ND	ND	ND	ND	ND	ND	ND
		3/16/94		Water	ND	ND	0.0005	0.0005	ND	ND	ND	ND
B-3	2.5	3/15/94	Unsat	ND	ND	ND	ND	ND	ND	ND	0.28	ND(0.03-0.1)
B-3	7.5	3/15/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-3	10.0	3/15/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
		3/15/94		Water	0.52	0.001	0.019	0.0084	0.046	ND	ND	ND
B-4	5.0	3/15/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-4	10.0	3/15/94	Sat	ND	49 (K)	ND	ND	ND	ND	ND	ND	ND
		3/15/94		Water	ND	ND	ND	ND	ND	ND	ND	ND
B-5	5.0	3/14/94	Unsat	ND	50 (D)	ND	ND	ND	ND	ND	ND	ND
B-5	7.5	3/14/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-5	12.5	3/14/94	Sat	ND	ND	0.015	ND	ND	0.012	ND	ND	ND
		3/14/94		Water	0.95	0.18	ND(1)	ND(1)	0.088	ND	ND	ND
B-6	5.0	3/14/94	Unsat	ND	4 (D)	ND	ND	ND	ND	ND	ND	ND
B-6	7.5	3/14/94	Unsat	10	230 (D)	ND(0.03)	ND(0.03)	0.017	ND(0.03)	ND(0.03)	ND(0.03)	ND(0.03-0.1)
		3/14/94		Water	4.0	79 (D)	<5	7	<5	ND	ND	0.001 d,2-DCE
B-7	8.5	3/16/94	Sat	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-7	13.5	3/16/94	Sat	ND	ND	ND	ND	ND	ND	ND	ND	ND
		3/16/94		Water	0.06	ND	0.002	ND	ND	ND	ND	ND

-- Table 1 continues next page --



Weiss Associates

Parts per million

Table 1. Analytic Results for Soil and Open-borehole Water Samples - New Century Beverage Co., 1150 Park Avenue, Emeryville, California (continued)

Boring ID	Depth	Date Sampled	Sat/ Unsat	TVH-G	TEH	Benzene	Toluene	Ethyl-benzene	Xylenes	1,2-DCA	PCE	Other HVOCs
B-8	5.0	3/16/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/16/94		ND	ND	ND	ND	ND	ND	ND	ND	ND
B-9	5.0	3/17/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/17/94		ND	ND	ND	ND	ND	ND	ND	ND	ND
B-10	5.9	3/14/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/14/94		15	3 (K)	0.34	0.031	0.64	1.9	ND(0.01)	ND(0.01)	ND(0.01-0.2)
B-11	2.5	3/16/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	7.5	3/16/94	Unsat?	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/16/94		0.06	ND	ND	0.0008	ND	ND	ND	ND	ND
B-12	7.5	3/17/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/17/94		ND	ND	ND	ND	ND	ND	ND	ND	ND
B-13	2.5	3/16/94	Unsat	ND	2 (D)	ND	ND	ND	0.008	ND	0.005	0.05 MC
	7.5	3/16/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	0.009 1,2-DCA
	Water	3/16/94		ND	ND	ND	ND	ND	ND	ND	ND	PCE
B-14	2.5	3/16/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	7.5	3/16/94	Unsat	ND	ND	ND	ND	ND	0.007	ND	ND	ND
	Water	3/16/94		ND	ND	ND	ND	ND	ND	ND	ND	ND
B-15	2.5	3/17/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	7.5	3/17/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/17/94		0.07	1 (K)	0.0097	ND	0.0011	0.0076	ND	ND	ND
B-16	5.0	3/18/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	7.5	3/18/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/18/94		38	15 (K)	0.57	0.28	1.5	5.4	ND	ND	ND

-- Table 1 continues next page --



Table 1. Analytic Results for Soil and Open-borehole Water Samples - New Century Beverage Co., 1150 Park Avenue, Emeryville, California (continued)

Boring ID	Depth	Date Sampled	Sat/Unsat	TVH-G	TEH	Benzene	Toluene	Ethylbenzene	Xylenes	1,2-DCA	PCE	Other HVOCs
B-17	2.5	3/17/94	Unsat	1	2 (D) 50 (MO)	ND	ND	0.005	0.055	ND	ND	ND
	7.5	3/17/94	Unsat	130	190 (K)	ND(0.08)	0.19	1.2	1.4	ND(0.03)	ND(0.03)	ND(0.03-0.1)
	<i>Water</i>	<i>3/17/94</i>		<i>32</i>	<i>6 (K)</i>	<i>1.8</i>	<i>0.78</i>	<i>1.1</i>	<i>2.4</i>	<i>ND</i>	<i>ND</i>	<i>0.001 CB</i>
B-18	8.4	3/14/94	Unsat	1	ND	ND	ND	ND	ND	ND	ND	ND
	13.4	3/14/94	Sat	1	ND	ND	ND	ND	ND	ND	ND	ND
	<i>Water</i>	<i>3/14/94</i>		<i>0.65</i>	<i>ND</i>	<i>0.032</i>	<i>0.0006</i>	<i>0.0048</i>	<i>0.0038</i>	<i>0.003</i>	<i>ND</i>	<i>ND</i>
B-19	7.5	3/14/94	Unsat	23 ^a	150 (D)	ND(0.01)	ND(0.01)	0.061	0.019	ND(0.1)	ND(0.1)	ND(0.1-0.5)
	12.5	3/14/94	Sat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	<i>Water</i>	<i>3/14/94</i>		<i>ND</i>	<i>110 (D)</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>
B-20	7.5	3/14/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12.5	3/14/94	Sat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	<i>Water</i>	<i>3/14/94</i>		<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>
B-21	5.0	3/15/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10.0	3/15/94	Sat	11	ND	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND	ND	ND
	<i>Water</i>	<i>3/15/94</i>		<i>0.14</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>0.0006</i>	<i>ND</i>	<i>ND</i>	<i>0.018 CB</i> <i>0.004 1,2-DCB</i>
B-22	5.0	3/18/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	7.5	3/18/94	Sat	130	340 (D)	0.07	0.98	0.07	0.25	ND(0.03)	ND(0.03)	ND(0.03-0.1)
	<i>Water</i>	<i>3/18/94</i>		<i>6.0</i>	<i>220 (D)</i>	<i>0.06</i>	<i>0.02</i>	<i>0.03</i>	<i>0.06</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>
B-23	10.0	3/30/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12.5	3/30/94	Sat?	ND	ND	ND	ND	ND	ND	ND	ND	ND
	<i>Water</i>	<i>3/30/94</i>		<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>ND</i>	<i>TCE 0.004</i> <i>c-1,2-DCE 0.006</i> <i>VC 0.004</i>
B-24	9.0	3/18/94	Sat?	4	20 (K)	0.13	ND	0.045	0.19	ND(0.03)	ND(0.03)	ND(0.03-0.1)
	<i>Water</i>	<i>3/18/94</i>		<i>22</i>	<i>2 (K)</i>	<i>1.8</i>	<i>0.03</i>	<i>0.52</i>	<i>1.9</i>	<i>0.004</i>	<i>ND</i>	<i>ND</i>

-- Table 1 continues next page --

Weiss Associates



Table 1. Analytic Results for Soil and Open-borehole Water Samples - New Century Beverage Co., 1150 Park Avenue, Emeryville, California (continued)

Boring ID	Depth	Date Sampled	Sat/ Unsat	TVH-G	TEH	Benzene	Toluene	Ethylbenzene	Xylenes	1,2-DCA	PCE	Other HVOCs
B-25	10.0	3/18/94	Sat?	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12.5	3/18/94	Sat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/18/94		ND	ND	ND	ND	ND	ND	ND	ND	ND
B-26	6.0	3/27/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/27/94		0.18	ND	0.0012	ND	ND	ND	ND	ND	ND
B-27	Water	3/26/94		ND	ND	ND	ND	ND	ND	ND	ND	ND
B-28	8.5	3/26/94	Sat?	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/26/94		0.06	ND	ND	ND	ND	ND	ND	ND	ND
B-29	6.0	3/27/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/27/94		20	2 (K)	0.13	0.041	0.77	0.36	ND	ND	ND
B-30	6.0	3/27/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8.5	3/27/94	Sat?	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/27/94		ND	ND	ND	ND	ND	ND	ND	ND	ND
B-31	6.0	3/27/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8.5	3/27/94	Sat?	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/27/94		ND	ND	ND	ND	ND	ND	ND	ND	ND
B-32	8.5	3/26/94	Unsat?	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/26/94		ND	ND	ND	ND	ND	ND	ND	ND	0.001 c1,2-DCE
B-33	8.5	3/26/94	Unsat?	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11.5	3/26/94	Sat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/26/94		ND	ND	ND	ND	ND	ND	ND	0.003	0.005 TCE 0.004 c1,2-DCE
B-34	10.0	3/30/94	Sat?	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12.5	3/30/94	Sat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/30/94		0.15	ND	0.001	0.01	0.003	0.019	ND	ND	ND

-- Table 1 continues next page --

Weiss Associates



Table 1. Analytic Results for Soil and Open-borehole Water Samples - New Century Beverage Co., 1150 Park Avenue, Emeryville, California (continued)

Boring ID	Depth	Date Sampled	Sat/ Unsat	←-----Parts per million----->								Other HVOCs
				TVH-G	TEH	Benzene	Toluene	Ethyl-benzene	Xylenes	1,2-DCA	PCE	
B-35	10.0	3/30/94	Sat?	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/30/94		ND	ND	ND	ND	ND	ND	ND	ND	TCE 0.002
B-36	7.5	3/30/94	Unsat	ND	ND	ND	ND	ND	0.007	ND	ND	ND
	10.0	3/30/94	Sat	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-37	8.5	3/27/94	Unsat?	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/27/94		ND	ND	ND	ND	ND	ND	ND	ND	0.002 1,1-DCE
B-38	5.0	3/31/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	7.5	3/31/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water	3/31/94		ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water ^b	3/31/94		ND(0.01)	ND(0.01)	ND(0.0003)	ND(0.0003)	ND(0.0003)	ND	ND	ND	ND
B-39	7.5	3/31/94	Unsat	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10.0	3/31/94	Sat?	ND	ND	ND	ND	ND	0.01	ND	ND	ND
	Water	3/31/94		ND	ND	ND	ND	ND	ND	ND	ND	ND
	Water ^b	3/31/94		ND(0.01)	ND(0.01)	ND(0.0003)	ND(0.0003)	ND(0.0003)	ND	ND	ND	ND
Travel	Water	3/27/94		ND	---	ND	ND	ND	ND	ND	ND	ND
Blank	Water	3/31/94		---	---	ND	ND	ND	ND	ND	ND	ND
	Water	3/31/94		---	---	ND	ND	ND	ND	ND	ND	0.002 MC ^c
Standard detection limit	Soil			1	1 (K,D) 30 (MO)	0.005	0.005	0.005	0.005	0.005	0.005	0.005-0.02
	Water			0.05	1 (K,D) 20 (MO)	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001-0.02
MCL						0.001	0.1 ^d	0.68	1.75	0.0005	0.005	0.03 CB 0.005 1,1-DCA 0.13 1,2-DCB ^d 0.006 1,1-DCE 0.006 c1,2-DCE 0.005 MC 0.005 TCE 0.0005 VC

-- Table 1 continues next page --



Table 1. Analytic Results for Soil and Open-borehole Water Samples - New Century Beverage Co., 1150 Park Avenue, Emeryville, California (continued)

Abbreviations:

Sat/Unsat = indicates whether soil sample was saturated with ground water

TVH-G = Total volatile hydrocarbons as gasoline detected by EPA Method 8015, modified per California Department of Health Services (DHS)

note: mineral spirits were also screened with this method, however, all detected TVH were characterized as gasoline

TEH = Total extractable hydrocarbons [kerosene (K), diesel (D), and motor oil (MO) range] detected by EPA Method 8015, modified by DHS

notes: hydraulic oil was also screened with this method, however, no hydraulic oil was reported in any samples

Kerosene-range compounds, where reported, are characterized by the laboratory as a fraction of gasoline hydrocarbons

HVOCs = Halogenated volatile organic compounds detected by EPA Method 8010

ND = Not detected at standard detection limit (indicated on the last row of the table)

ND(n) = Not detected at detection limit of n ppm, due to dilution of sample prior to analysis

-- = Not analyzed

MCL = Maximum Contaminant Level for Drinking Water established by the California Department of Toxic Substances Control

Notes:

Analyses performed by Curtis & Tompkins, Ltd. of Berkeley, CA except as noted (CA DHS certification # 1459)

^aReported concentration falls in volatile range but does not match gasoline or mineral spirits fingerprint

^bSplit duplicate analysis performed by GTEL Environmental Laboratories, Inc. of Concord, CA (CA DHS certification # E1075)

^cMethylene chloride was also reported in the method blank at 0.0007 ppm - no methylene chloride was detected in the site ground water samples (methylene chloride is used during some laboratory procedures and is a common laboratory contaminant)

^dDTSC Recommended Action Level - no MCL established

Table 2. Historical Ground Water Elevations - New Century Beverage Co., 1150 Park Avenue, Emeryville, Ca				
Well ID	Date	Top-of-Casing Elevation (Ft above msl)	Depth to Water (Ft)	Ground Water Elevation (Ft above msl)
MW-1	3/27/94	38.74	5.90	32.84
	3/29/94		5.89	32.85
	4/15/94		6.24	32.50
	5/20/94		5.79	32.95
MW-2	3/27/94	38.87	6.57	32.30
	3/29/94		6.58	32.29
	4/15/94		6.86	32.01
	5/20/94		6.45	32.42
MW-3	3/27/94	40.79	10.75	30.04
	3/29/94		10.69	30.10
	4/15/94		10.90	29.89
	5/20/94		10.81	29.98
MW-4	3/27/94	40.15	8.23	31.92
	3/29/94		8.21	31.94
	4/15/94		8.78	31.37
	5/20/94		8.54	31.61
MW-5	3/27/94	36.47	8.02	28.45
	3/29/94		7.93	28.54
	4/15/94		8.10	28.37
	5/20/94		7.88	28.59
MW-6	3/27/94	35.52	9.60	25.92
	3/29/94		9.59	25.93
	4/15/94		9.64	25.88
	5/20/94		9.47	26.05
MW-7	3/27/94	37.53	7.25	30.28
	3/29/94		7.27	30.26
	4/15/94		7.47	30.06
	5/20/94		7.25	30.28
MW-8	4/5/94	33.11	9.03	24.08
	4/15/94		8.94	24.17
	5/20/94		8.70	24.41
MW-9	4/5/94	36.06	7.60	28.46
	4/15/94		7.60	28.46
	5/20/94		7.39	28.67

Table 3. Analytic Results of Ground Water Samples from Developed Wells (with nearest open-borehole water sample results) - New Century Beverage Co., 1150 Park Avenue, Emeryville, California

Well/ Boring ID	Date Sampled	TVH-G	TEH	Benzene	Toluene	Ethyl-benzene	Xylenes	1,2-DCA	PCE	Other HVOCs
←-----Parts per million----->										
MW-1	3/29/94	ND	ND (I)	ND	ND	ND	ND	ND	ND	ND
	5/20/94	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-2	3/29/94	2.4	37 (D)	0.017	ND (0.001)	0.005	0.015	ND	ND	ND
	5/20/94	1.9	6.7	0.021	0.0086	0.0061	0.0059	ND	ND	ND
MW-3	3/29/94	ND	ND (I)	ND	ND	ND	ND	ND	ND	ND
	5/20/94	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-4	3/29/94	0.13	ND (I)	ND	ND	ND	ND	ND	ND	0.017 CB 0.004 1,2-DCB
	5/20/94	0.22	b	0.0006	0.0015	0.0011	0.0035	ND	ND	0.017 CB 0.005 1,2-DCB
	6/1/94	--	ND	--	--	--	--	--	--	--
MW-5	3/29/94	2.1	30 (K)	0.39	ND (0.003)	ND (0.003)	0.18	ND	ND	ND
	5/20/94	2.3	2.7 (D)	0.49	0.005	0.033	0.23	ND	ND	ND
MW-6	3/29/94	ND	5 (D)	ND	ND	ND	ND	ND	ND	ND
	5/20/94	ND	2.4 (D)	ND	ND	ND	ND	ND	ND	ND
Standard detection limit		0.05	0.05 (K,D)	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001-0.02
MCL				0.001	0.1 ^d	0.68	1.75	0.0005	0.005	0.13 1,2-DCB ^d 0.03 CB

-- Table 3 continues next page --

Table 3. Analytic Results of Ground Water Samples from Developed Wells (with nearest open-borehole water sample results) - New Century Beverage Co., 1150 Park Avenue, Emeryville, California (continued)

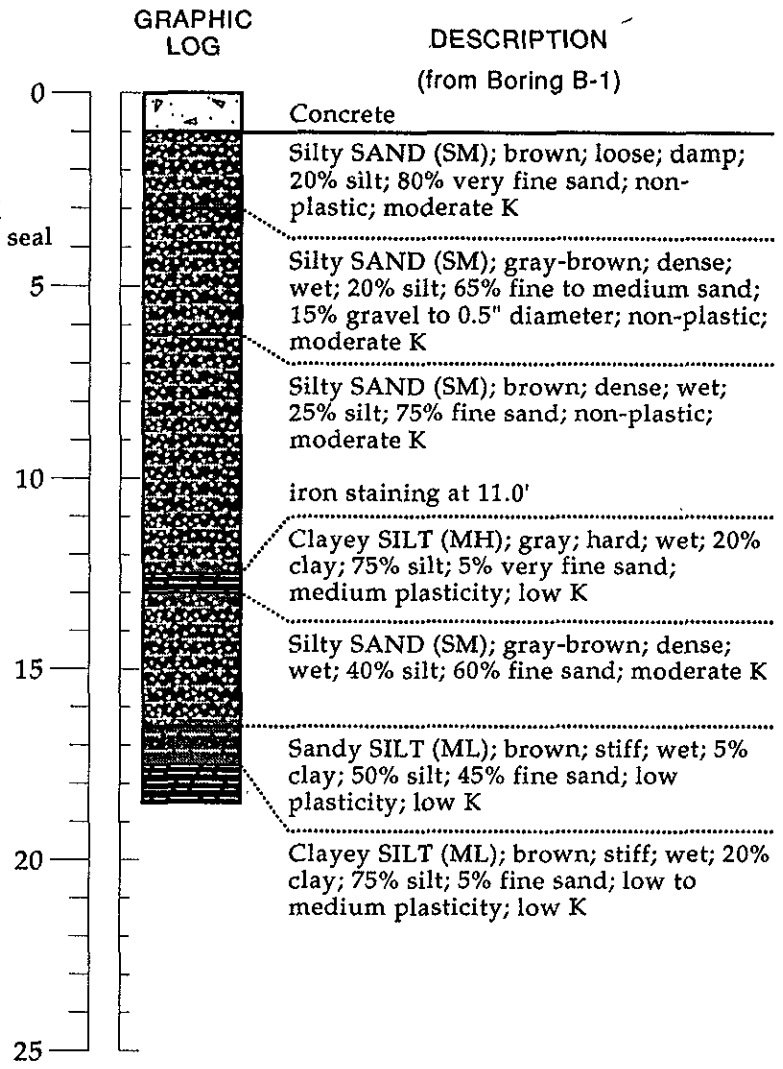
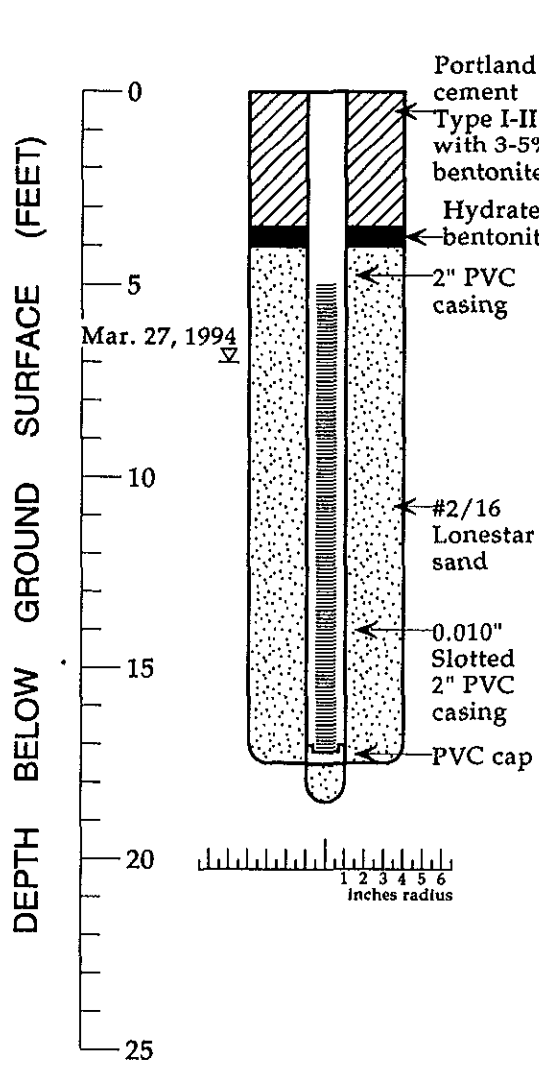
Well/ Boring ID	Date Sampled	TVH-G	TEH	Benzene	Toluene	Ethyl-benzene	Xylenes	1,2-DCA	PCE	Other HVOCs
←-----Parts per million----->										
MW-7	3/29/94	0.16	ND (1)	ND	ND	ND	ND	ND	ND	ND
dup	3/29/94	ND	ND (1)	ND	ND	ND	ND	ND	ND	ND
	5/20/94	ND	ND	ND	ND	ND	ND	ND	ND	ND
split ^a	5/20/94	ND	ND	ND	ND	ND	ND	ND (0.0005)	ND (0.0005)	ND
dup	5/20/94	ND	^b	ND	ND	ND	ND	ND	ND	ND
dup	6/1/94	--	ND	--	--	--	--	--	--	--
MW-8	4/5/94	ND	ND (1)	ND	ND	ND	ND	ND	ND	ND
split ^a	4/5/94	ND(0.01)	ND (1)	ND(0.0003)	0.0004	ND(0.0003)	ND(0.0003)	ND	ND	ND
	5/20/94	ND	ND ^c	ND	ND	ND	ND	ND	ND	ND
MW-9	4/5/94	ND	ND (1)	ND	ND	ND	ND	ND	ND	ND
	5/20/94	ND	ND	ND	ND	ND	ND	ND	ND	ND
Travel Blank	3/29/94	ND	--	ND	ND	ND	ND	ND	ND	ND
	4/5/94	ND	--	ND	ND	ND	ND	ND	ND	ND
	5/20/94	ND	--	ND	ND	ND	ND	ND	ND	ND
Bailer Blank	3/29/94	ND	ND (1)	ND	ND	ND	ND	ND	ND	ND
	4/5/94	ND	ND (1)	ND	ND	ND	ND	ND	ND	ND
	5/20/94	ND	0.42 ^b	ND	ND	ND	ND	ND	ND	ND
Standard detection limit		0.05	0.05 (K,D)	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001-0.02
MCL				0.001	0.1 ^d	0.68	1.75	0.0005	0.005	0.13 1,2-DCB ^d 0.03 CB

-- Table 3 continues next page --



APPENDIX A
WELL AND BORING LOGS

WELL MW-1 (B-1A)



EXPLANATION

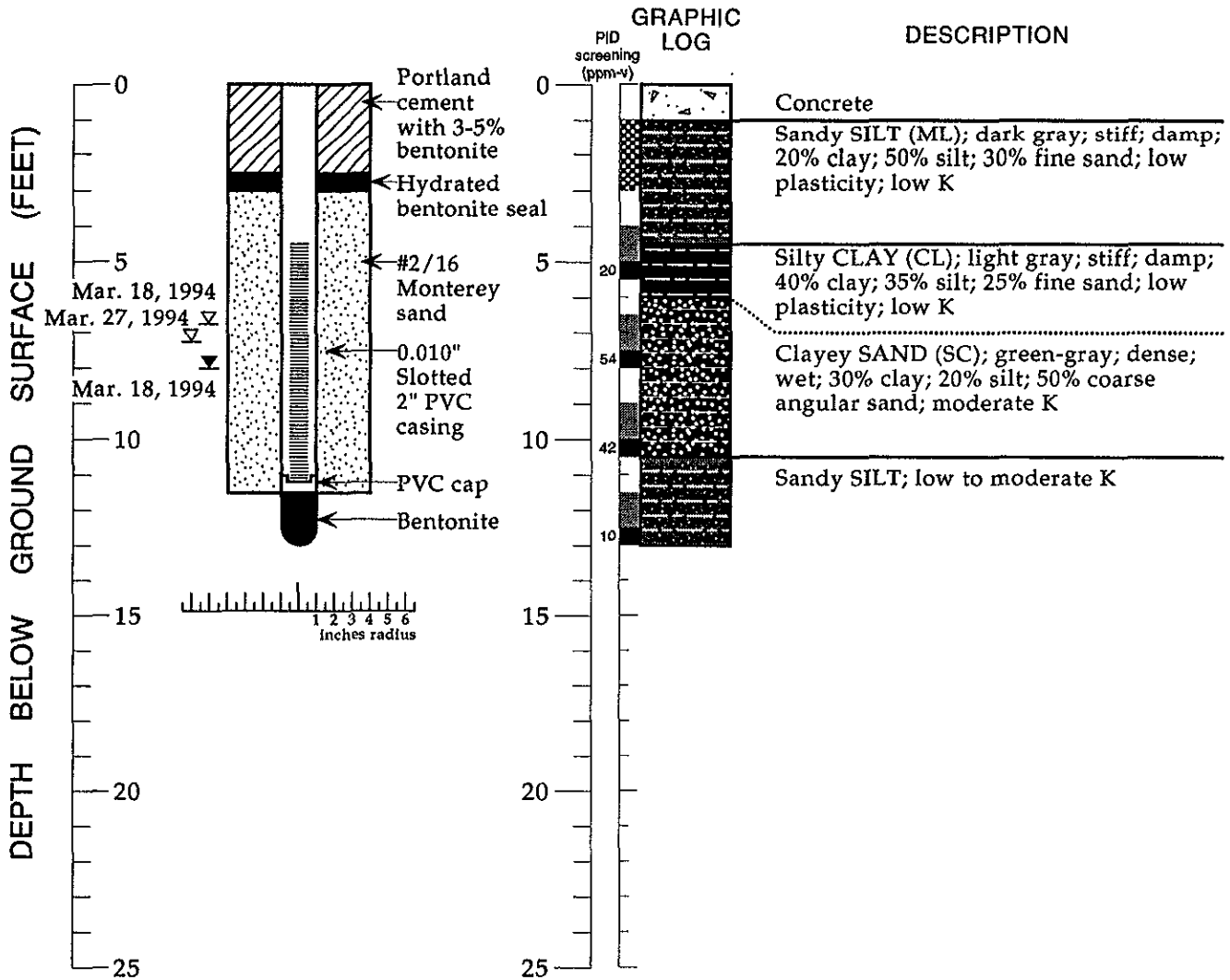
- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Joyce Adams
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Soils Exploration Services, Vacaville, CA
 License Number: C57-582696
 Driller: Moe Paxinos
 Drilling Method: Hollow-stem auger
 Date Drilled: March 15, 1994
 Well Head Completion: Water tight traffic rated vault at grade
 Ground Surface Elevation: 39.29 feet above mean sea level

Boring Log and Well Construction Details - Well MW-1 (BH-1A) - New Century Beverage Company, 1150 Park Avenue, Emeryville, California



WELL MW-2 (B-22)



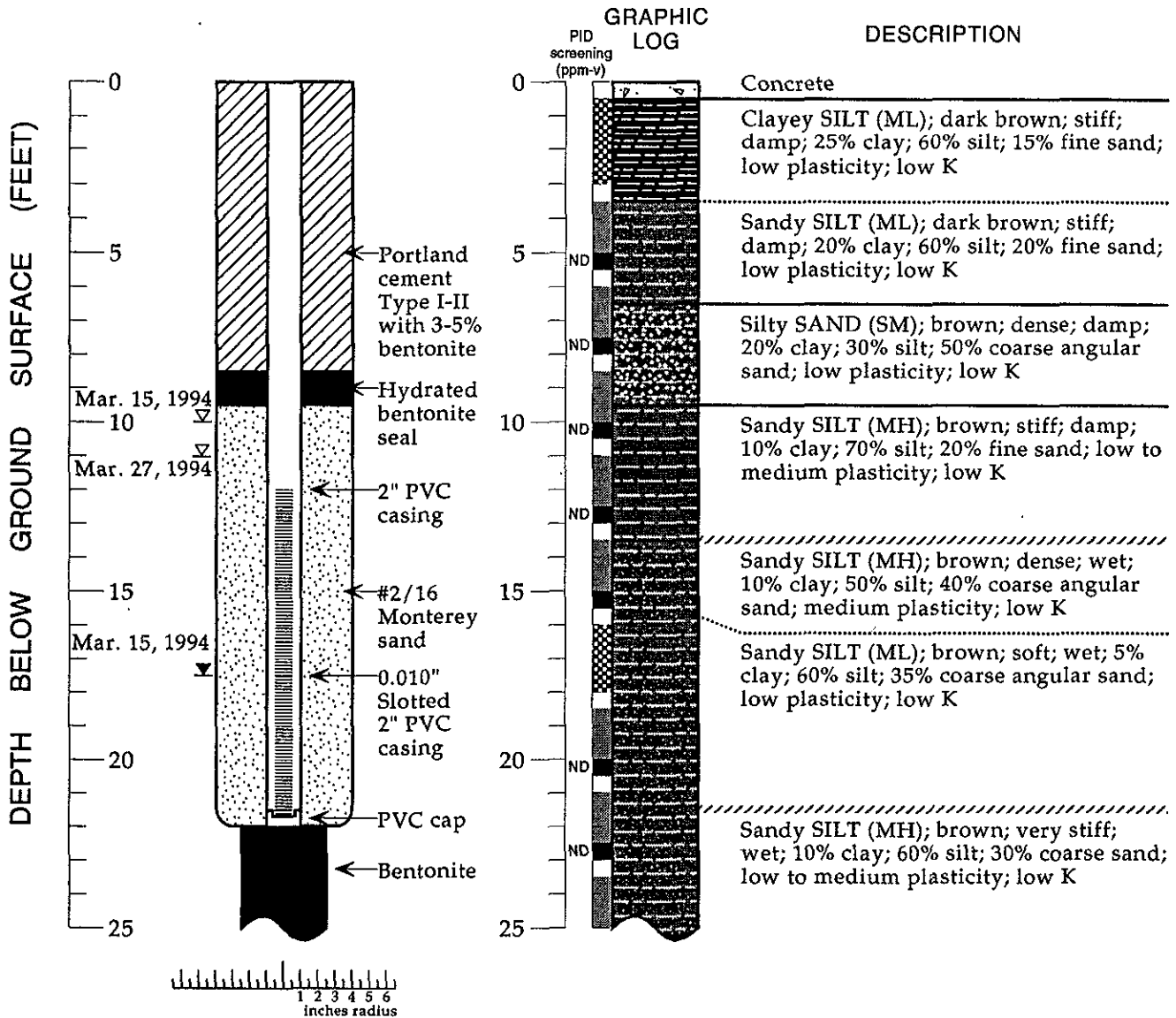
EXPLANATION

- ▽ Water level during drilling (date)
- ∇ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Alison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Ted Hogan
 Drilling Method: Hollow-stem auger
 Date Drilled: March 18, 1994
 Well Head Completion: Water tight traffic rated vault at grade
 Type of Sampler: Split barrel (2.0" ID)
 Ground Surface Elevation: 39.30 feet above mean seal level
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

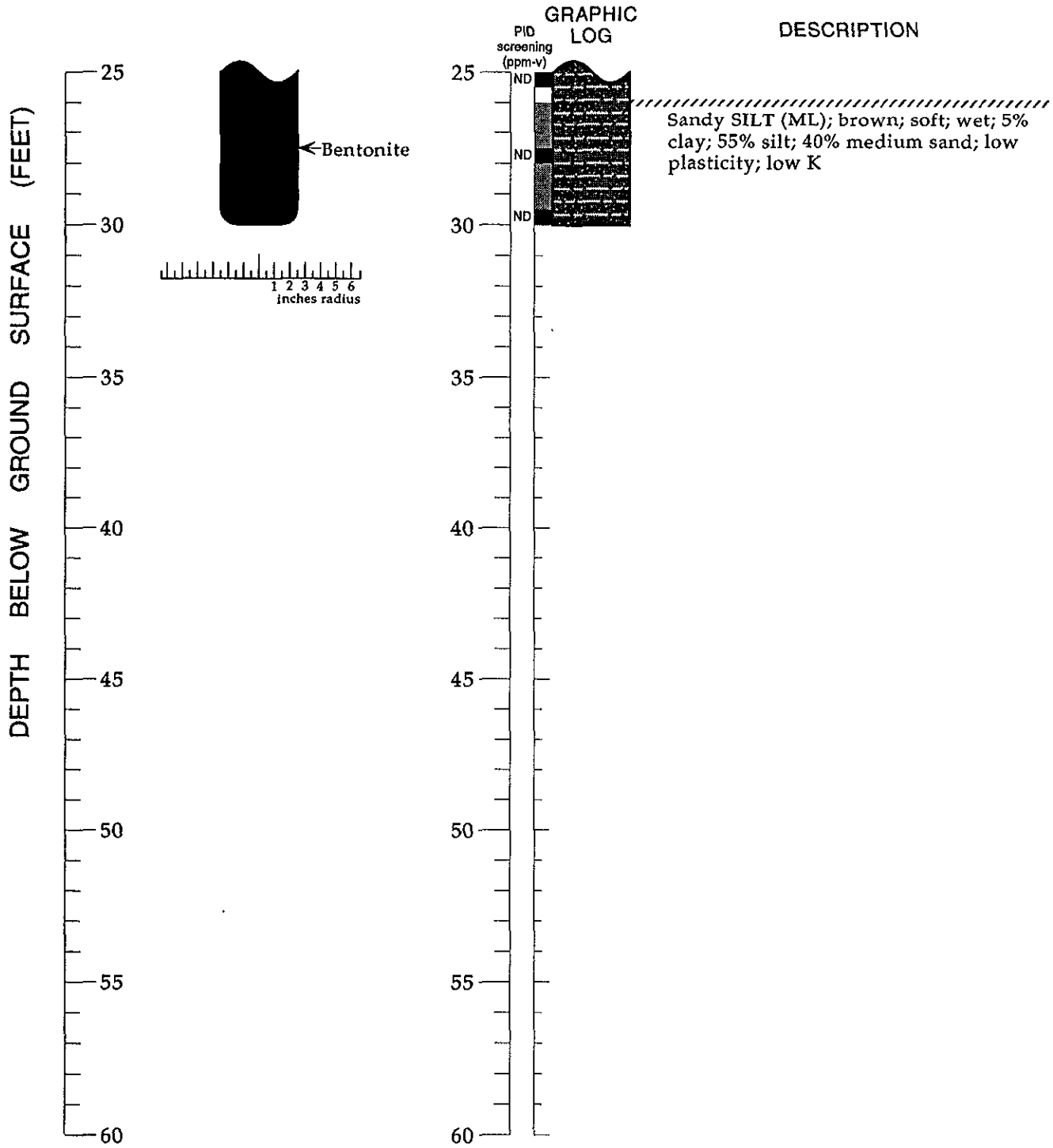
Boring Log and Well Construction Details - Well MW2 (B-22) - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

WELL MW-3 (B-3)



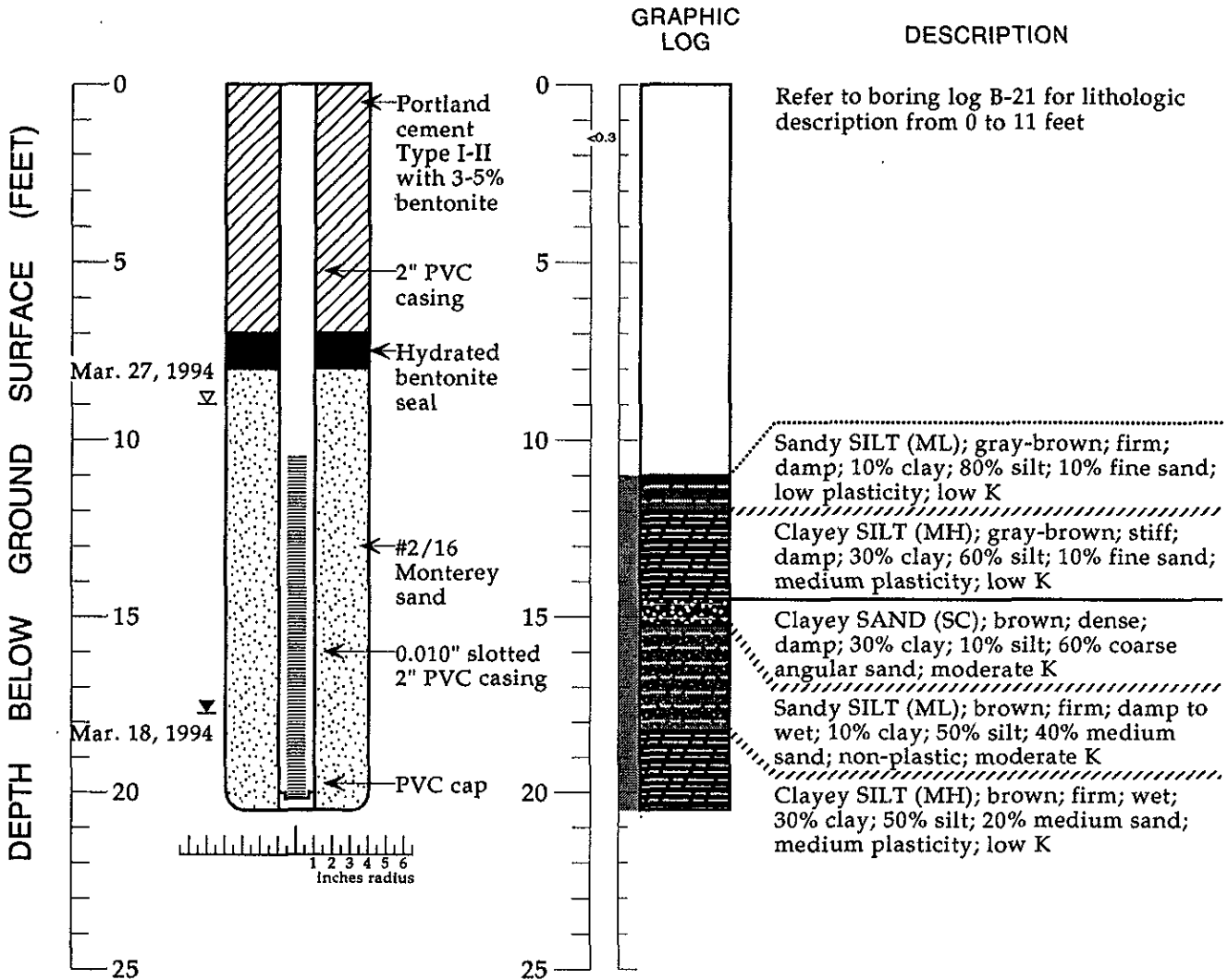
Boring Log and Well Construction Details - Well MW-3 (Boring B-3) - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

WELL MW-3 (B-3) (cont.)



Boring Log and Well Construction Details - Well MW-3 (Boring B-3) - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

WELL MW-4

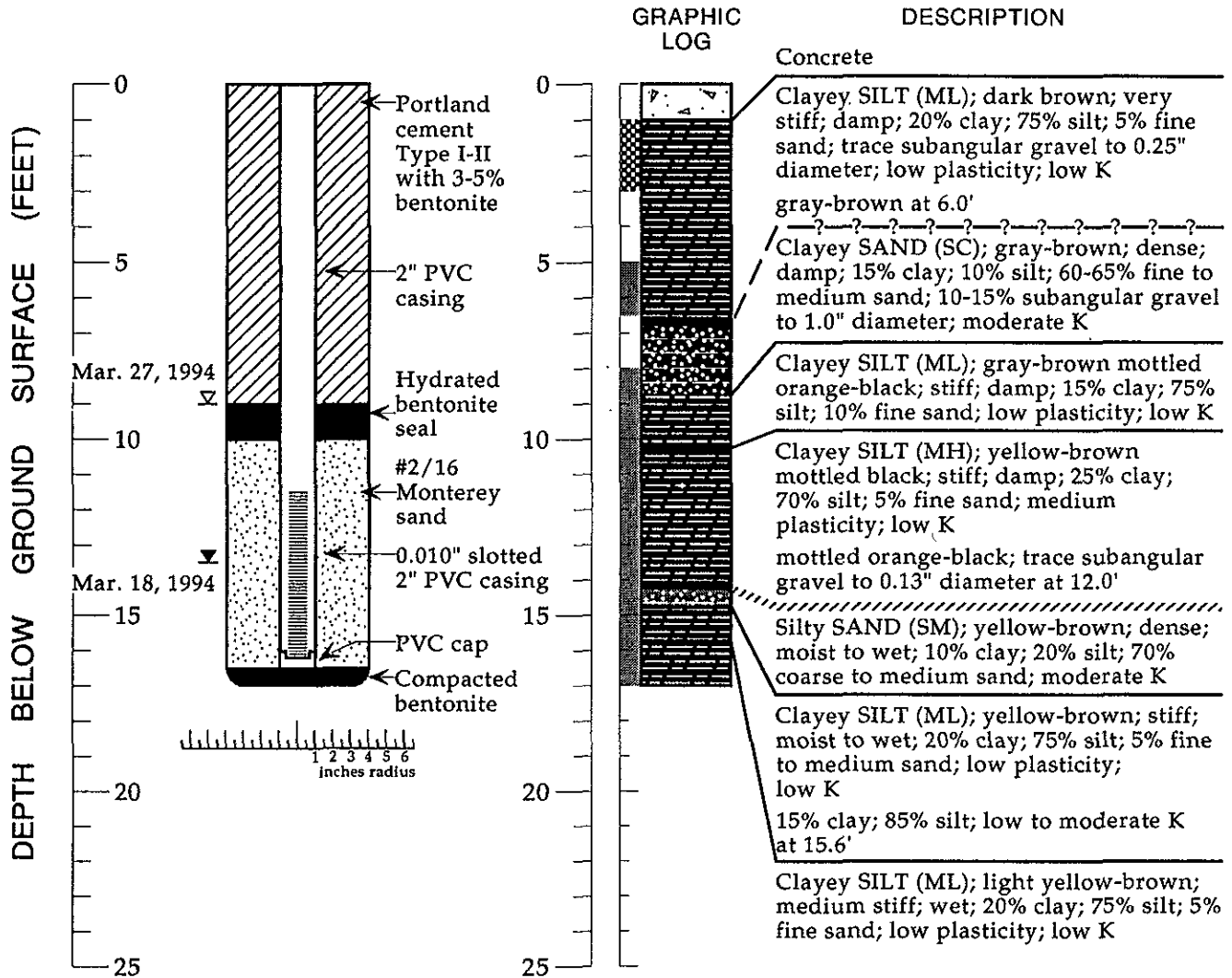


EXPLANATION

- | | | |
|-------|--|--|
| ▼ | Water level during drilling (date) | Logged By: Allison Watts |
| ▽ | Water level (date) | Supervisor: Mary Stallard; CEG 1704 |
| | Contact (dotted where approximate) | Drilling Company: Gregg Drilling, Pacheco, CA |
| —?—? | Uncertain contact | License Number: C57-485165 |
| //// | Gradational contact | Driller: Ted Hogan |
| ■ | Location of recovered drive sample | Drilling Method: Hollow-stem auger |
| ■ | Location of drive sample sealed for possible chemical analysis | Date Drilled: March 18, 1994 |
| ■ | Cutting sample | Well Head Completion: Water tight traffic rated vault at grade |
| K = | Estimated hydraulic conductivity | Type of Sampler: Split barrel (2.0" ID) |
| | | Ground Surface Elevation: 40.64 feet above mean sea level |

Boring Log and Well Construction Details - Well MW-4 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

WELL MW-5



EXPLANATION

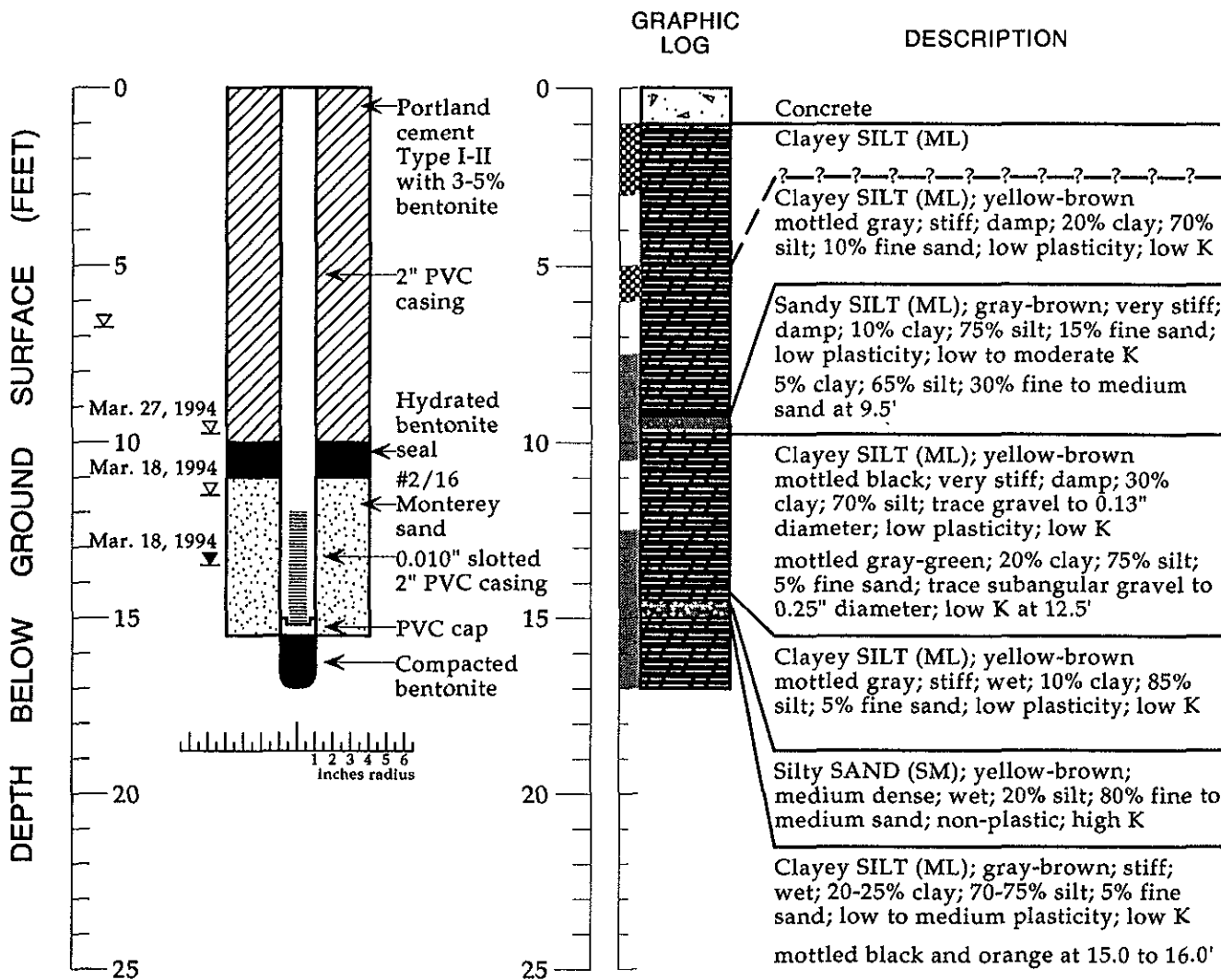
- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity

Logged By: Jonathan Weingast
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Marvin Hoover
 Drilling Method: Hollow-stem auger
 Date Drilled: March 18, 1994
 Well Head Completion: Water tight traffic rated vault at grade
 Type of Sampler: Split barrel (2.0" ID)
 Ground Surface Elevation: 36.95 feet above mean sea level

Boring Log and Well Construction Details - Well MW-5 - New Century Beverage Company,
 1150 Park Avenue, Emeryville, California



WELL MW-6

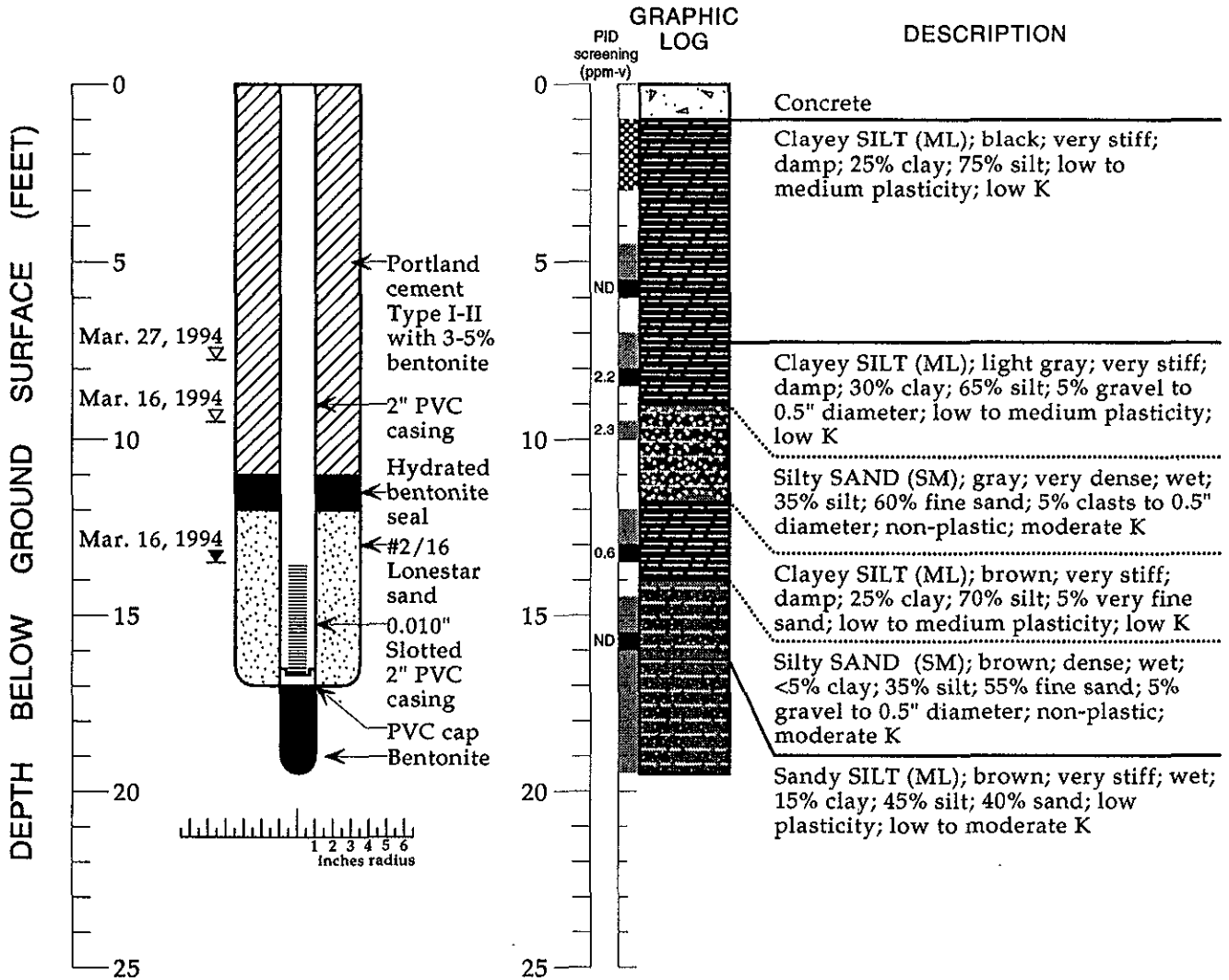


EXPLANATION

- | | |
|--|--|
| <ul style="list-style-type: none"> ▽ Water level during drilling (date) ∇ Water level (date) Contact (dotted where approximate) -?-?-? Uncertain contact //// Gradational contact ■ Location of recovered drive sample ■ Location of drive sample sealed for possible chemical analysis ■ Cutting sample K = Estimated hydraulic conductivity | <ul style="list-style-type: none"> Logged By: Jonathan Weingast Supervisor: Mary Stallard; CEG 1704 Drilling Company: Gregg Drilling, Pacheco, CA License Number: C57-485165 Driller: Marvin Hoover Drilling Method: Hollow-stem auger Date Drilled: March 18, 1994 Well Head Completion: Water tight traffic rated vault at grade Type of Sampler: Split barrel (2.0" ID) Ground Surface Elevation: 35.77 feet above mean sea level |
|--|--|

Boring Log and Well Construction Details - Well MW-6 - New Century Beverage Company,
1150 Park Avenue, Emeryville, California

WELL MW-7 (B-7)



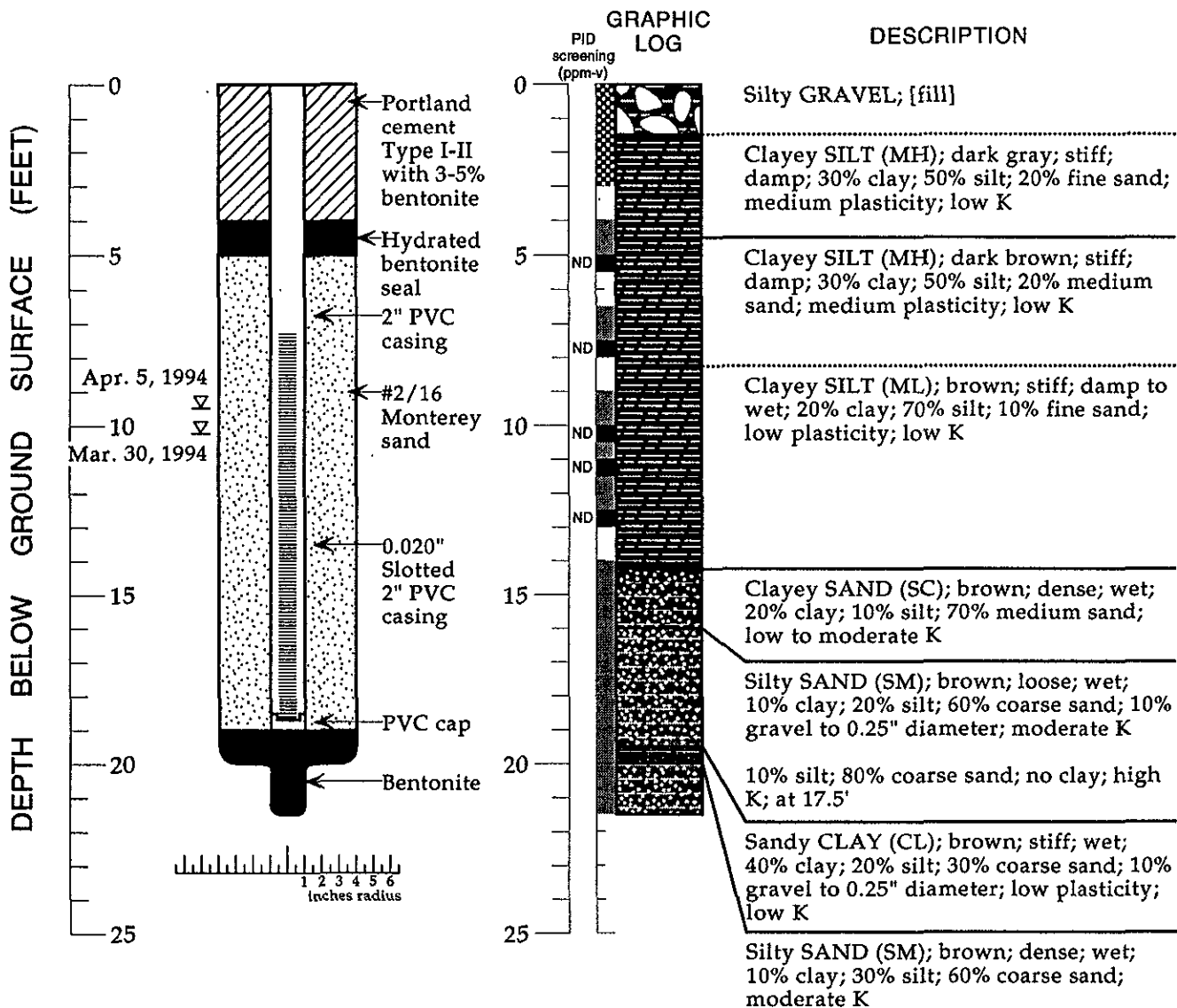
EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Joyce Adams
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Soils Exploration Services, Vacaville, CA
 License Number: C57-582696
 Driller: Ken Lenk
 Drilling Method: Hollow-stem auger
 Date Drilled: March 16, 1994
 Well Head Completion: Water tight traffic rated vault at grade
 Type of Sampler: Split barrel (2.0" ID)
 Ground Surface Elevation: 38.04 feet above mean sea level
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log and Well Construction Details - Well MW-7 (Boring B-7) - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

WELL MW-8 (B-34)

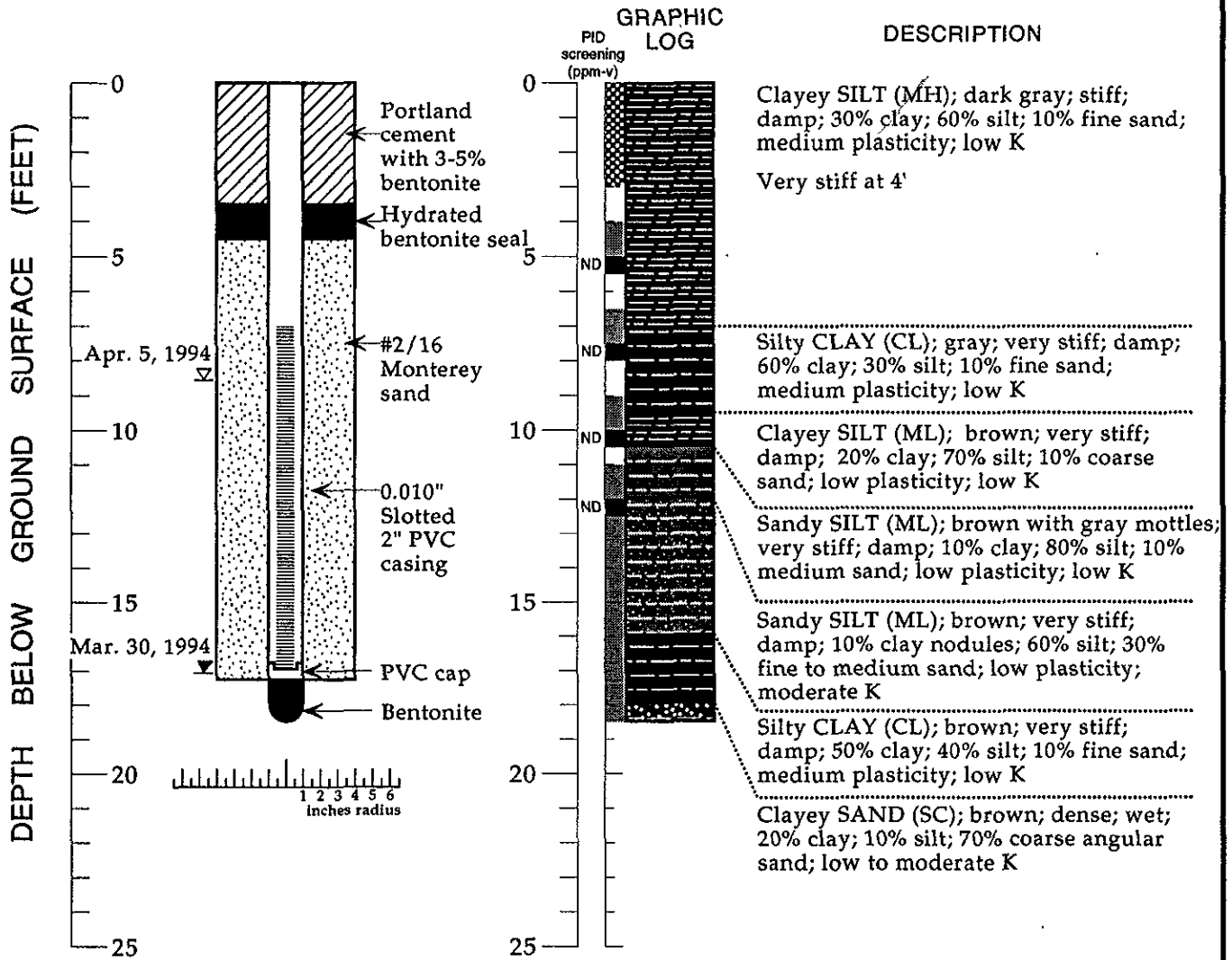


EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Alison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: West Hazmat, Newark, CA
 License Number: C57-554979
 Driller: Ted Hogan
 Drilling Method: Hollow-stem auger
 Date Drilled: March 30, 1994
 Well Head Completion: Water tight traffic rated vault at grade
 Type of Sampler: Split barrel (2.0" ID)
 Ground Surface Elevation: 33.39 feet above mean sea level
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

WELL MW-9 (B-36)



EXPLANATION

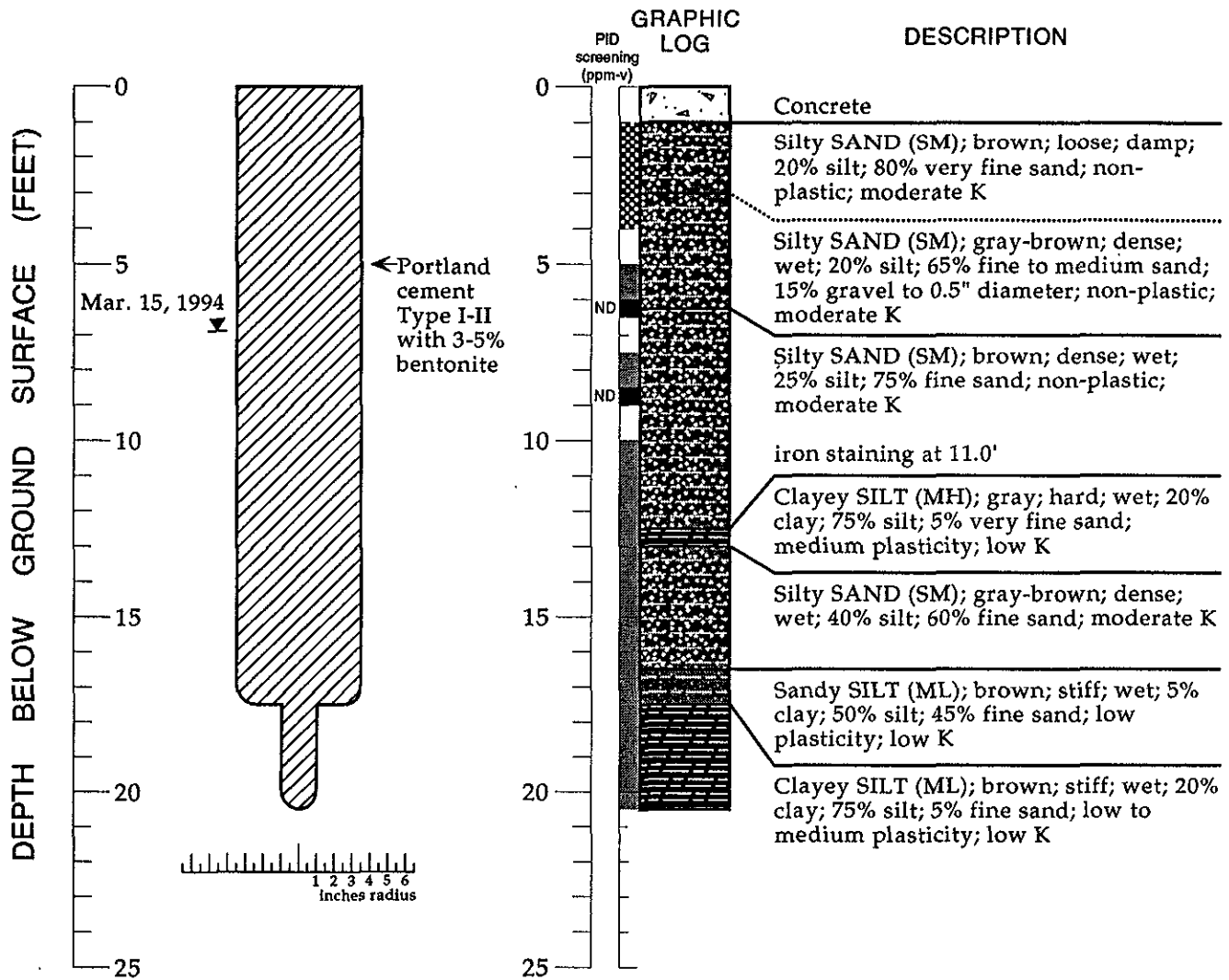
- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Alison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: West Hazmat, Newark, CA
 License Number: C57-554979
 Driller: Thomas Wright
 Drilling Method: Hollow-stem auger
 Date Drilled: March 30, 1994
 Well Head Completion: Water tight traffic rated vault at grade
 Type of Sampler: Split barrel (2.0" ID)
 Ground Surface Elevation: 36.48 feet above mean sea level
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log and Well Construction Details - Well MW-9 (B-36) - New Century Beverage Company, 1150 Park Avenue, Emeryville, California



BORING B-1



EXPLANATION

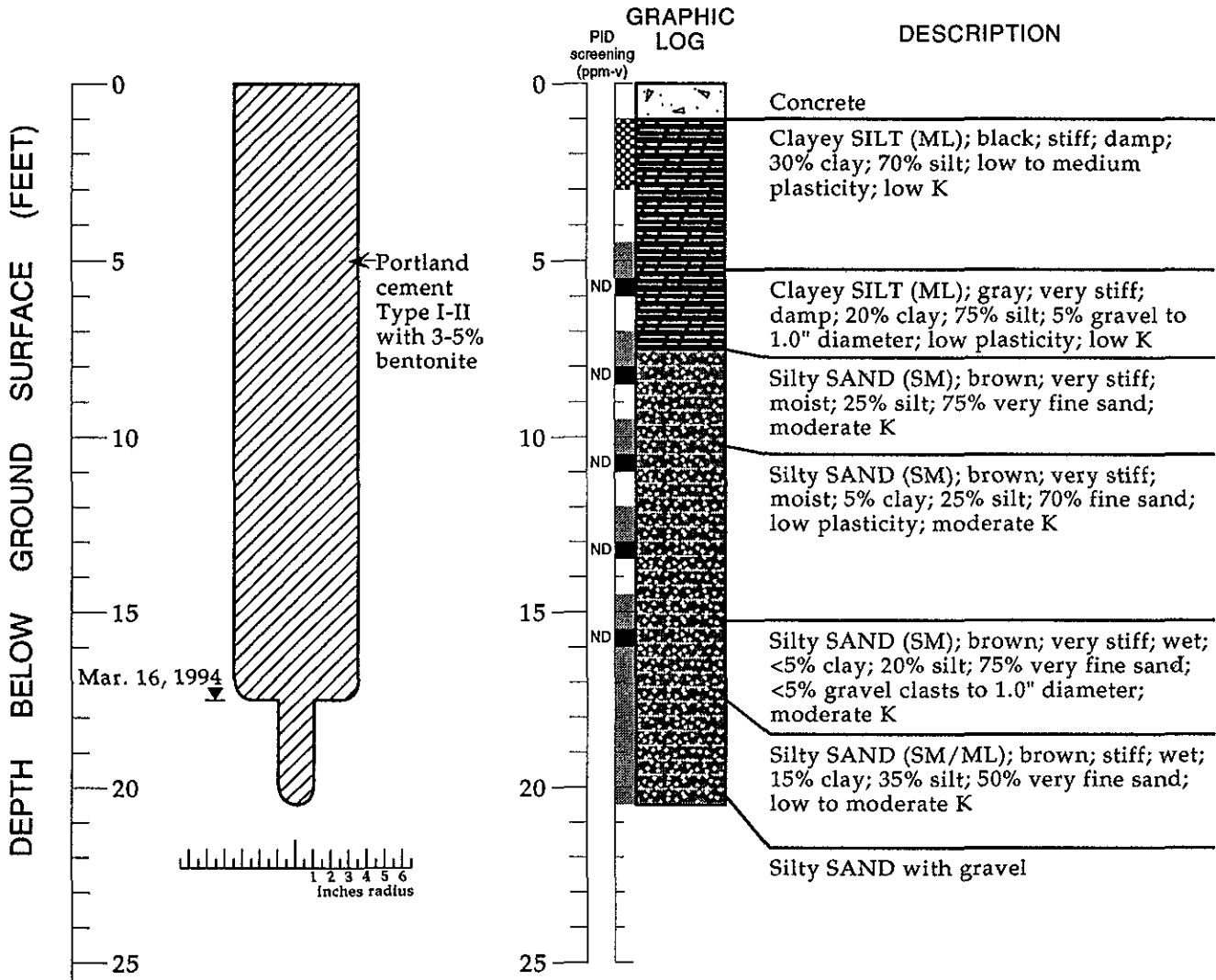
- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Joyce Adams
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Soils Exploration Services, Vacaville, CA
 License Number: C57-582696
 Driller: Moe Paxinos
 Drilling Method: Hollow-stem auger
 Date Drilled: March 15, 1994
 Type of Sampler: Split barrel (2" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-1 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California



BORING B-2



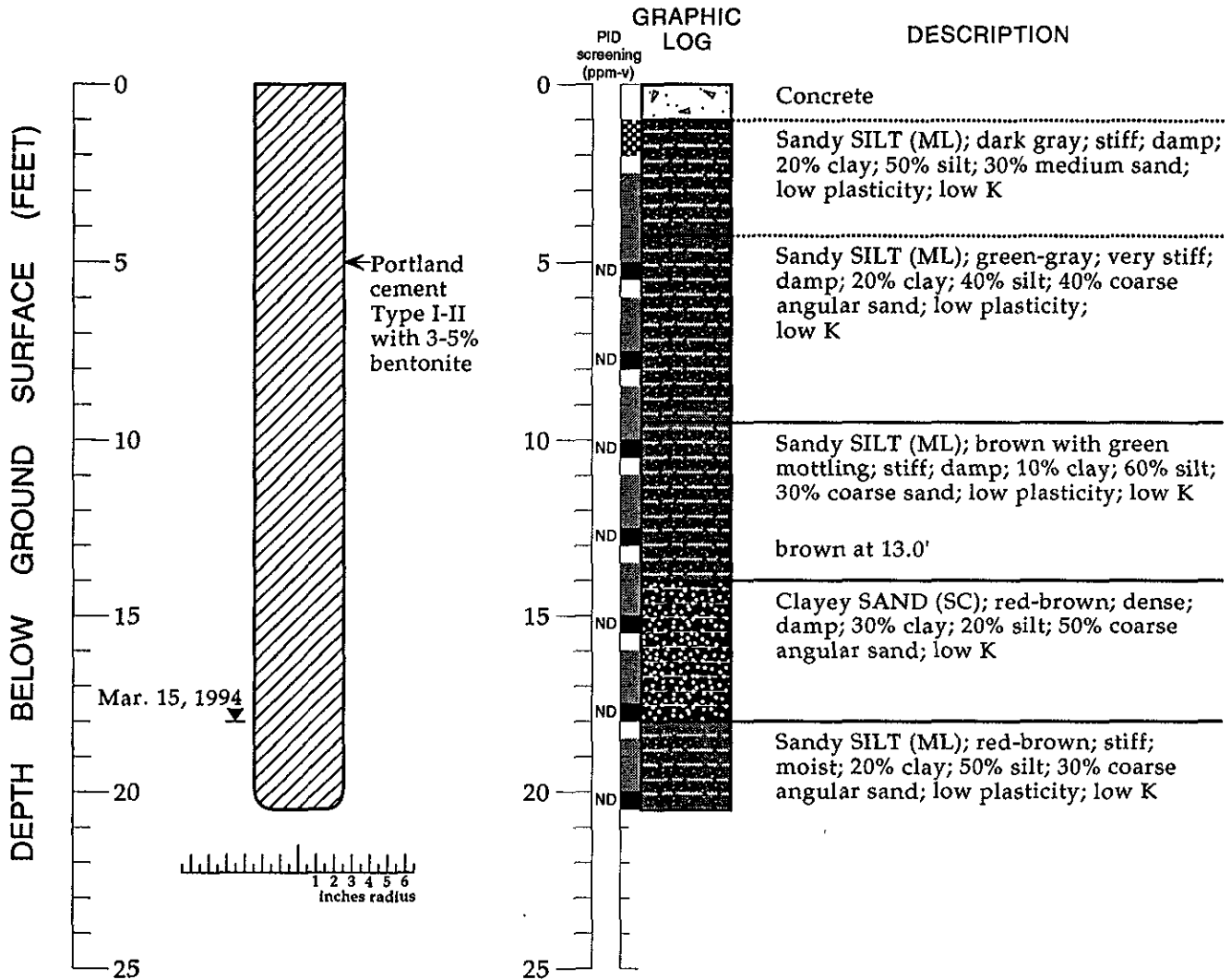
EXPLANATION

- ▼ Water level during drilling (date)
- ∇ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Joyce Adams
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Soils Exploration Services, Vacaville, CA
 License Number: C57-582696
 Driller: Ken Lenk
 Drilling Method: Hollow-stem auger
 Date Drilled: March 16, 1994
 Type of Sampler: Split barrel (2" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-2 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-4



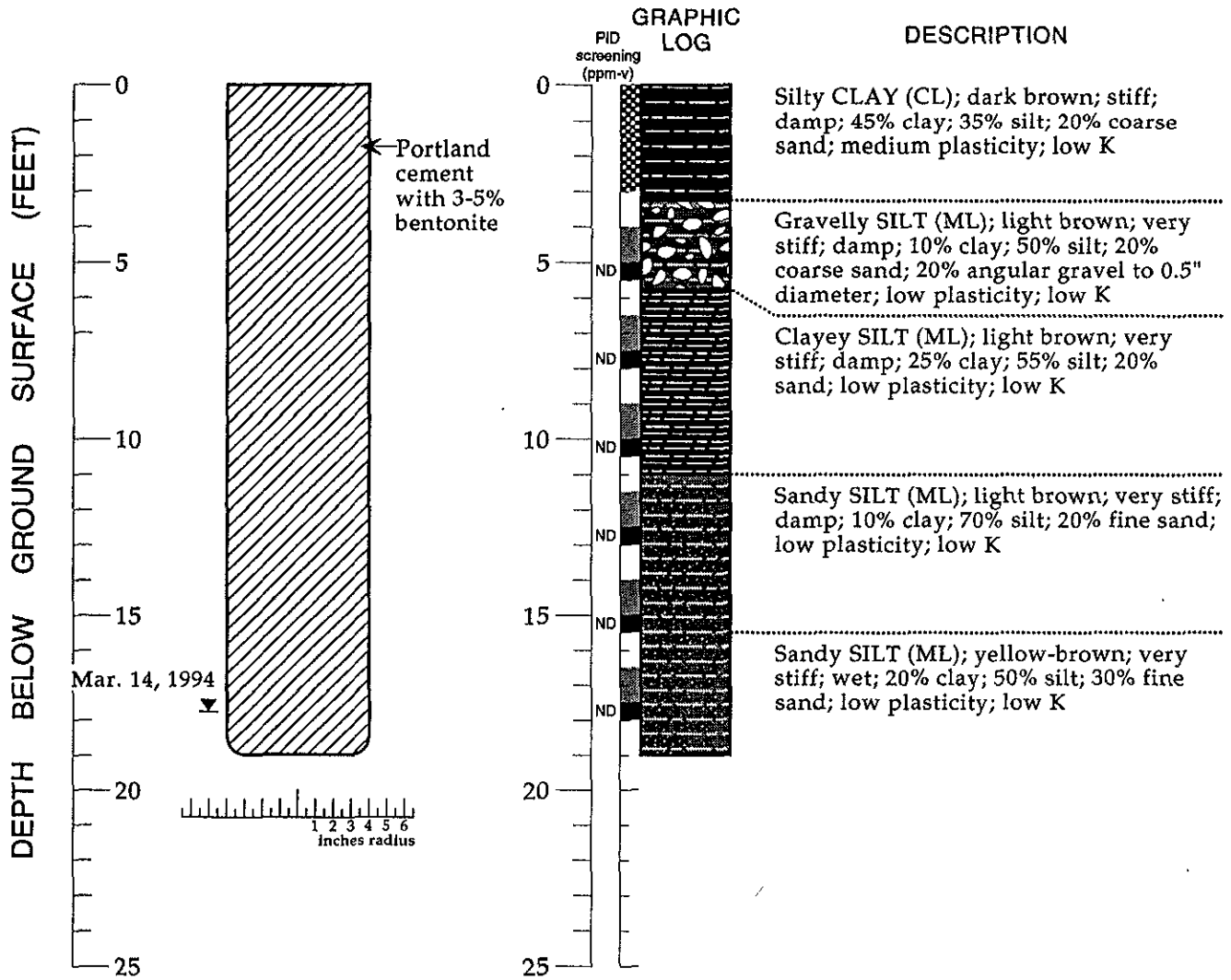
EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?- Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Allison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Ted Hogan
 Drilling Method: Hollow-stem auger
 Date Drilled: March 15, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-4 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-5



EXPLANATION

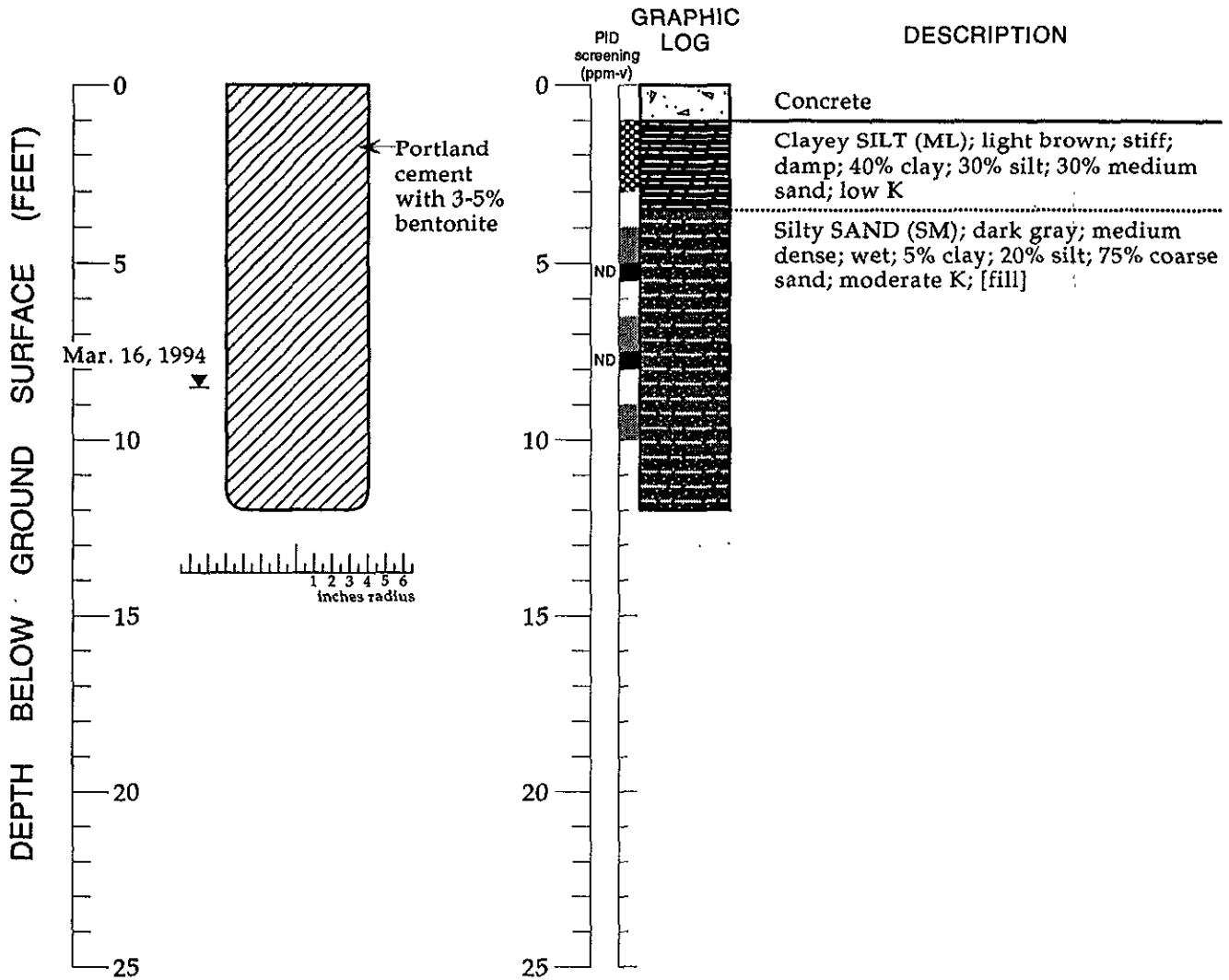
- ▼ Water level during drilling (date)
- ∇ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Alison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Marvin Hoover
 Drilling Method: Hollow-stem auger
 Date Drilled: March 14, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-5 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California



BORING B-6



EXPLANATION

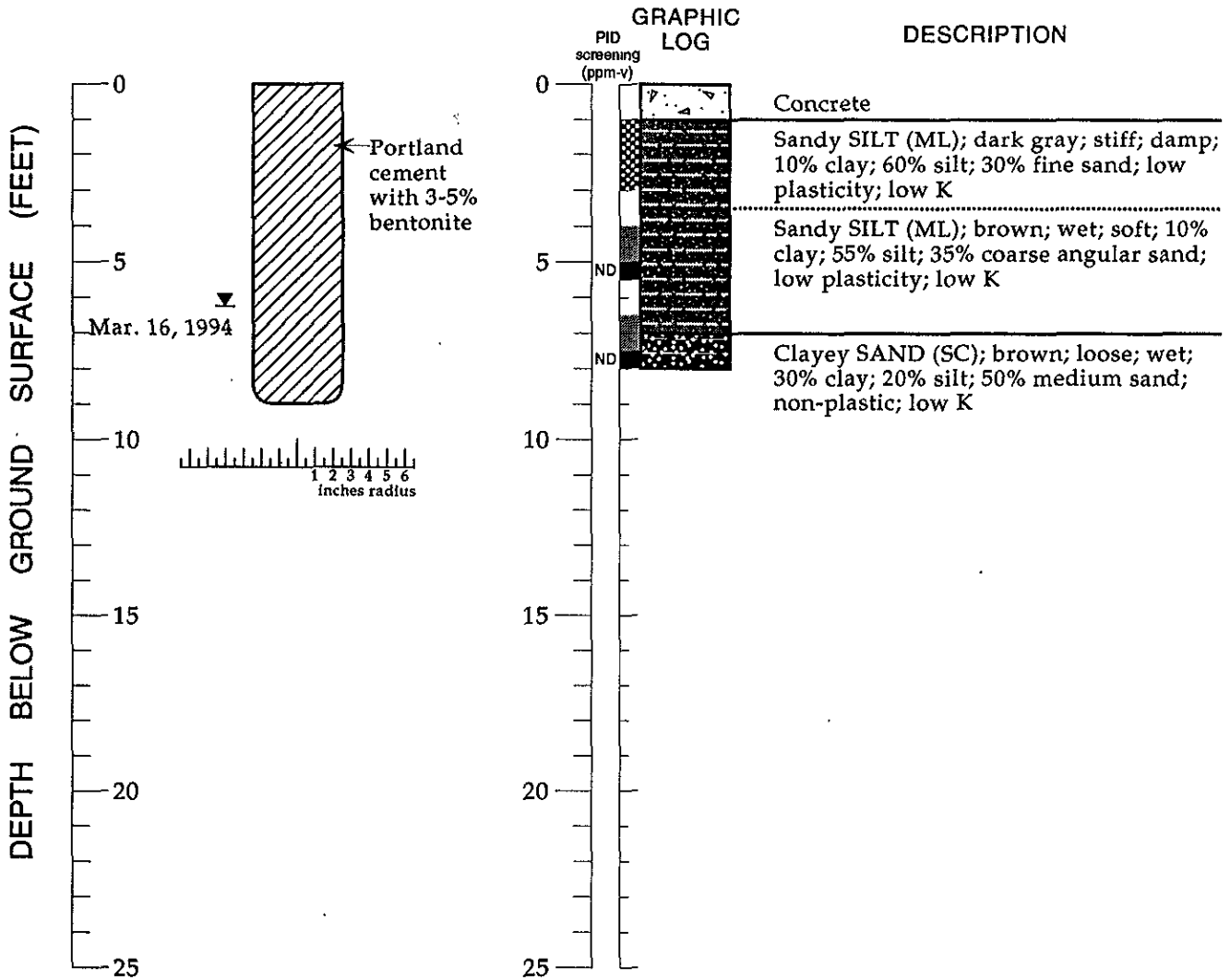
- ▼ Water level during drilling (date)
- ⊠ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Alison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Marvin Hoover
 Drilling Method: Hollow-stem auger
 Date Drilled: March 14, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Logs - Boring B-6 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California



BORING B-8



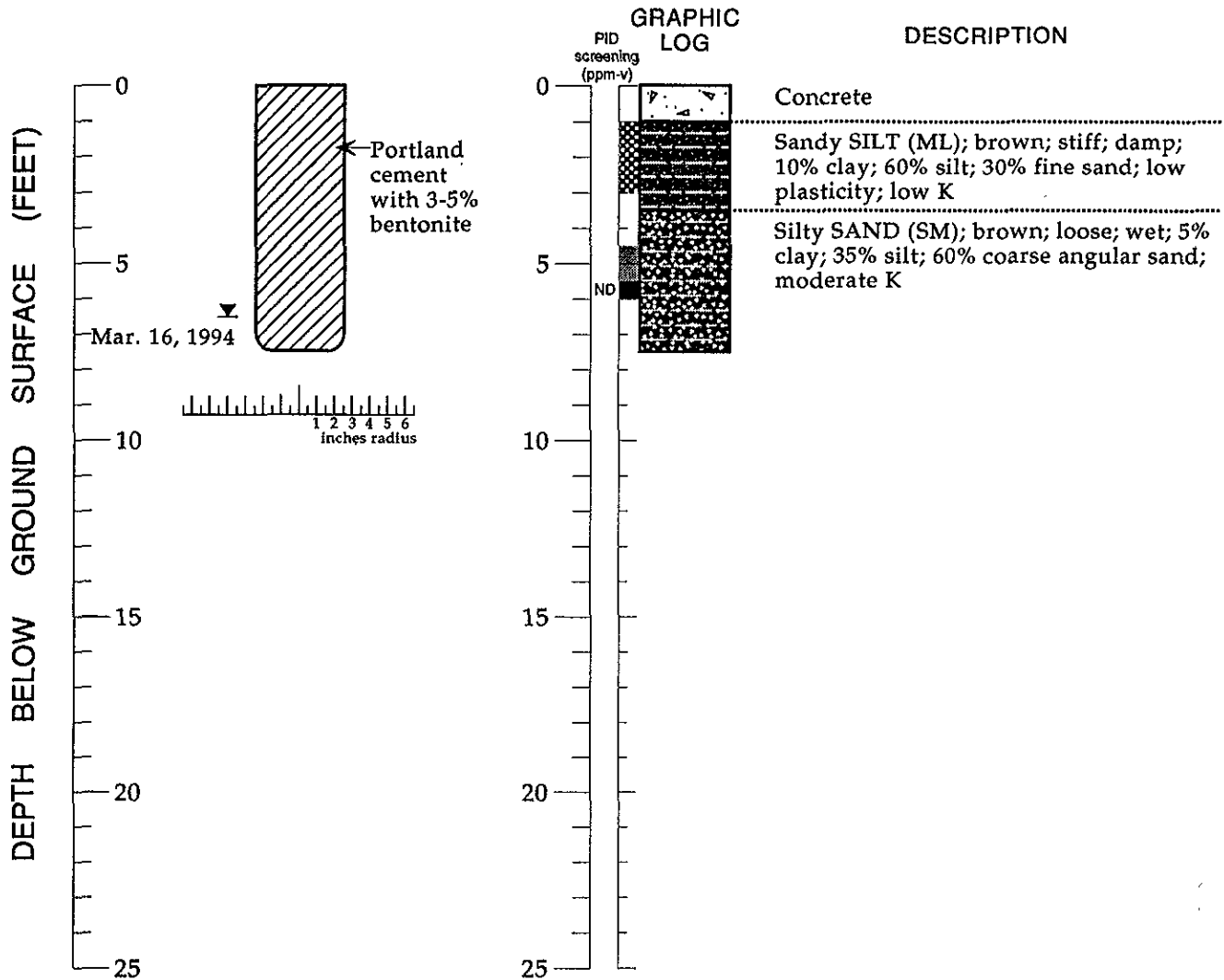
EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- ▣ Cuttings sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Alison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Ted Hogan
 Drilling Method: Hollow-stem auger
 Date Drilled: March 16, 1994
 Type of Sampler: Split barrel (2" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-8 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-9



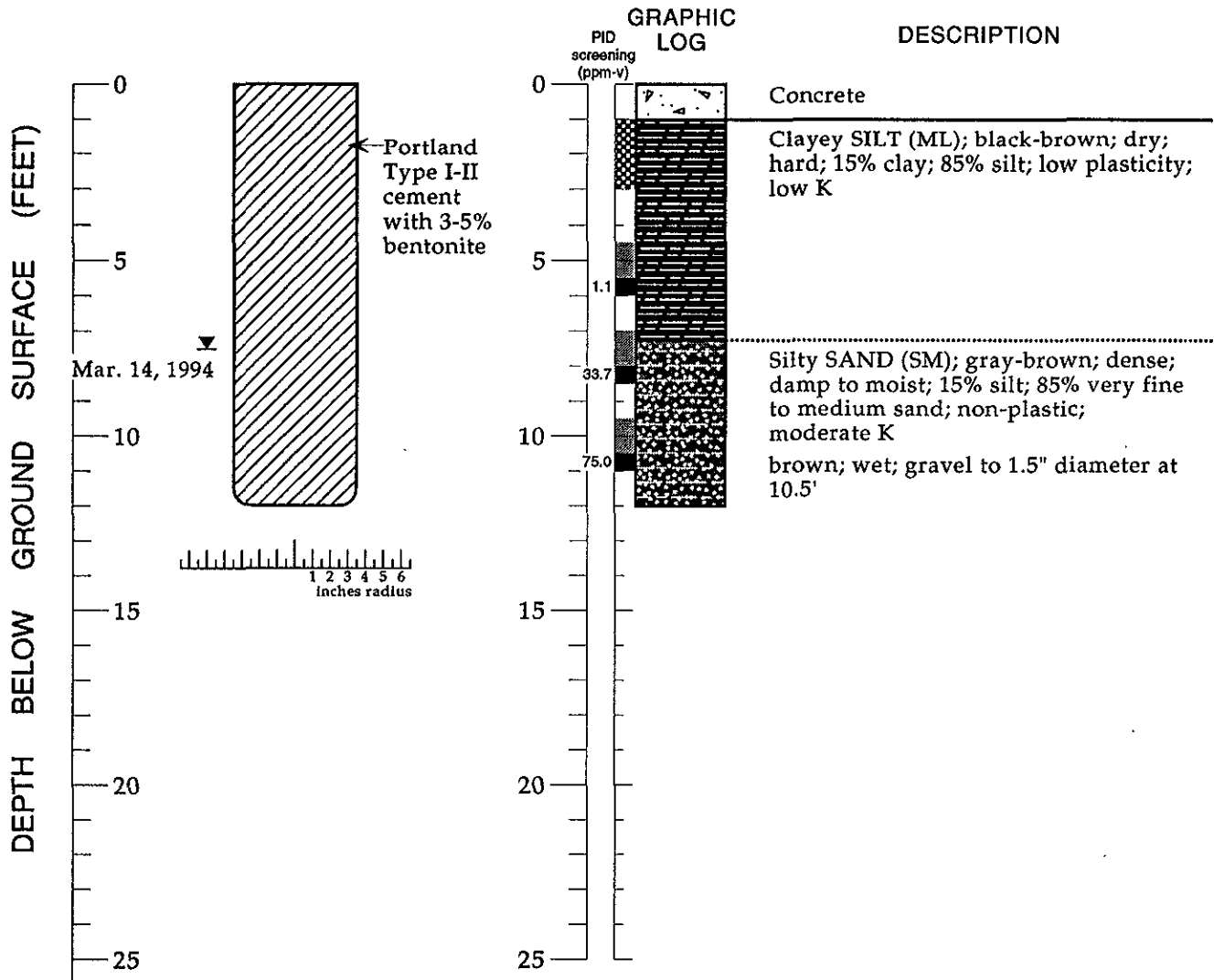
EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Alison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Ted Hogan
 Drilling Method: Hollow-stem auger
 Date Drilled: March 14, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-9 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-10



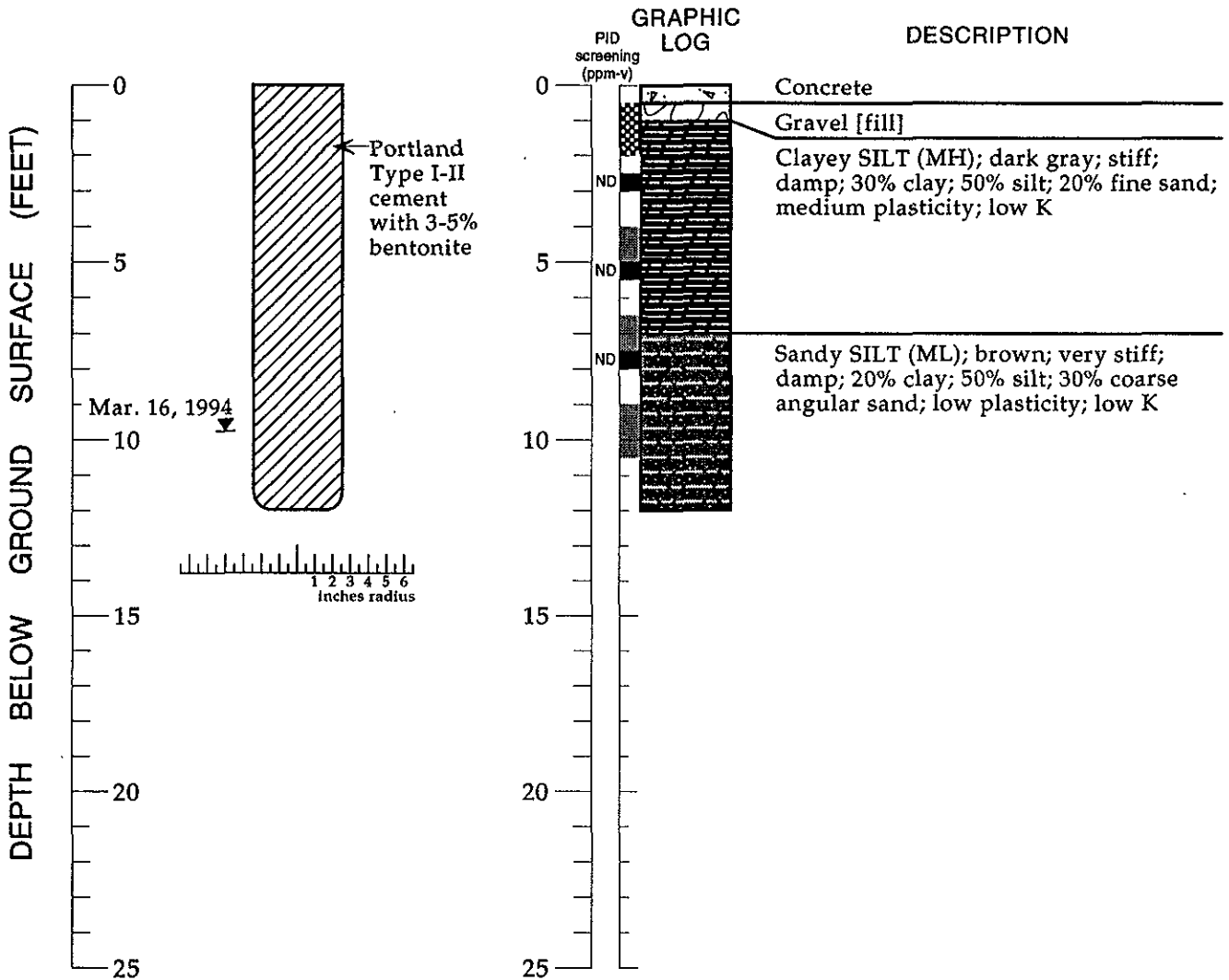
EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Joyce Adams
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Soils Explorations Services, Vacaville, CA
 License Number: C57-582696
 Driller: Ken Lenk
 Drilling Method: Hollow-stem auger
 Date Drilled: March 14, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-10 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-11



EXPLANATION

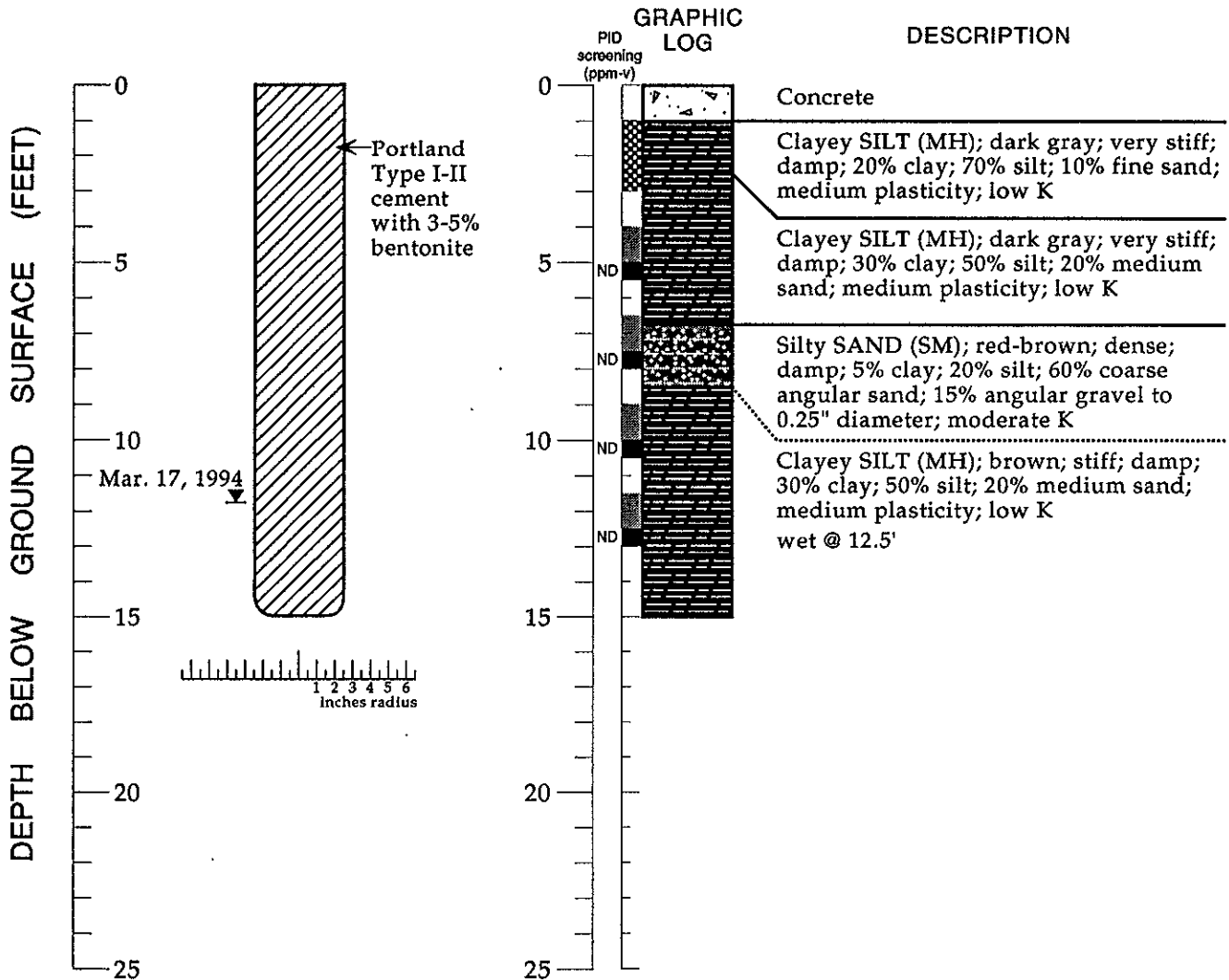
- ▼ Water level during drilling (date)
- ⊗ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Alison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Ted Hogan
 Drilling Method: Hollow-stem auger
 Date Drilled: March 16, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-11 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California



BORING B-12



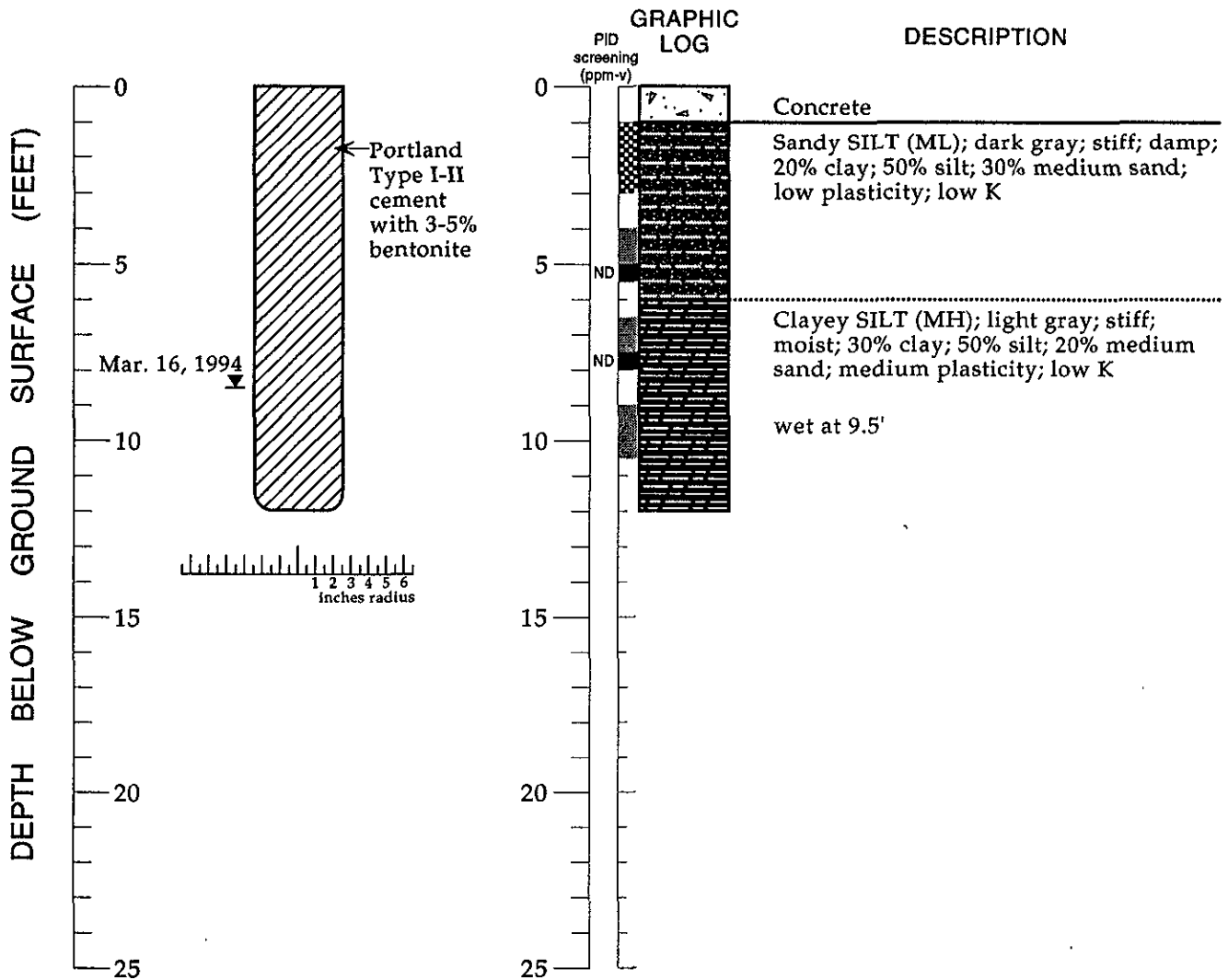
EXPLANATION

- ▼ Water level during drilling (date)
- ∇ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Alison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Ted Hogan
 Drilling Method: Hollow-stem auger
 Date Drilled: March 17, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-12 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-13



EXPLANATION

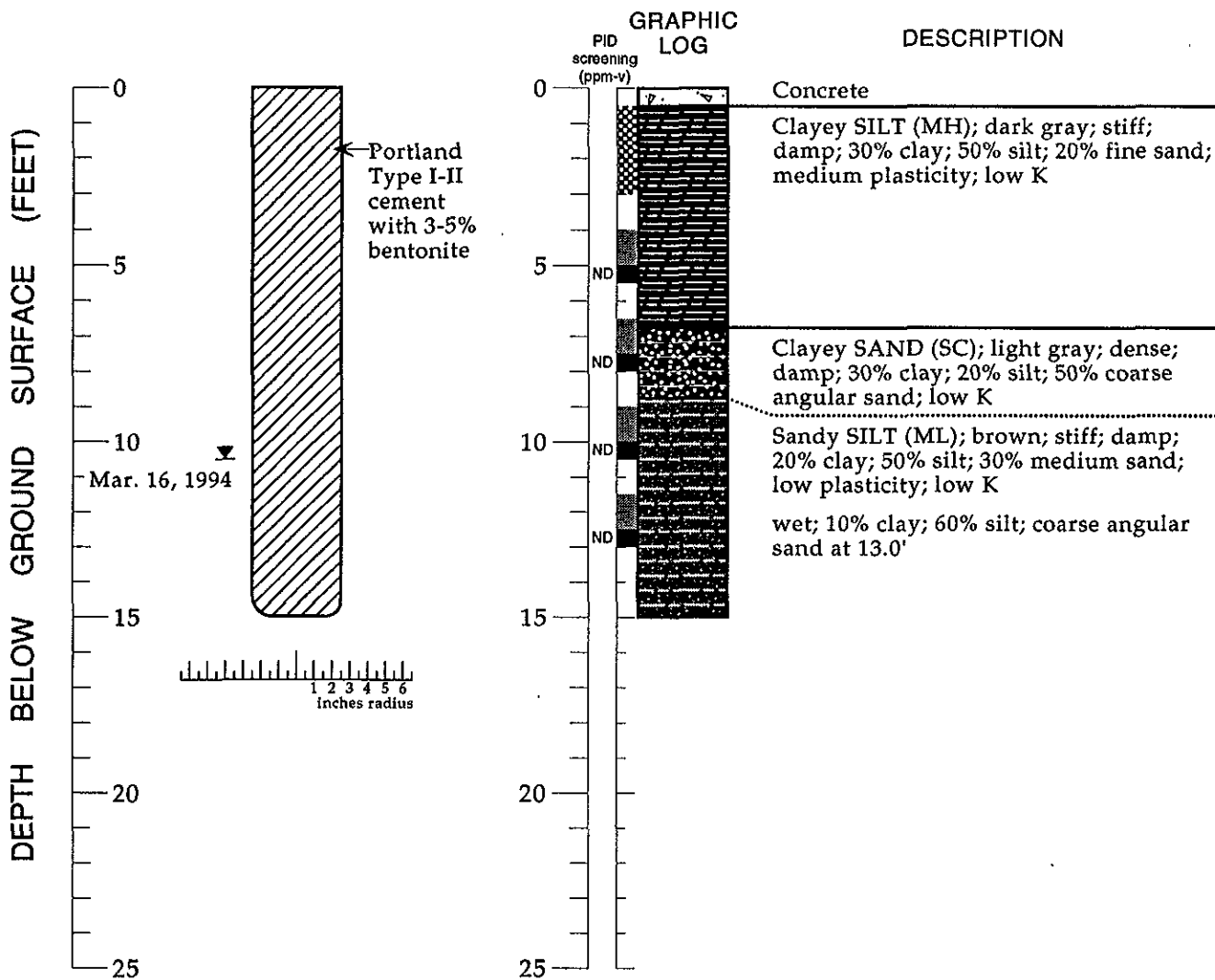
- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Alison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Ted Hogan
 Drilling Method: Hollow-stem auger
 Date Drilled: March 16, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-13 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California



BORING B-14



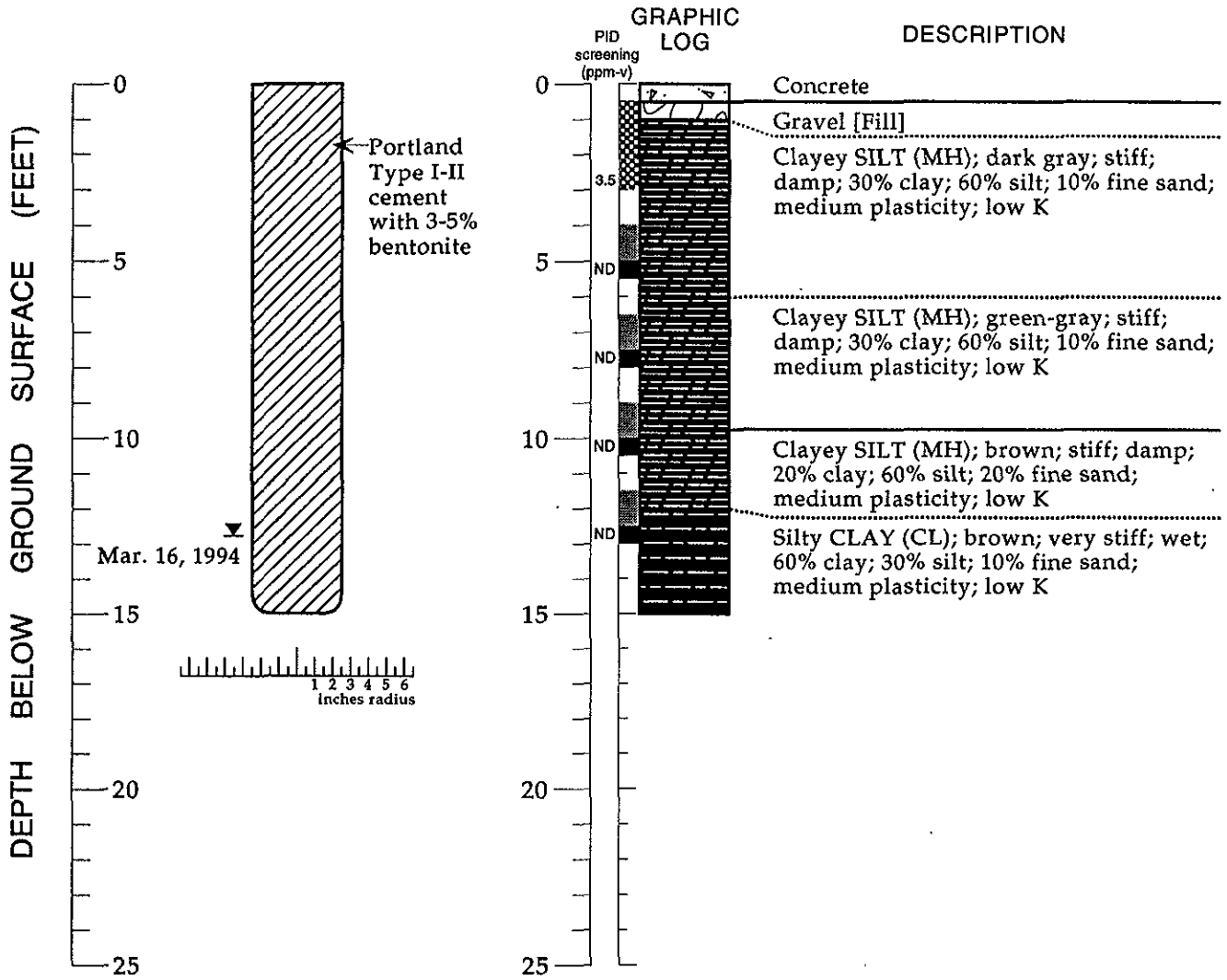
EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity
- ND = Not detected




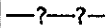
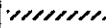



Logged By: Alison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Ted Hogan
 Drilling Method: Hollow-stem auger
 Date Drilled: March 17, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-14 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-15



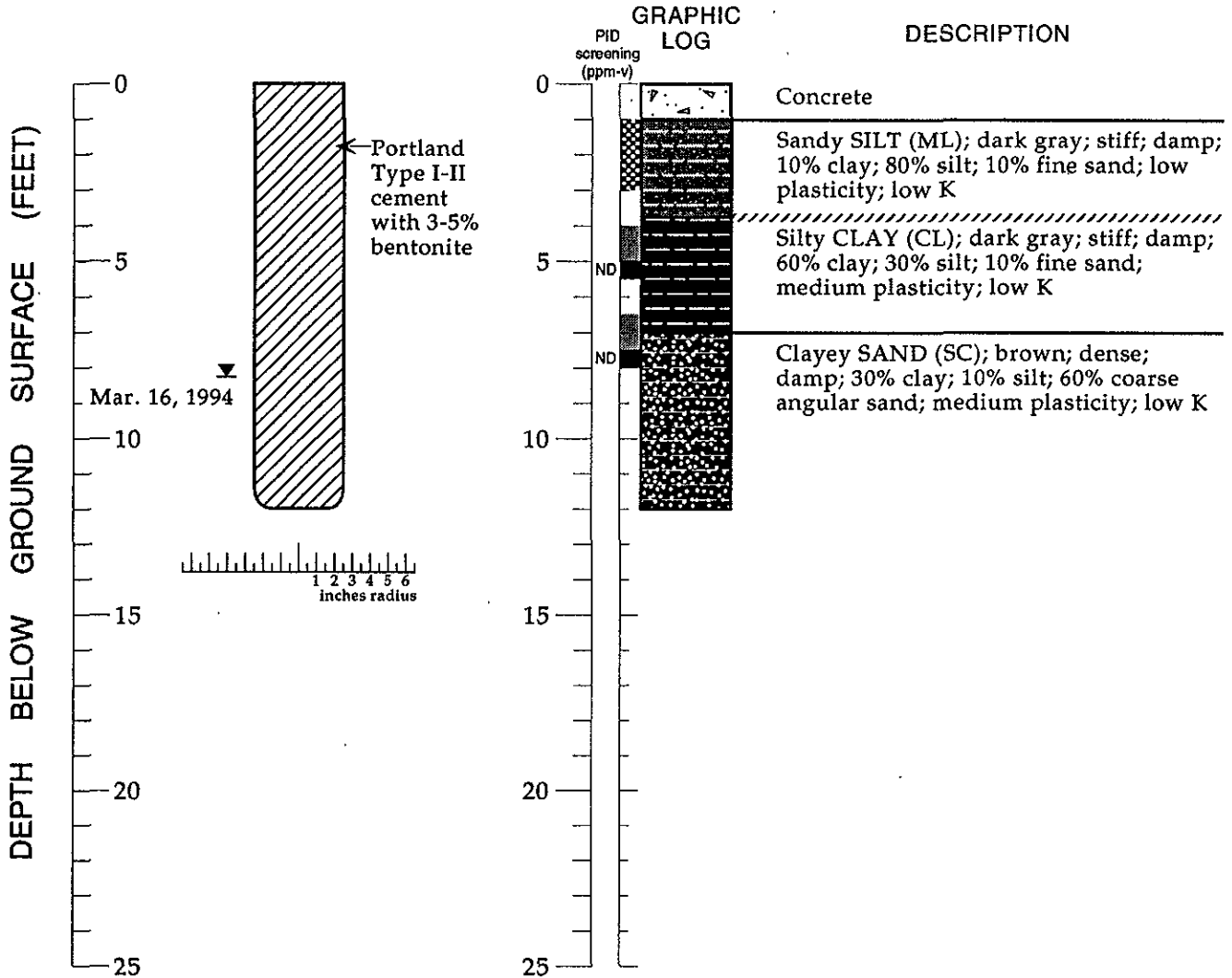
EXPLANATION

-  Water level during drilling (date)
-  Water level (date)
-  Contact (dotted where approximate)
-  Uncertain contact
-  Gradational contact
-  Location of recovered drive sample
-  Location of drive sample sealed for possible chemical analysis
-  Cuttings sample
- K** = Estimated hydraulic conductivity
- ND** = Not detected

Logged By: Alison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Ted Hogan
 Drilling Method: Hollow-stem auger
 Date Drilled: March 17, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-15 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-16



EXPLANATION

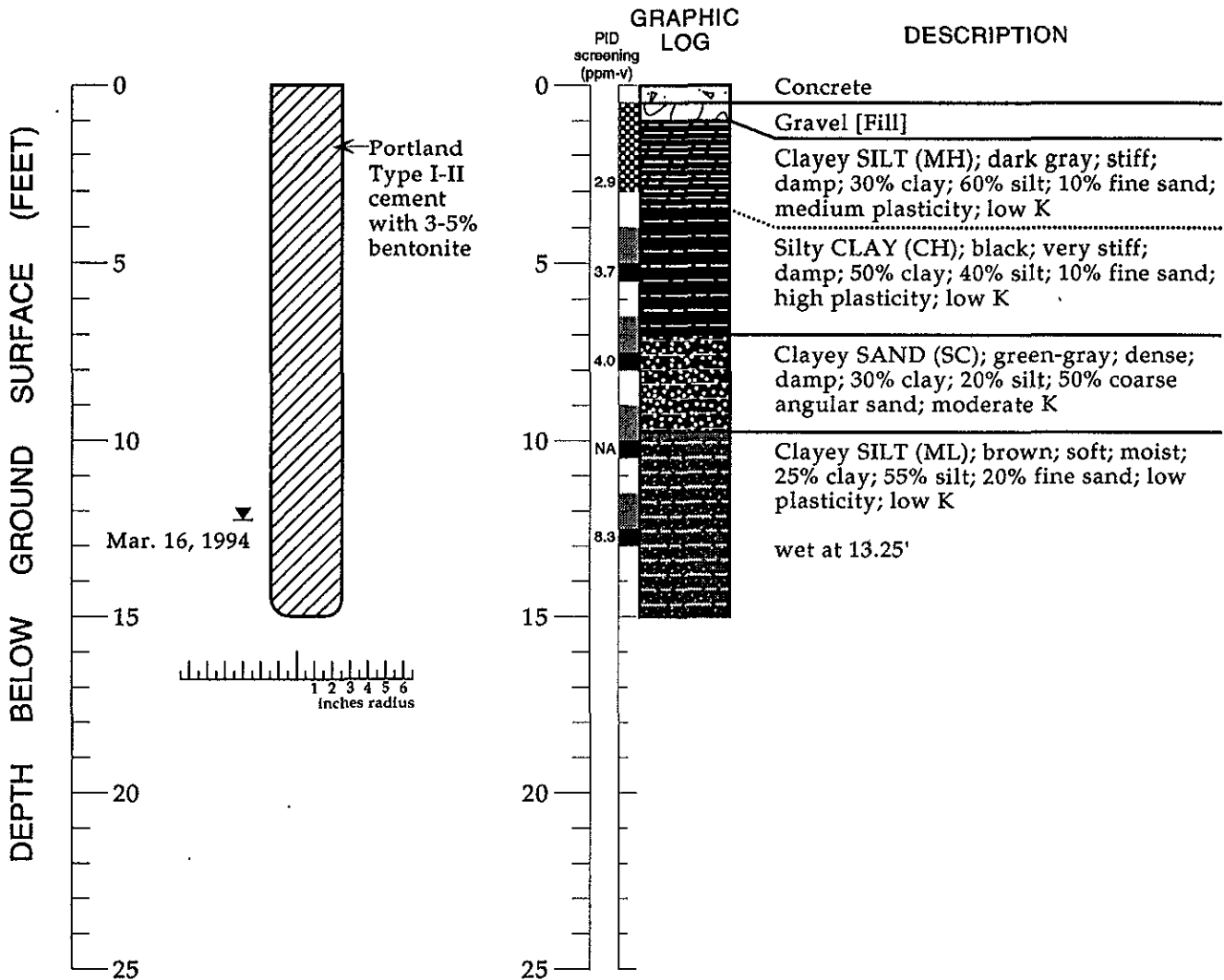
- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Alison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Ted Hogan
 Drilling Method: Hollow-stem auger
 Date Drilled: March 17, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-16 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California



BORING B-17



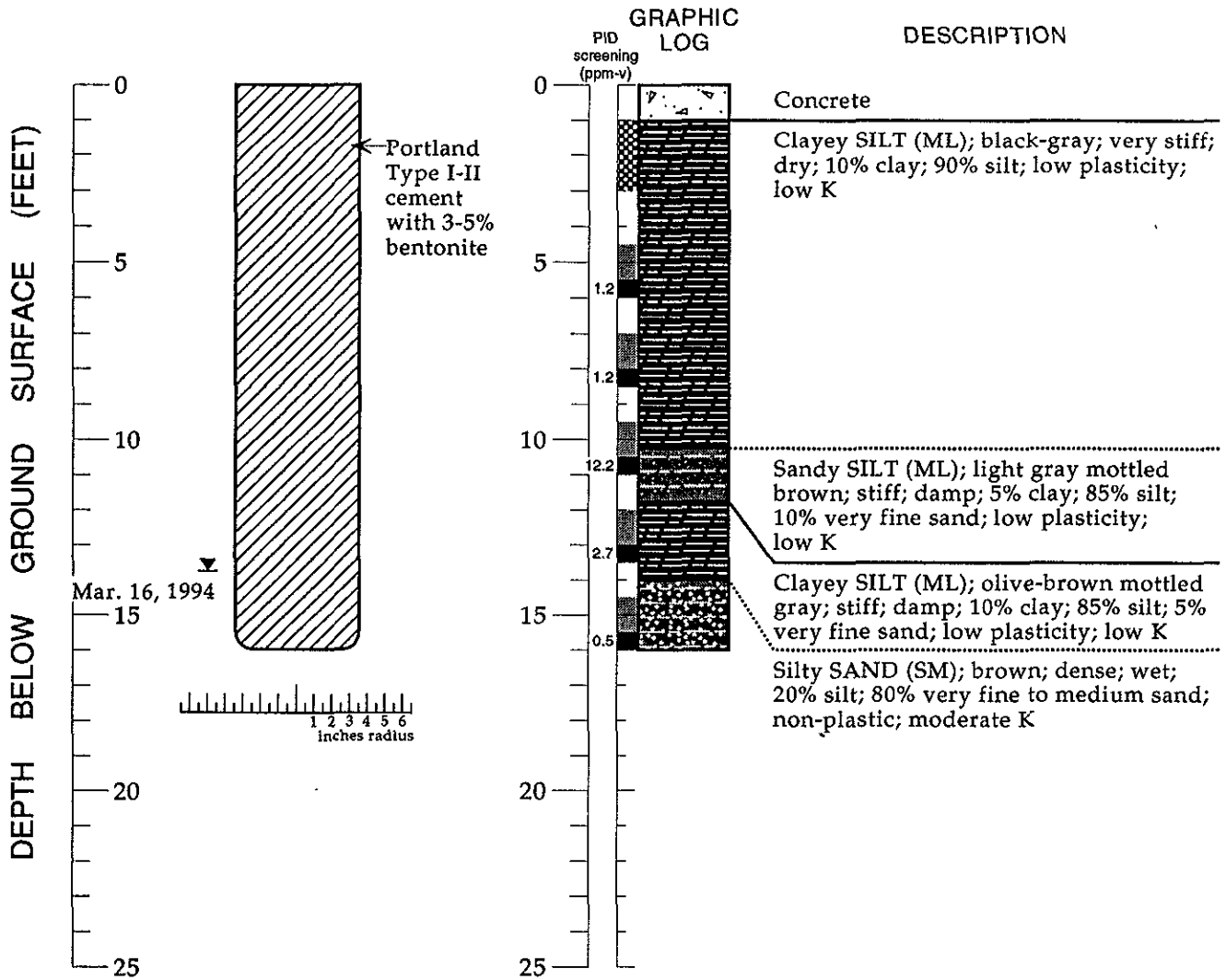
EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity
- NA = Not available

Logged By: Alison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Ted Hogan
 Drilling Method: Hollow-stem auger
 Date Drilled: March 17, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-17 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-18



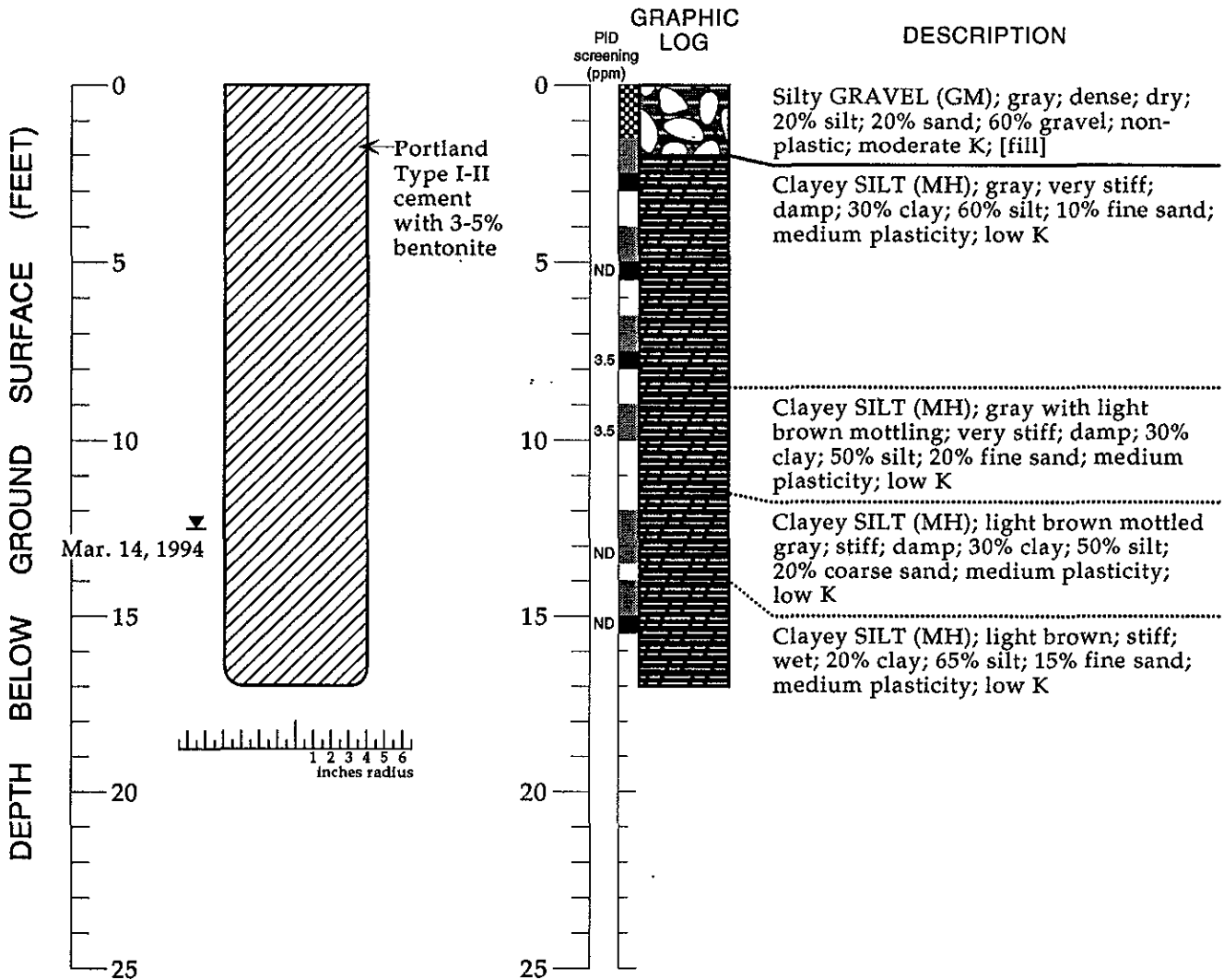
EXPLANATION

- ▼ Water level during drilling (date)
- ⚡ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity

Logged By: Joyce Adams
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Soils Exploration Services, Vacaville, CA
 License Number: C57-582696
 Driller: Ken Lenk
 Drilling Method: Hollow-stem auger
 Date Drilled: March 14, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-18 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-19



EXPLANATION

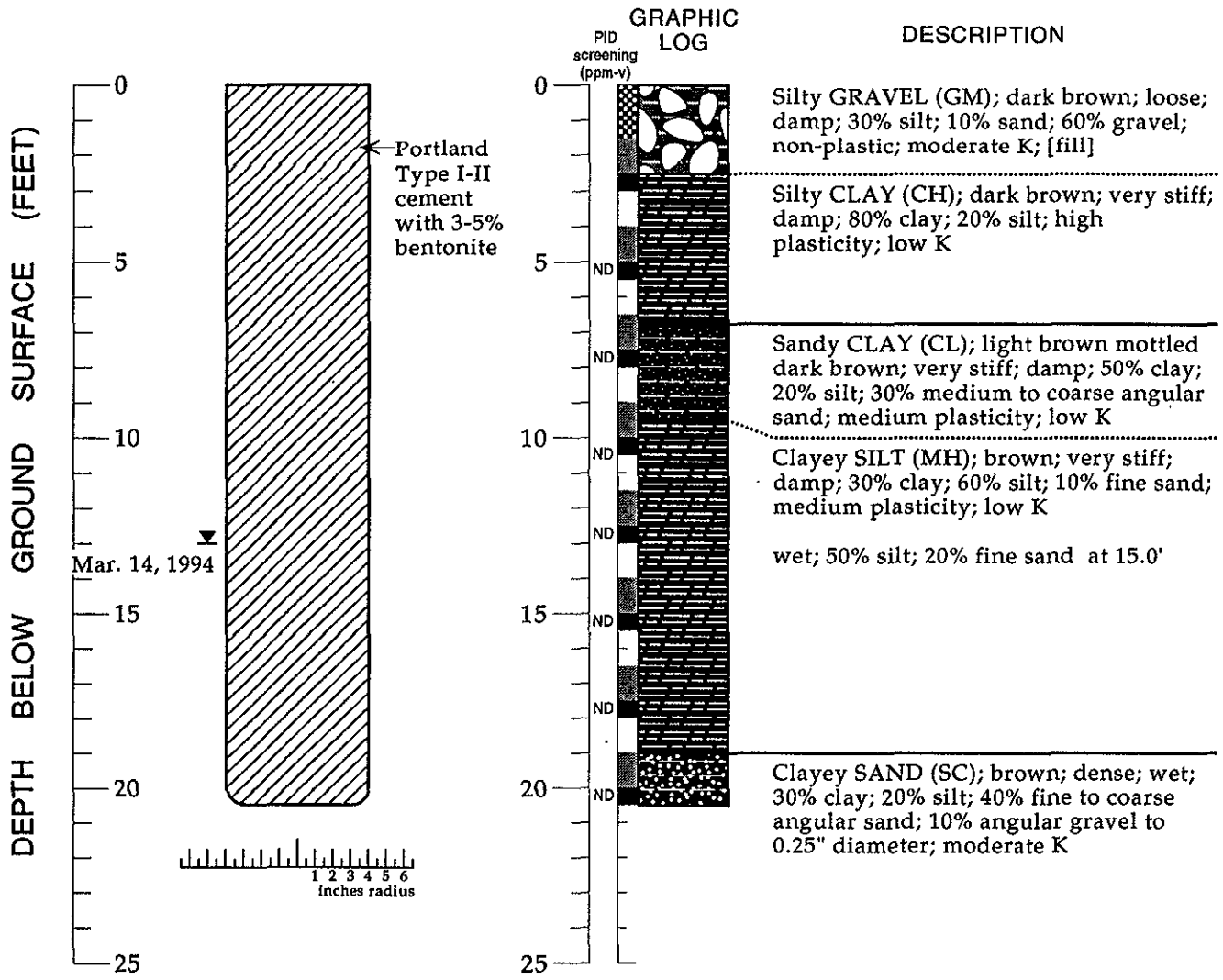
- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Allison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Marvin Hoover
 Drilling Method: Hollow-stem auger
 Date Drilled: March 14, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-19 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California



BORING B-20



EXPLANATION

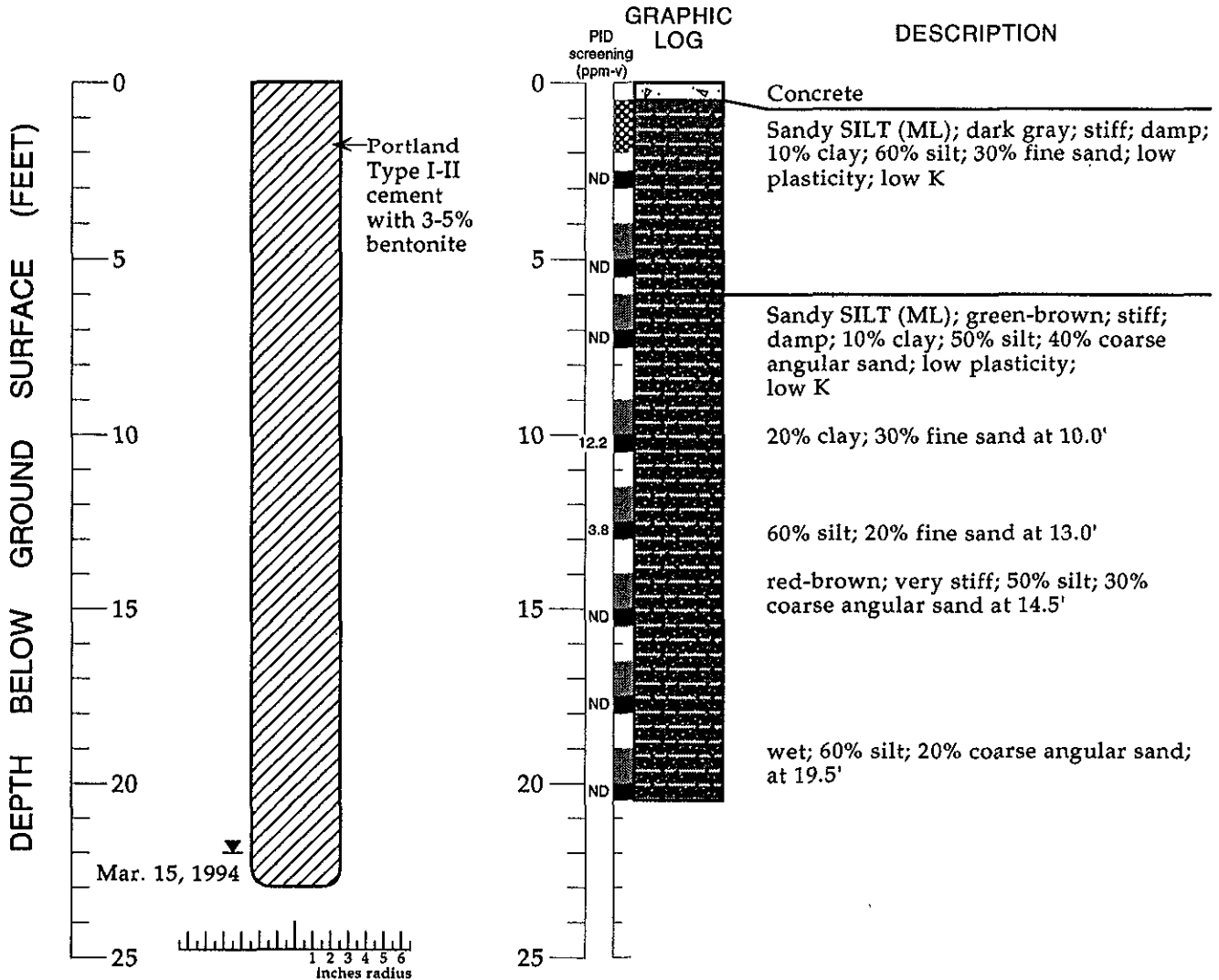
- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Allison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Marvin Hoover
 Drilling Method: Hollow-stem auger
 Date Drilled: March 14, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-20 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California



BORING B-21



EXPLANATION

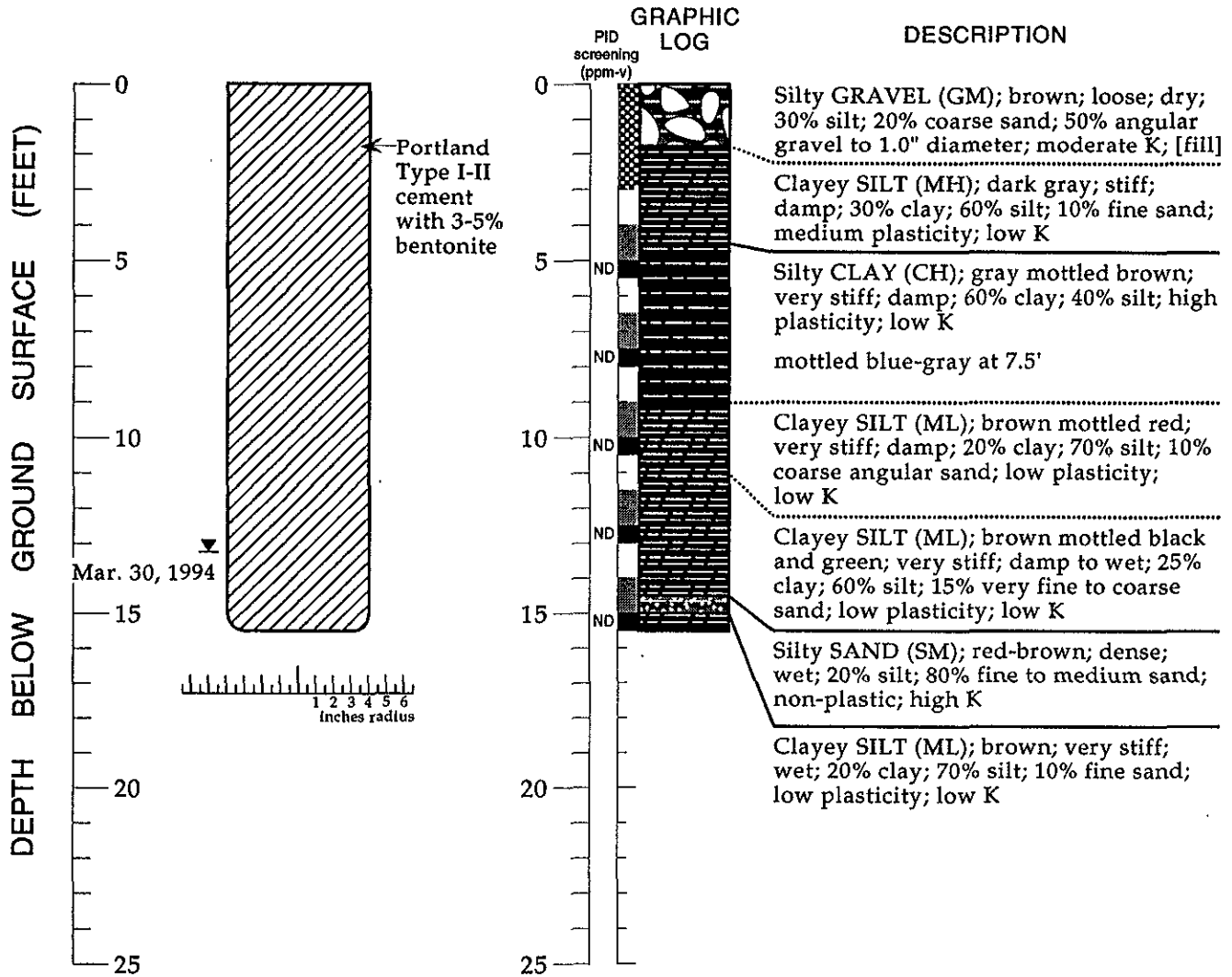
- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approximate)
- Uncertain contact
- Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Allison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Ted Hogan
 Drilling Method: Hollow-stem auger
 Date Drilled: March 15, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-21 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California



BORING B-23



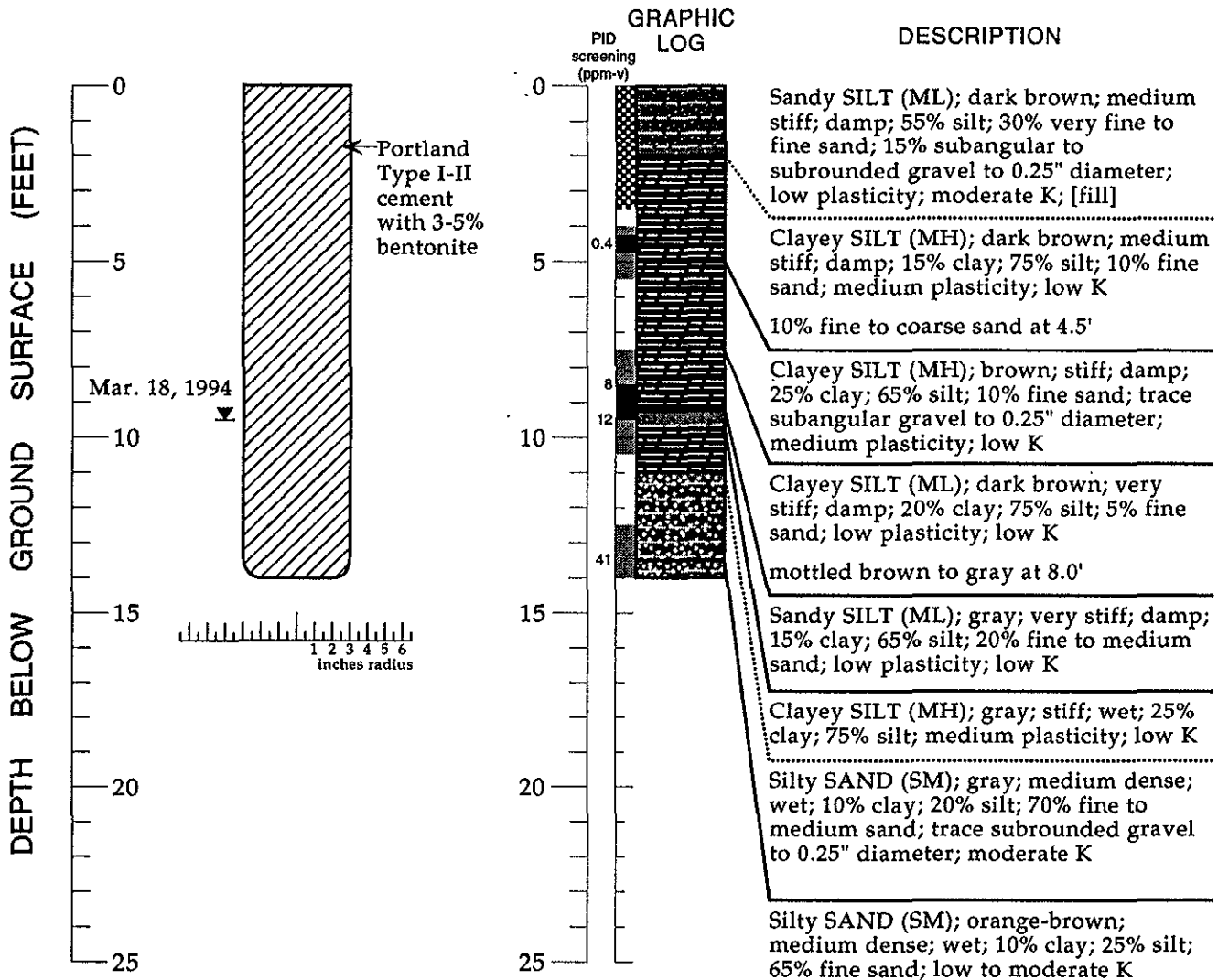
EXPLANATION

- ⊓ Water level during drilling (date)
- ⊔ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Allison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: West Hazmat, Newark, CA
 License Number: C57-554979
 Driller: Thomas Wright
 Drilling Method: Hollow-stem auger
 Date Drilled: March 30, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-23 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-24



EXPLANATION

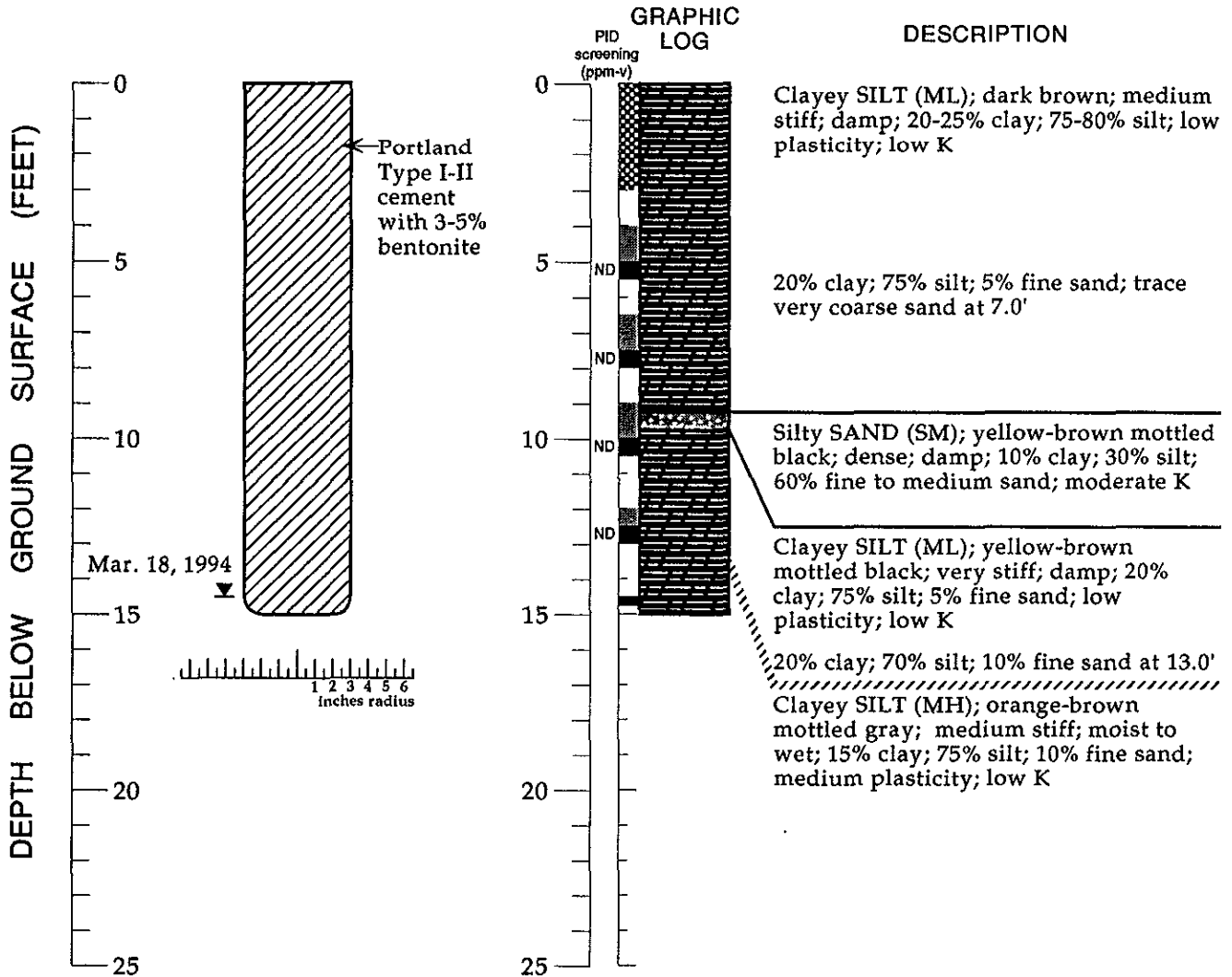
- ▼ Water level during drilling (date)
- ⊗ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity

Logged By: Jonathan Weingast
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Marvin Hoover
 Drilling Method: Hollow-stem auger
 Date Drilled: March 18, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-24 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California



BORING B-25



EXPLANATION

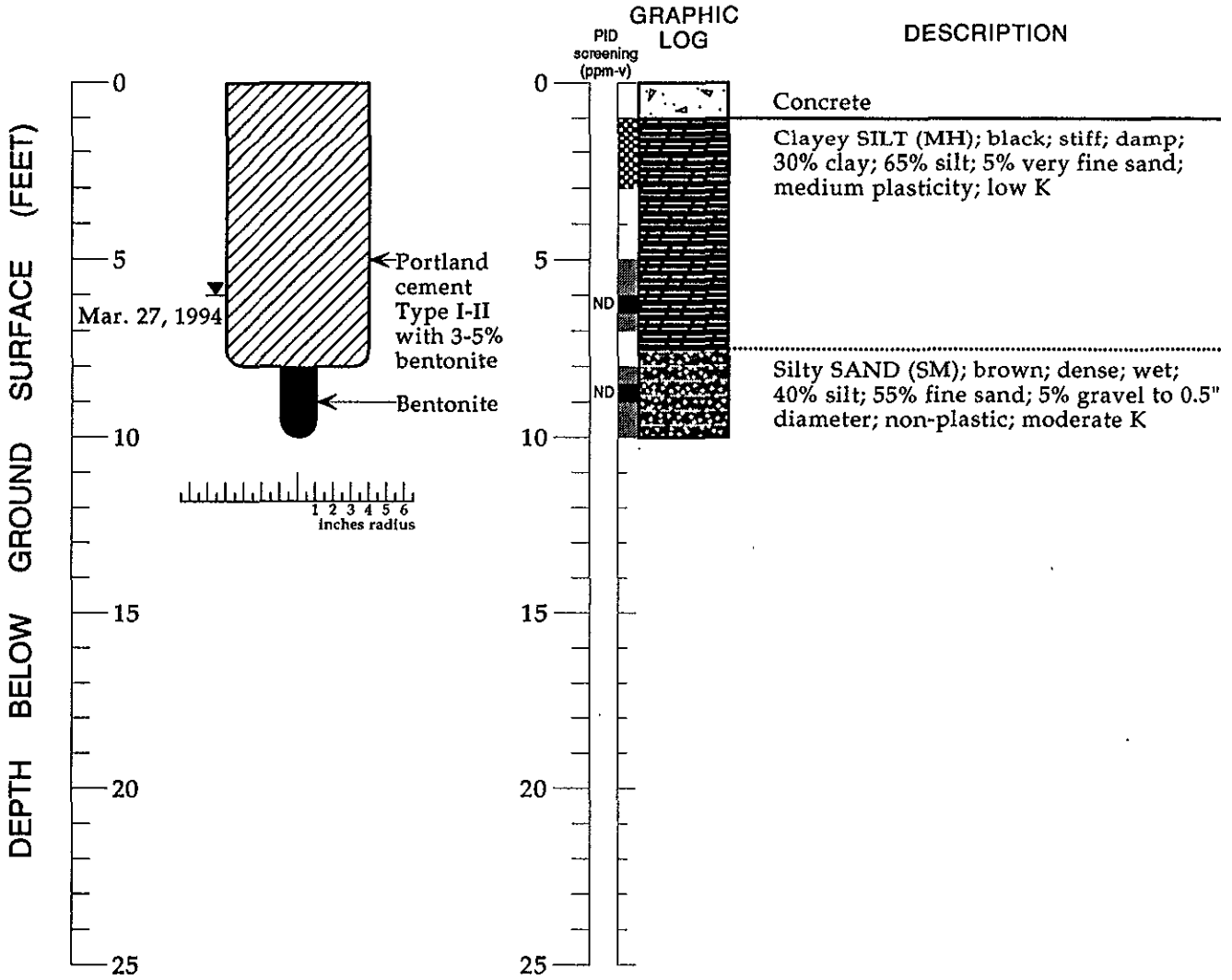
- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Jonathan Weingast
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: Gregg Drilling, Pacheco, CA
 License Number: C57-485165
 Driller: Marvin Hoover
 Drilling Method: Hollow-stem auger
 Date Drilled: March 18, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-25 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California



BORING B-26



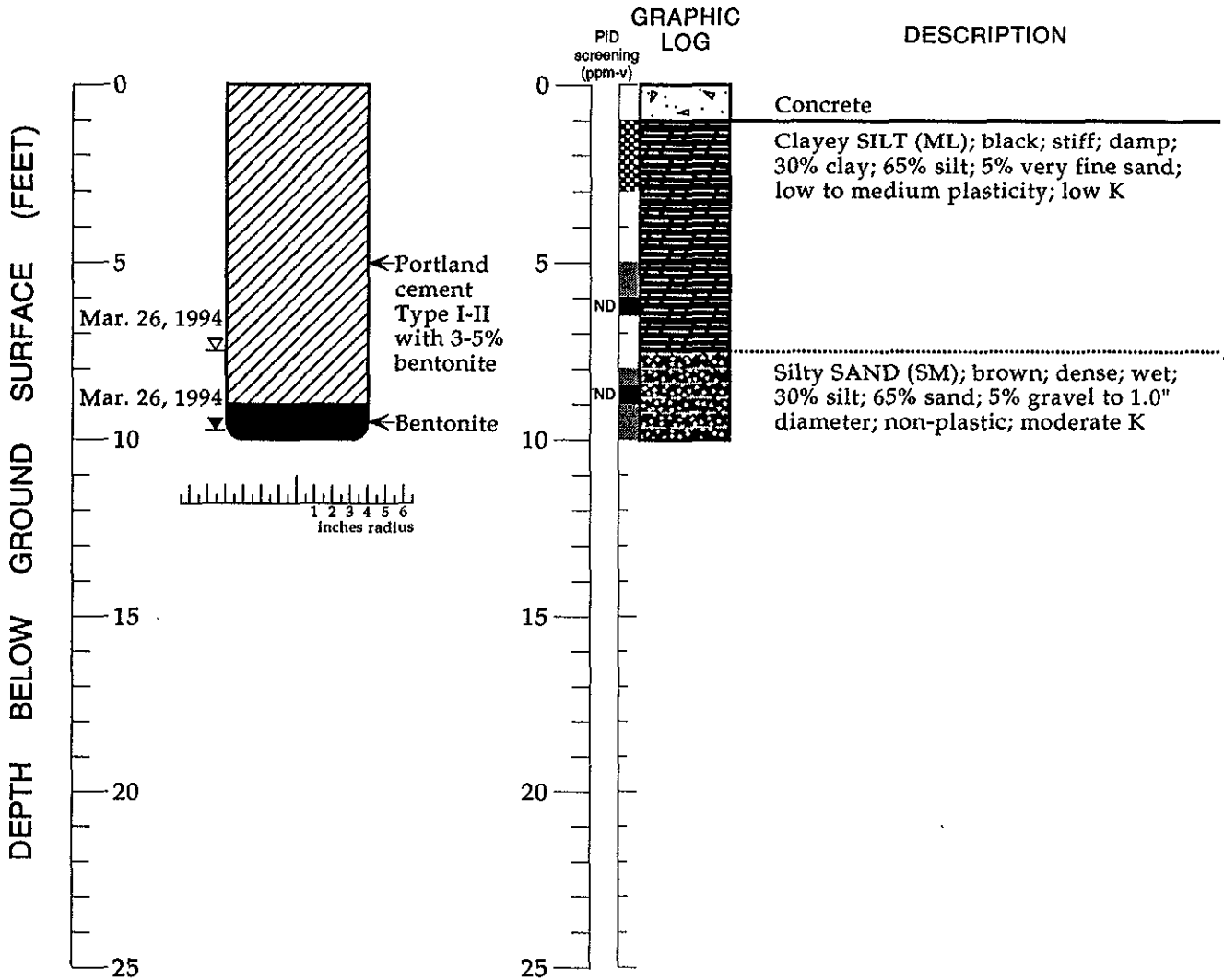
EXPLANATION

- ▼ Water level during drilling (date)
- ⊗ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Joyce Adams
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: West Hazmat; Newark, CA
 License Number: C57-554979
 Driller: George DeJesus
 Drilling Method: Hollow-stem auger
 Date Drilled: March 27, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-26 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-27



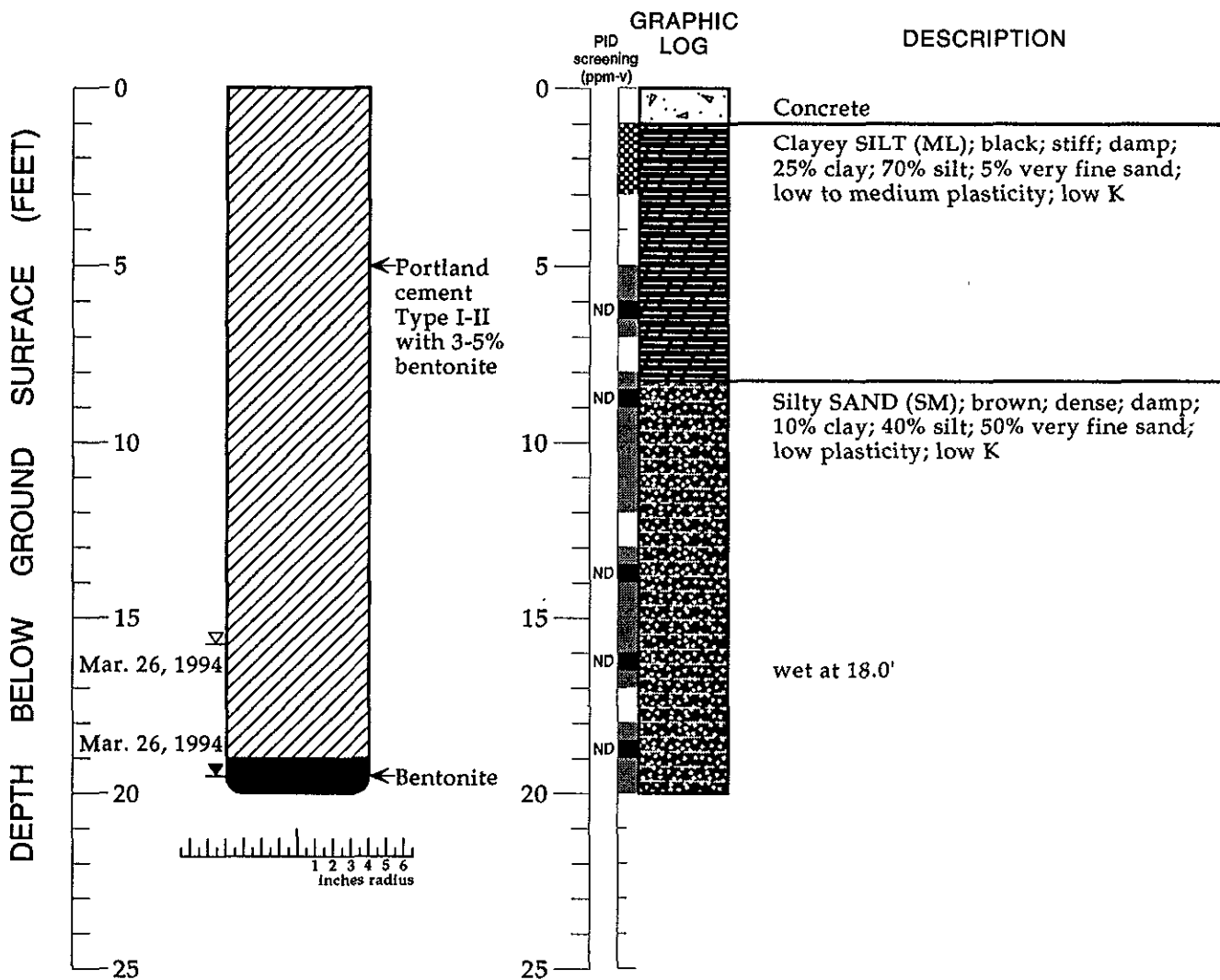
EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Joyce Adams
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: West Hazmat; Newark, CA
 License Number: C57-554979
 Driller: George DeJesus
 Drilling Method: Hollow-stem auger
 Date Drilled: March 26, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-27 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-28



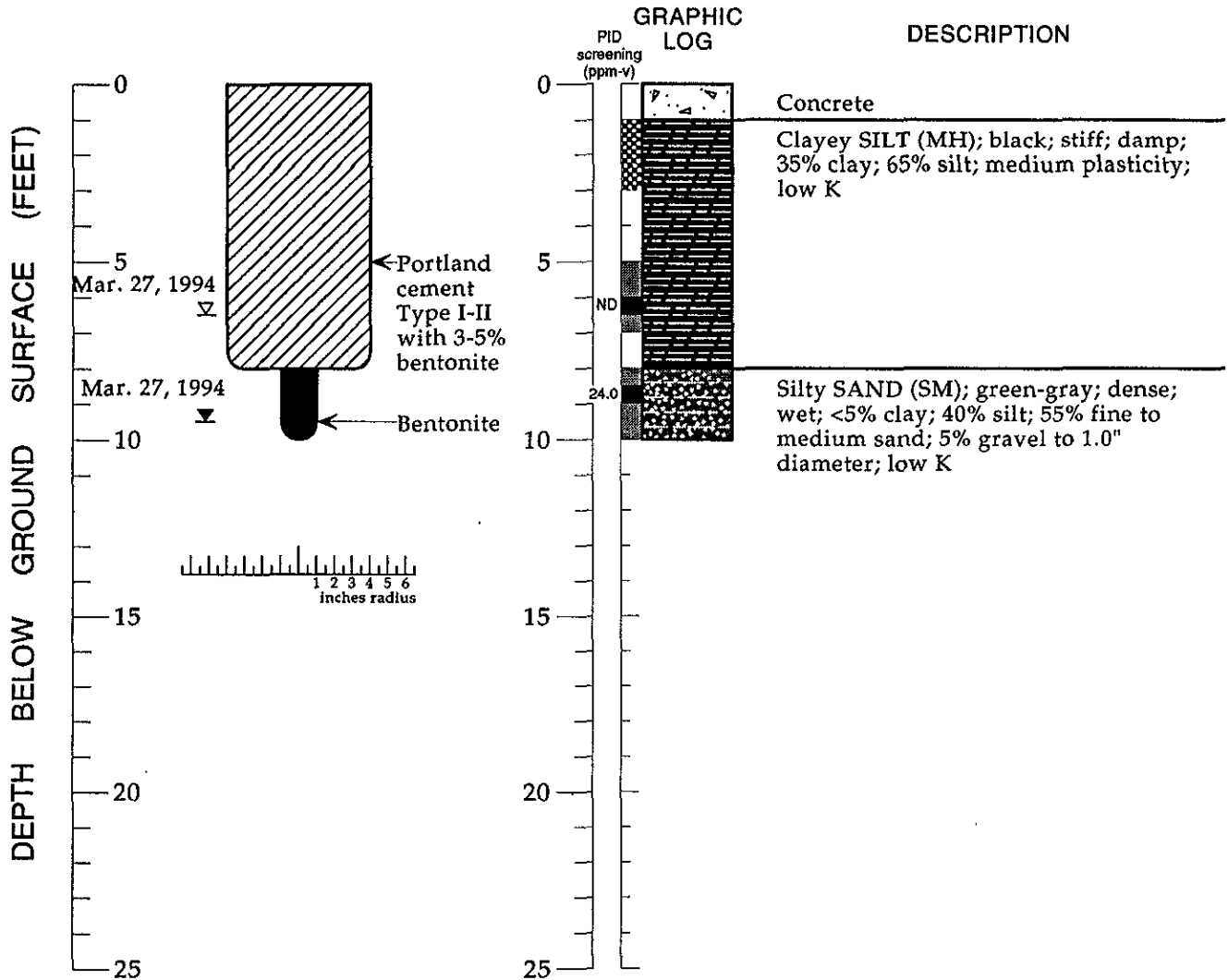
EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Joyce Adams
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: West Hazmat; Newark, CA
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 Drilling Method: Hollow-stem auger
 Date Drilled: March 26, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-28 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-29



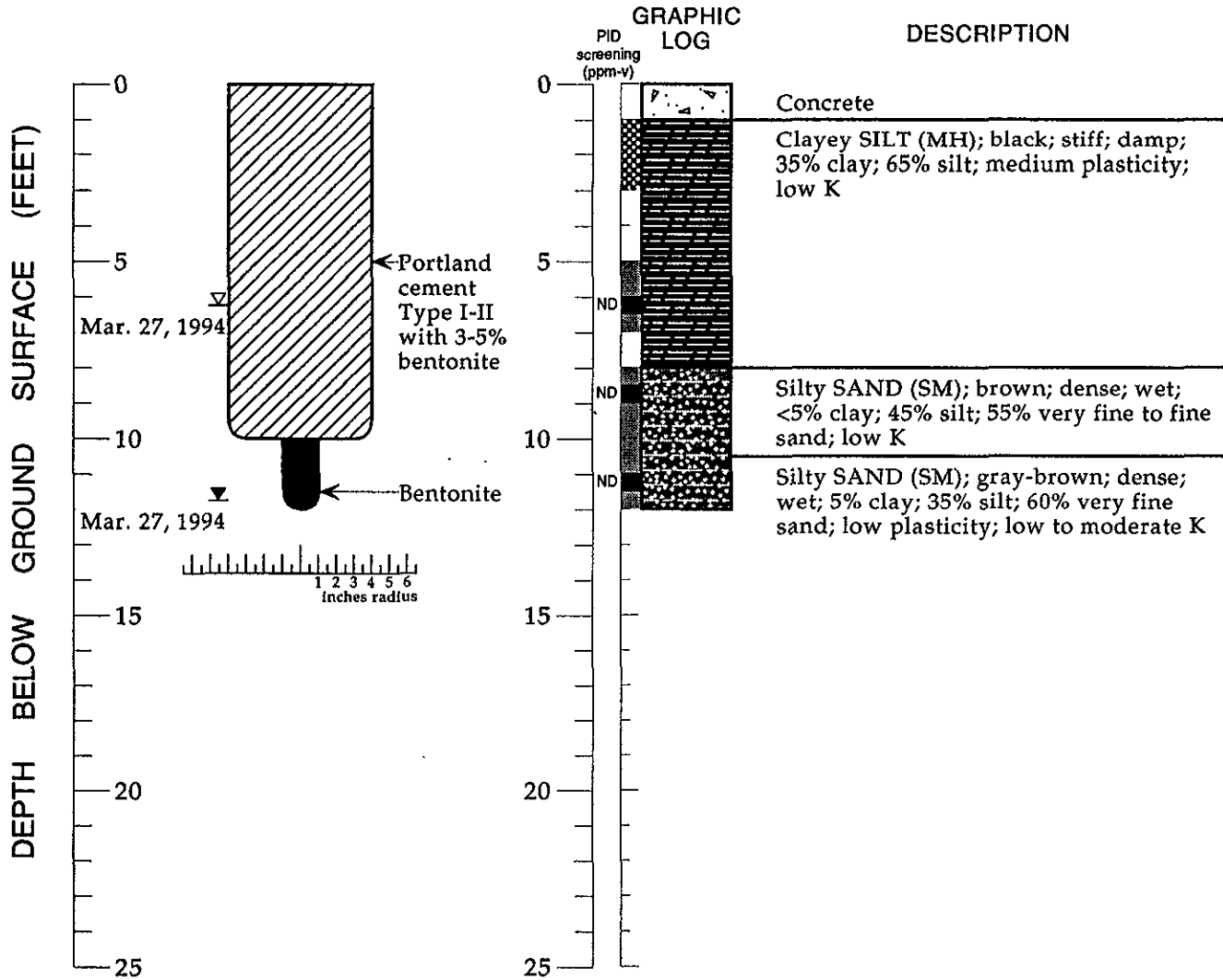
EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Joyce Adams
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: West Hazmat; Newark, CA
 License Number: C57-554979
 Driller: George DeJesus
 Drilling Method: Hollow-stem auger
 Date Drilled: March 27, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-29 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-30



EXPLANATION

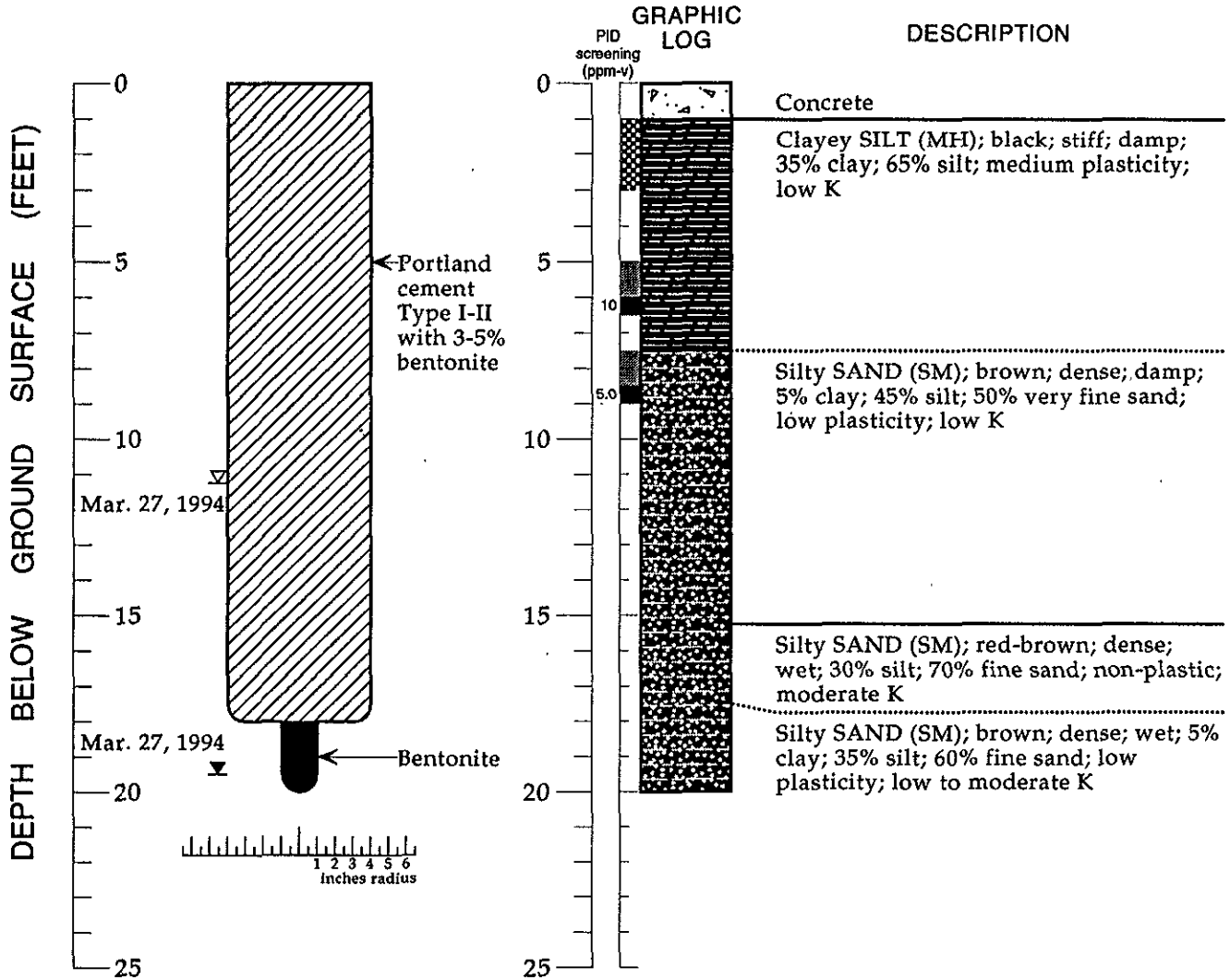
- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Joyce Adams
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: West Hazmat; Newark, CA
 License Number: C57-554979
 Driller: George DeJesus
 Drilling Method: Hollow-stem auger
 Date Drilled: March 27, 1994
 Type of Sampler: Split barrel (2" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-30 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California



BORING B-31



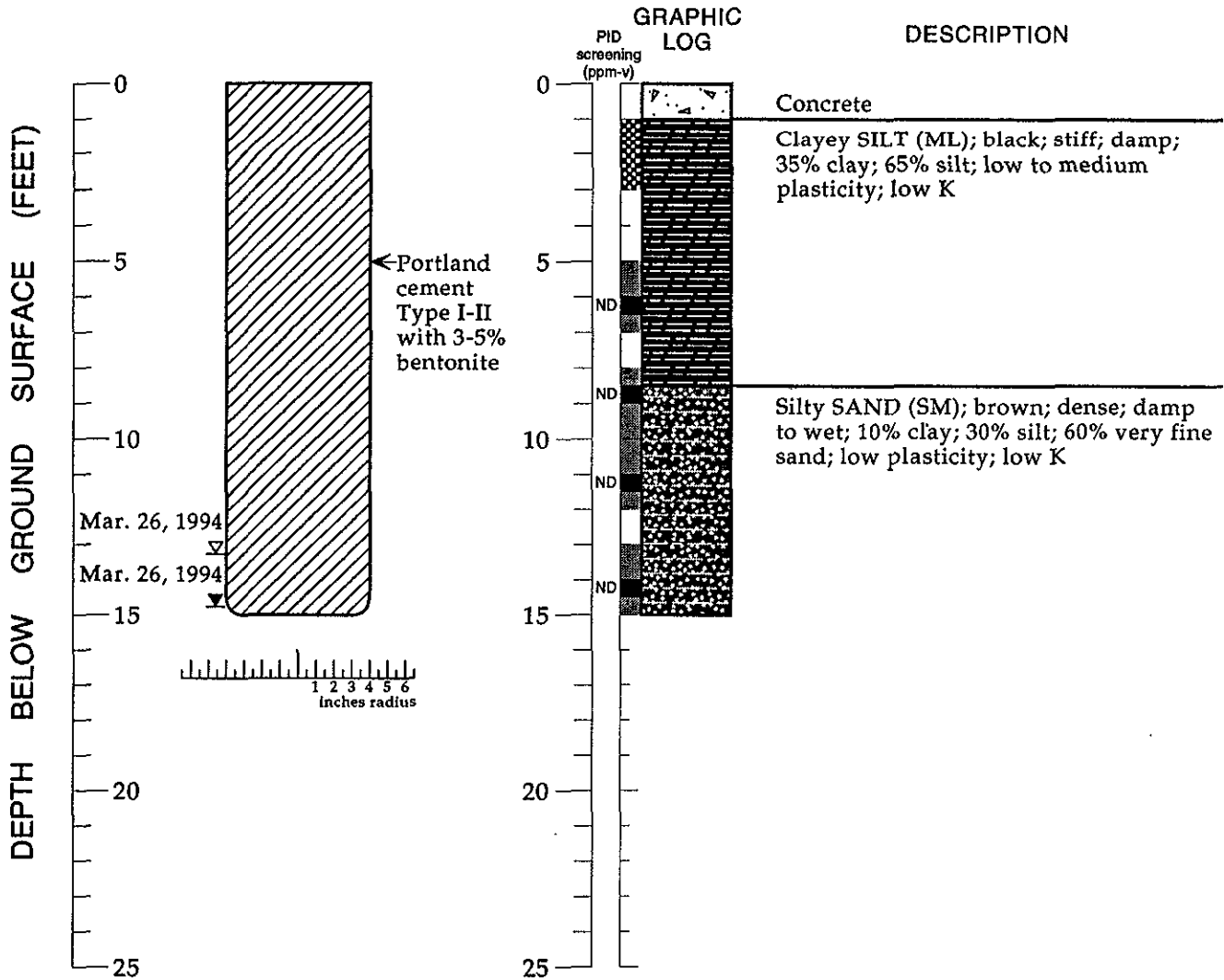
EXPLANATION

- ▽ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cuttings sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Joyce Adams
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: West Hazmat; Newark, CA
 License Number: C57-554979
 Driller: George DeJesus
 Drilling Method: Hollow-stem auger
 Date Drilled: March 27, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-31 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-32



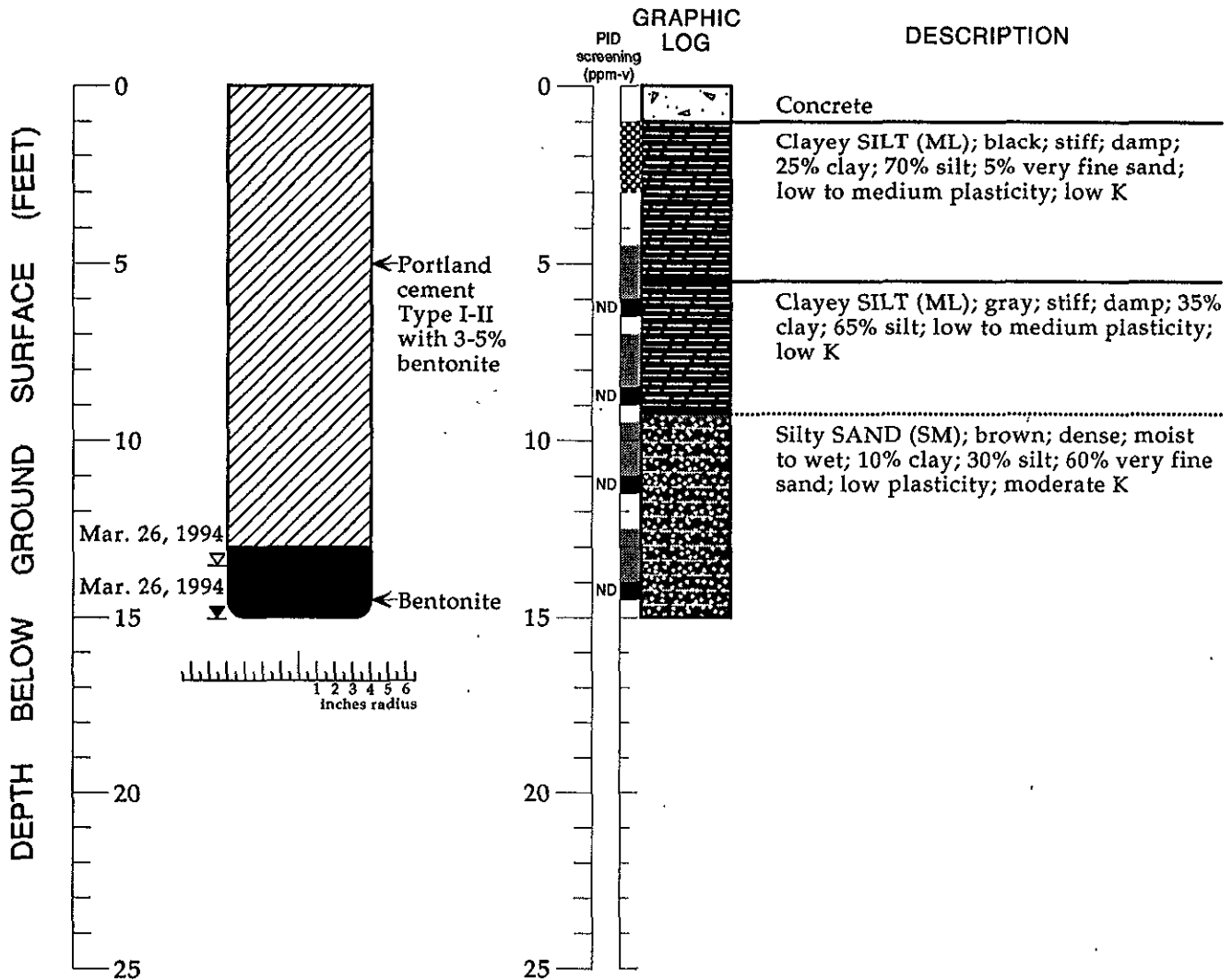
EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Joyce Adams
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: West Hazmat; Newark, CA
 License Number: C57-554979
 Driller: George DeJesus
 Drilling Method: Hollow-stem auger
 Date Drilled: March 26, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-32 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-33



EXPLANATION

- ▽ Water level during drilling (date)
- ∇ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity
- ND = Not detected

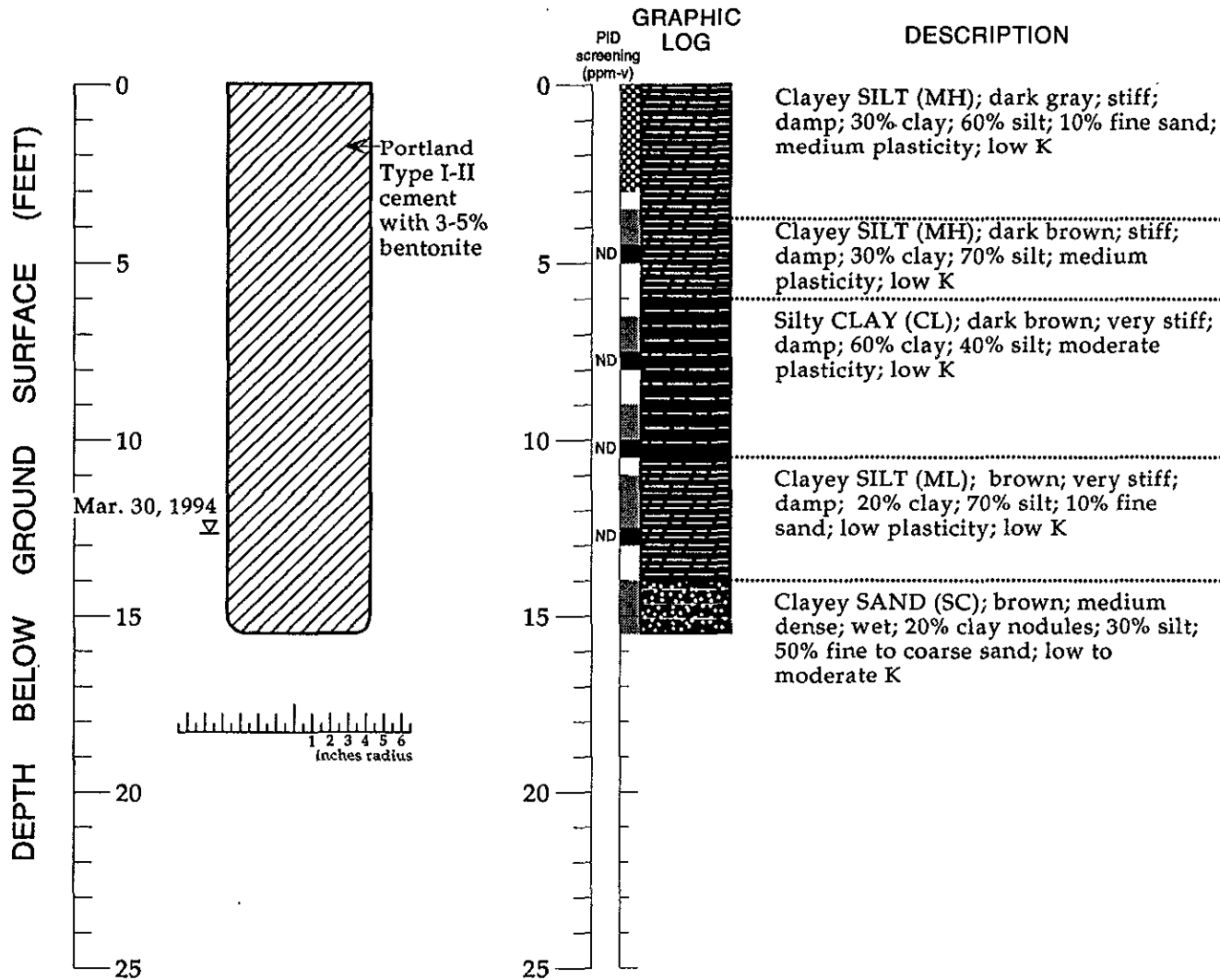
Logged By: Joyce Adams
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: West Hazmat; Newark, CA
 License Number: C57-554979
 Driller: George DeJesus
 Drilling Method: Hollow-stem auger
 Date Drilled: March 26, 1994
 Type of Sampler: Split barrel (2.0" ID)

PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-33 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California



BORING B-35



EXPLANATION

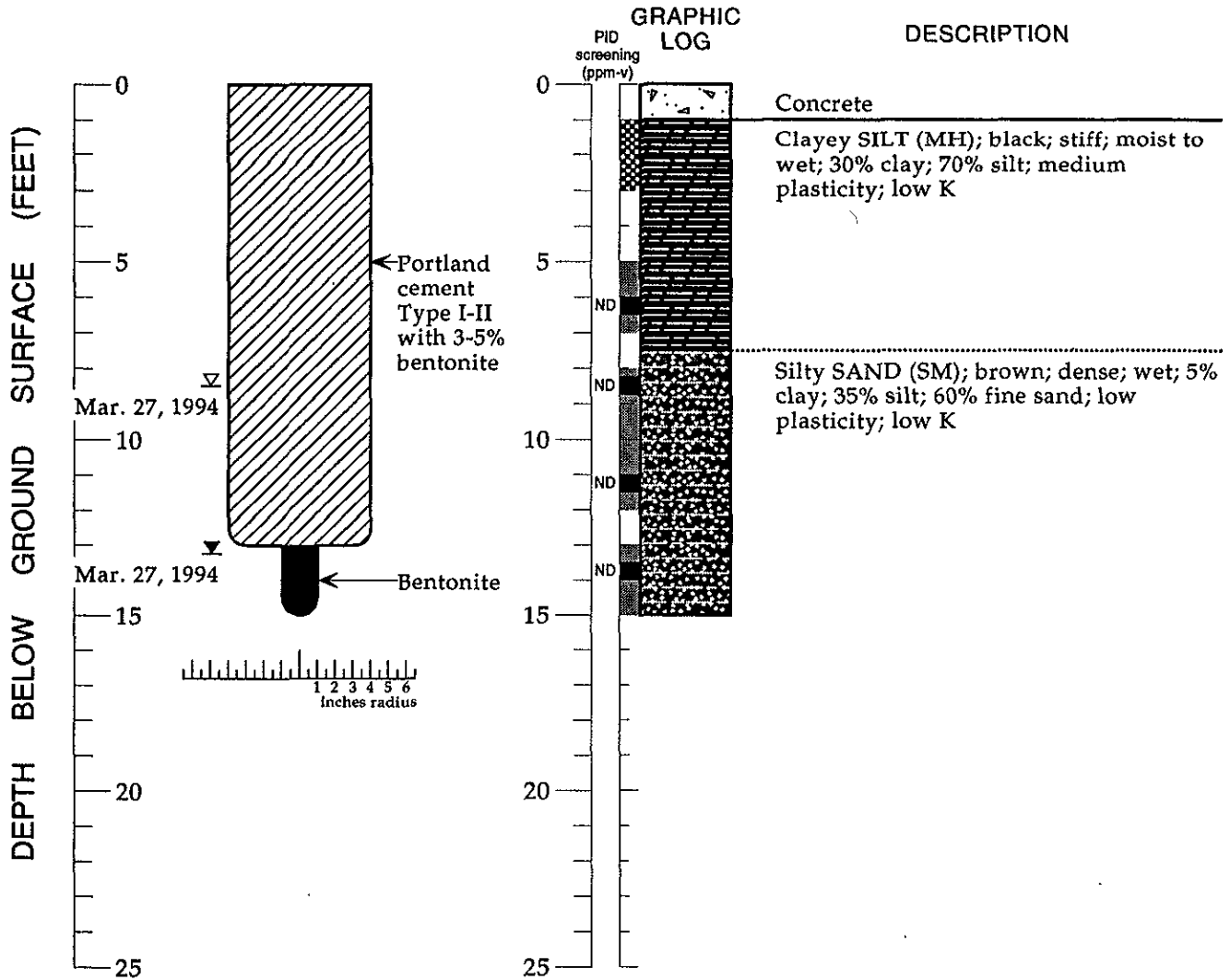
- ▽ Water level during drilling (date)
- ∇ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Alison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: West Hazmat, Newark, CA
 License Number: C57-554979
 Driller: Thomas Wright
 Drilling Method: Hollow-stem auger
 Date Drilled: March 30, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-35 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California



BORING B-37



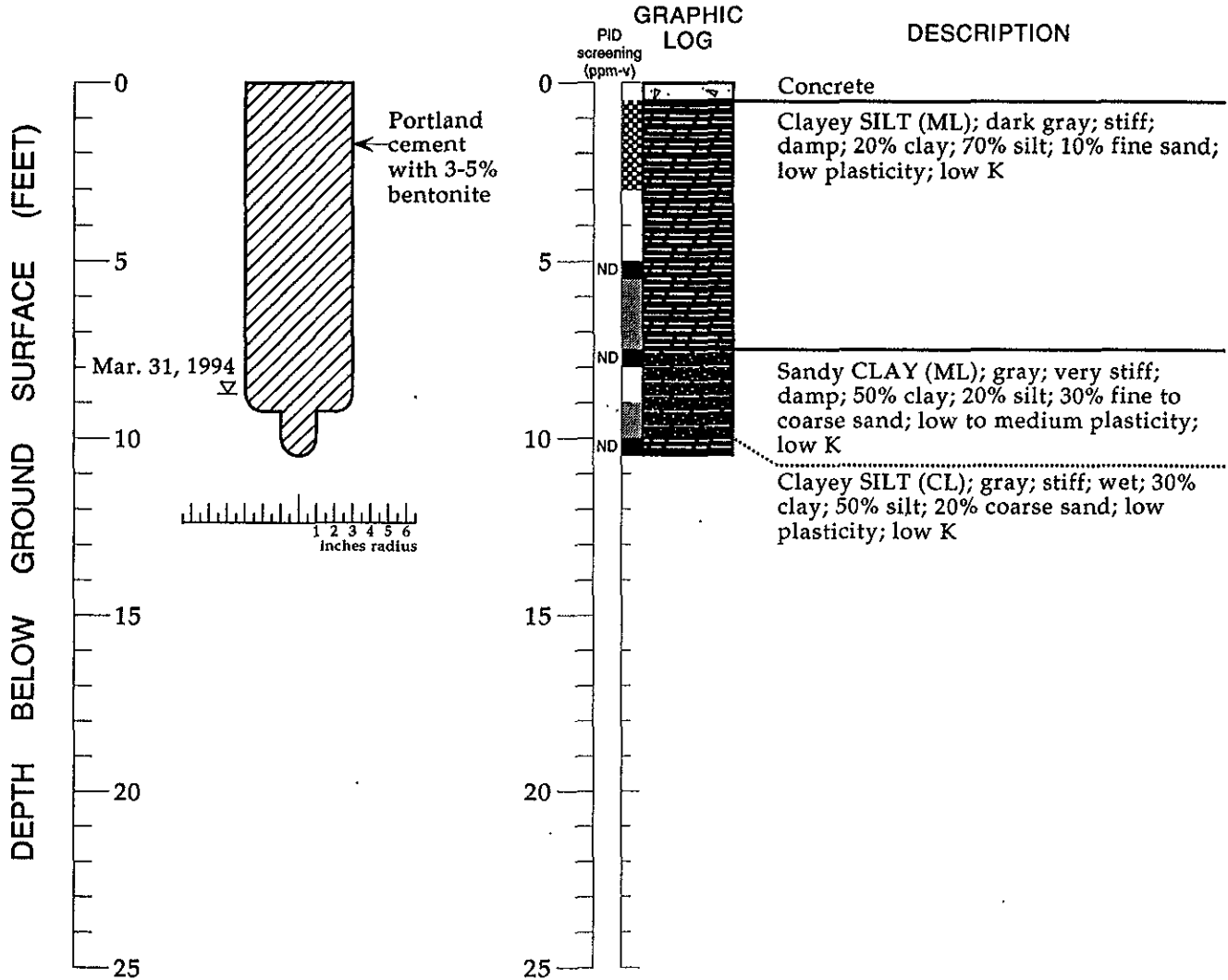
EXPLANATION

- ▽ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Joyce Adams
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: West Hazmat; Newark, CA
 License Number: C57-554979
 Driller: George DeJesus
 Drilling Method: Hollow-stem auger
 Date Drilled: March 27, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-37 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-38



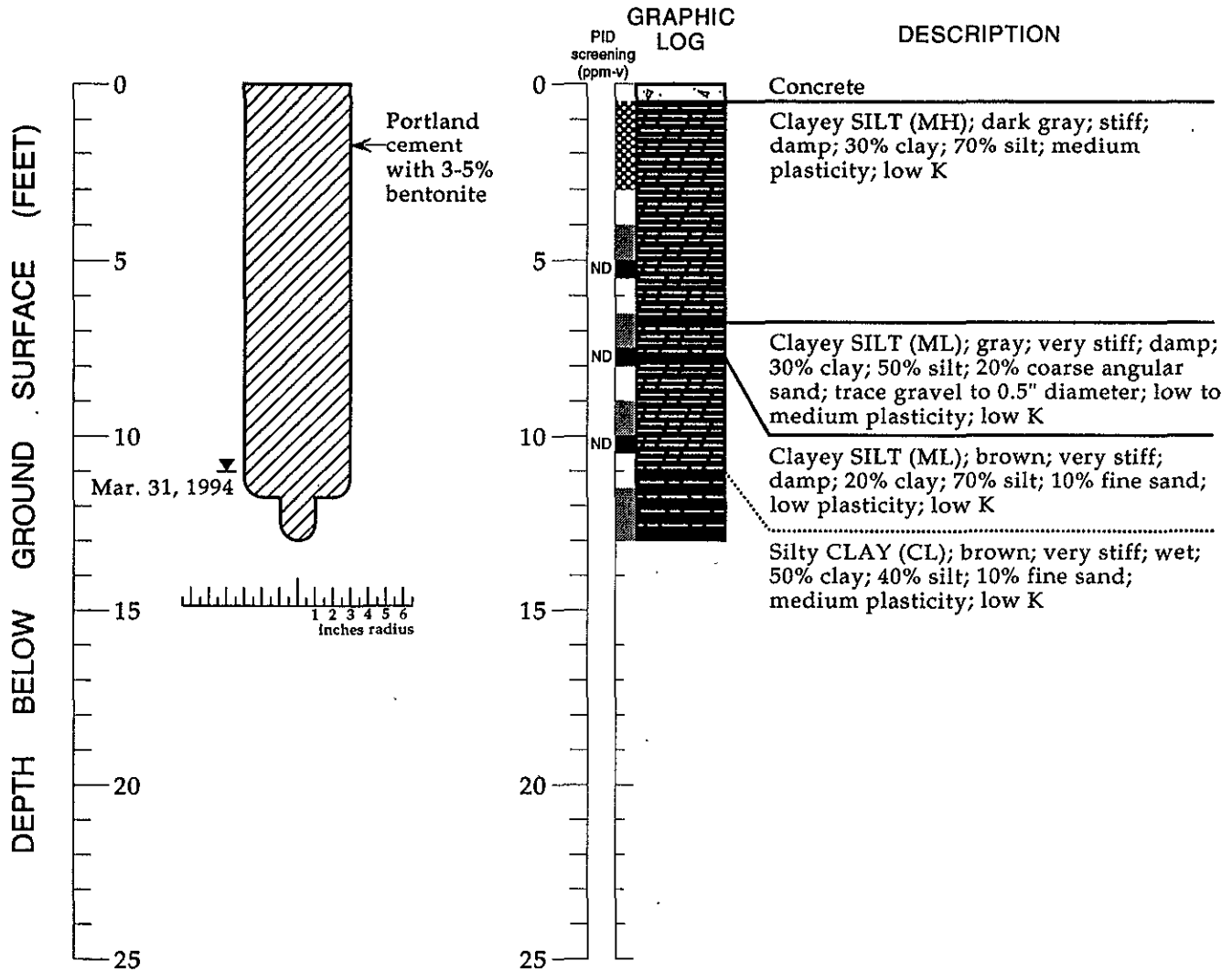
EXPLANATION

- ▽ Water level during drilling (date)
- ∇ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Alison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: HEW, East Palo Alto, CA
 License Number: C57-384167
 Driller: Perfecto Roberts
 Drilling Method: Hollow-stem auger
 Date Drilled: March 31, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-38 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

BORING B-39



EXPLANATION

- ▼ Water level during drilling (date)
- ∇ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for possible chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity
- ND = Not detected

Logged By: Alison Watts
 Supervisor: Mary Stallard; CEG 1704
 Drilling Company: HEW, East Palo Alto, CA
 License Number: C57-384167
 Driller: Perfecto Roberts
 Drilling Method: Hollow-stem auger
 Date Drilled: March 31, 1994
 Type of Sampler: Split barrel (2.0" ID)
 PID: Results of field screening with photoionization detector for VOCs in parts per million by volume

Boring Log - Boring B-39 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

APPENDIX B

**ANALYTICAL REPORTS FOR SOIL AND OPEN BOREHOLE WATER SAMPLES AND
CHAIN OF CUSTODY DOCUMENTS**

Due to its size, Appendix B has been produced as Volume 2

APPENDIX C

ANALYTICAL REPORTS FOR GROUND WATER SAMPLES FROM
MONITORING WELLS AND CHAIN OF CUSTODY DOCUMENTS



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

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

Prepared for:

Weiss Associates
5500 Shellmound Street
Emeryville, CA 94608

Date: 06-APR-94
Lab Job Number: 114980
Project ID: 14-307-01
Location: N/A

Reviewed by:

Reviewed by:

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LABORATORY NUMBER: 114980
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-01

 DATE SAMPLED: 03/29/94
 DATE RECEIVED: 03/30/94
 DATE ANALYZED: 03/31/94
 DATE REPORTED: 03/31/94

 Total Volatile Hydrocarbons as Gasoline in Aqueous Solutions
 California DOHS Method
 LUFT Manual October 1989

LAB ID	CLIENT ID	TVH AS	TVH AS	REPORTING	SURROGATE	
		MINERAL SPIRITS (ug/L)	GASOLINE (ug/L)		LIMIT (ug/L)	RECOVERIES TFT
114980-001	307-01	ND	ND	50	109 %	107 %
114980-002	307-02	**	2,400	100	112 %	112 %
114980-003	307-03	ND	ND	50	111 %	108 %
114980-004	307-04	**	130	50	111 %	108 %
114980-005	307-05	**	2,100	300	112 %	114 %
114980-006	307-06	ND	ND	50	109 %	108 %
114980-007	307-07	ND	160	50	112 %	108 %
114980-008	307-08	ND	ND	50	111 %	108 %
114980-009	307-09	ND	ND	50	110 %	108 %
114980-010	307-10	ND	ND	50	113 %	108 %
METHOD BLANK	N/A	ND	ND	50	110 %	105 %

** Mineral Spirits not reported due to overlap of hydrocarbon ranges.

TFT = Trifluorotoluene (Limits: 60-140)

BB = Bromobenzene (Limits: 60-140)

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: BS/BSD

RPD, %	2
RECOVERY, %	115

LABORATORY NUMBER: 114980
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-01

 DATE SAMPLED: 03/29/94
 DATE RECEIVED: 03/30/94
 DATE EXTRACTED: 03/30/94
 DATE ANALYZED: 04/02/94
 DATE REPORTED: 04/04/94
 DATE REVISED: 04/14/94

 Extractable Petroleum Hydrocarbons in Aqueous Solutions
 California DOHS Method
 LUFT Manual October 1989

LAB ID	CLIENT ID	KEROSENE RANGE (mg/L)	DIESEL RANGE (mg/L)	MOTOR OIL RANGE (mg/L)	SURROGATE RECOVERY (Hexacosane)
114980-001	307-01	ND(1)	ND(1)	ND(20)	100 %
114980-002	307-02	**	37	ND(20)	104 %
114980-003	307-03	ND(1)	ND(1)	ND(20)	99 %
114980-004	307-04	ND(1)	ND(1)	ND(20)	96 %
114980-005	307-05	30 *	ND(1)	ND(20)	106 %
114980-006	307-06	**	5	ND(20)	94 %
114980-007	307-07	ND(1)	ND(1)	ND(20)	107 %
114980-008	307-08	ND(1)	ND(1)	ND(20)	93 %
114980-010	307-10	ND(1)	ND(1)	ND(20)	82 %
METHOD BLANK	N/A	ND(1)	ND(1)	ND(20)	101 %

** Kerosene range not reported due to overlap of hydrocarbon ranges.
 * Kerosene range quantitation results from gasoline range hydrocarbons.

ND = Not detected at or above reporting limit. Reporting limit indicated in parentheses.

Hexacosane recovery limits (50%-150%)

QA/QC SUMMARY: MS/MSD

RPD, %	17	(Limit: <25 %)
RECOVERY, %	87	(Limits: 50-150)

LABORATORY NUMBER: 114980
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-01

DATE SAMPLED: 03/29/94
 DATE RECEIVED: 03/30/94
 DATE ANALYZED: 03/31/94
 DATE REPORTED: 03/31/94

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020
 Extraction by EPA 5030 Purge and Trap

LAB ID	CLIENT ID	BENZENE	TOLUENE	ETHYL	TOTAL	REPORTING	SURROGATE	
		(ug/L)	(ug/L)	BENZENE (ug/L)	XYLENES (ug/L)	LIMIT (ug/L)	TFT	BB
114980-001	307-01	ND	ND	ND	ND	0.5	100 %	95 %
114980-002	307-02	17*	ND	5	15	1	115 %	103 %
114980-003	307-03	ND	ND	ND	ND	0.5	99 %	95 %
114980-004	307-04	ND	ND	ND	ND	0.5	98 %	94 %
114980-005	307-05	390	ND	ND	180	3	104 %	102 %
114980-006	307-06	ND	ND	ND	ND	0.5	98 %	94 %
114980-007	307-07	ND	ND	ND	ND	0.5	100 %	94 %
114980-008	307-08	ND	ND	ND	ND	0.5	100 %	95 %
114980-009	307-09	ND	ND	ND	ND	0.5	99 %	94 %
114980-010	307-10	ND	ND	ND	ND	0.5	100 %	95 %
METHOD BLANK	N/A	ND	ND	ND	ND	0.5	104 %	100 %

* Presence of this compound confirmed by second column; however, the confirmation concentration differed from the reported result by more than a factor of two.

TFT = Trifluorotoluene (Limits: 60-140)
 BB = Bromobenzene (Limits: 60-140)

ND = Not detected at or above reporting limit.
 Reporting Limit applies to all analytes.



LABORATORY NUMBER: 114980-1
CLIENT: WEISS ASSOCIATES
PROJECT ID: 14-307-01
SAMPLE ID: 307-01

DATE SAMPLED: 03/29/94
DATE RECEIVED: 03/30/94
DATE ANALYZED: 04/05/94
DATE REPORTED: 04/06/94

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

=====

Surrogate Recovery, %

=====

98



LABORATORY NUMBER: 114980-2
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-01
 SAMPLE ID: 307-02

DATE SAMPLED: 03/29/94
 DATE RECEIVED: 03/30/94
 DATE ANALYZED: 04/05/94
 DATE REPORTED: 04/06/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

=====

Surrogate Recovery, %

=====

98

LABORATORY NUMBER: 114980-3
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-01
 SAMPLE ID: 307-03

DATE SAMPLED: 03/29/94
 DATE RECEIVED: 03/30/94
 DATE ANALYZED: 04/05/94
 DATE REPORTED: 04/06/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

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Surrogate Recovery, %	101
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=====

LABORATORY NUMBER: 114980-4
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-01
 SAMPLE ID: 307-04

DATE SAMPLED: 03/29/94
 DATE RECEIVED: 03/30/94
 DATE ANALYZED: 04/05/94
 DATE REPORTED: 04/06/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	17	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	4	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

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Surrogate Recovery, %	98
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=====

LABORATORY NUMBER: 114980-5
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-01
 SAMPLE ID: 307-05

DATE SAMPLED: 03/29/94
 DATE RECEIVED: 03/30/94
 DATE ANALYZED: 04/05/94
 DATE REPORTED: 04/06/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

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Surrogate Recovery, %	98
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=====

LABORATORY NUMBER: 114980-6
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-01
 SAMPLE ID: 307-06

DATE SAMPLED: 03/29/94
 DATE RECEIVED: 03/30/94
 DATE ANALYZED: 04/05/94
 DATE REPORTED: 04/06/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

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Surrogate Recovery, %	98
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LABORATORY NUMBER: 114980-7
CLIENT: WEISS ASSOCIATES
PROJECT ID: 14-307-01
SAMPLE ID: 307-07

DATE SAMPLED: 03/29/94
DATE RECEIVED: 03/30/94
DATE ANALYZED: 04/05/94
DATE REPORTED: 04/06/94

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	100
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LABORATORY NUMBER: 114980-8
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-01
 SAMPLE ID: 307-08

DATE SAMPLED: 03/29/94
 DATE RECEIVED: 03/30/94
 DATE ANALYZED: 04/05/94
 DATE REPORTED: 04/06/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	99
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LABORATORY NUMBER: 114980-9
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-01
 SAMPLE ID: 307-09

DATE SAMPLED: 03/29/94
 DATE RECEIVED: 03/30/94
 DATE ANALYZED: 04/05/94
 DATE REPORTED: 04/06/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

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Surrogate Recovery, %

=====

100

LABORATORY NUMBER: 114980-10
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-01
 SAMPLE ID: 307-10

DATE SAMPLED: 03/29/94
 DATE RECEIVED: 03/30/94
 DATE ANALYZED: 04/05/94
 DATE REPORTED: 04/06/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

=====	
Surrogate Recovery, %	100
=====	



LABORATORY NUMBER: 114980-METHOD BLANK
CLIENT: WEISS ASSOCIATES
PROJECT ID: 14-307-01

DATE ANALYZED: 04/04/94
DATE REPORTED: 04/06/94

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	100
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MS/MSD SUMMARY SHEET FOR EPA 8010

Laboratory Number: 114980
 Client: Weiss Associates
 Analysis date: 04/04/94
 Sample type: Water
 Sample spiked: 114848-003
 Spike file: 094w006
 Spike dup file: 094w007

8010 MS/MSD DATA (spiked at 20 ppb)

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	28.32	123 %	OK	61 - 145
Trichloroethene	20.44	100 %	OK	71 - 120
Chlorobenzene	19.63	98 %	OK	75 - 130
SPIKE DUP COMPOUNDS				
1,1-Dichloroethene	28.48	124 %	OK	61 - 145
Trichloroethene	20.97	103 %	OK	71 - 120
Chlorobenzene	20.48	102 %	OK	75 - 130
SURROGATES				
Bromobenzene (MS)	99.51	100 %	OK	75 - 125
Bromobenzene (MSD)	99.89	100 %	OK	75 - 125
MATRIX RESULTS				
1,1-Dichloroethene	3.7326			
Trichloroethene	0.4251			
Chlorobenzene	0			

RPD DATA

8010 COMPOUNDS	SPIKE	SPIKE DUP	RPD	STATUS	LIMITS
1,1-Dichloroethene	28.32	28.48	1 %	OK	<= 14
Trichloroethene	20.44	20.97	3 %	OK	<= 14
Chlorobenzene	19.63	20.48	4 %	OK	<= 13

Please send analytic results and a copy of the signed chain of custody form to:

JOHN DUBY

Project ID: 14-307-01

Lab Personnel:

PLEASE INCLUDE QA/QC DATA IF BOX IS CHECKED.

- 1) Specify analytic method and detection limit in report.
- 2) Notify us if there are any anomalous peaks in GC or other scans.
- 3) ANY QUESTIONS/CLARIFICATIONS: CALL US.

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sampled by: ANNI KREML

Laboratory Name: CURTIS & TOMPKINS

No. of Containers	Sample ID	Container Type	Sample Date	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analyze for	Analytic Method	Turn ⁵	COMMENTS
4	307-01	W/V	3/29/94	40ml	N	Y	HCL	TVH/BETX/HVOCs	LUFT/8020/9010	R	*
2	307-02										*Expected high fuel concentration
3	307-03										*
1	307-04										*
2	307-05										*
0	307-06										*
7	307-07										*
6	307-08										*
1	307-09										*
0	307-10										*

* Compare chromatograms to gasoline, mineral spirits, kerosene, diesel & motor oils standards for all TVH/TEH analyses.

Anni Kreml 3/29/94 21:45
 Released by (Signature), Date

Paul Cardy 3/30/94 10:17
 Released by (Signature), Date

5 _____
 Released by (Signature), Date

1 Weiss Assoc.
 Affiliation

3 _____
 Affiliation

5 _____
 Affiliation

2 Paul Cardy 3/30/94
 Received by (Signature), Date

4 _____
 Shipping Carrier, Method, Date

6 [Signature] 3/30/94 Seal intact?
 Received by Lab Personnel, Date

2 Weiss Assoc. 09:40
 Affiliation

4 _____
 Affiliation

6 C-7 10:13
 Affiliation, Telephone

1 Sample Type Codes: W = Water, S = Soil, Describe Other; Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B - Clear/Brown Glass, Describe Other; Cap Codes: PT = Plastic, Teflon Lined 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround [N = Normal, W = 1 Week, R = 24 Hour, HOLD (write out)]
 ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

Please send analytic results and a copy of the signed chain of custody form to:

JOHN DUEY

Project ID: 14-307-01

Lab Personnel:

PLEASE INCLUDE QA/QC DATA IF BOX IS CHECKED.

- 1) Specify analytic method and detection limit in report.
- 2) Notify us if there are any anomalous peaks in GC or other scans.
- 3) ANY QUESTIONS/CLARIFICATIONS: CALL US.

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sampled by: ANNI KRSMML

Laboratory Name: CURTIS TOMPKINS

No. of Containers	Sample ID	Container Type	Sample Date	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analyze for	Analytic Method	Turn ⁵	COMMENTS
1	307-01	W/A	3/29/04	10	N	Y	None	TEH	LUFT	R	*
	307-02										* expected high fuel concentrations
	307-03										*
	307-04										*
	307-05										*
	307-06										*
	307-07										*
	307-08										*
	307-10										*
											* Compare chromatograms to gasoline, mineral spirits, kerosene, diesel & motor oil standards for all TVH/TEH analyses

Anni Krsml 3/29/04 21:45
 Released by (Signature), Date

Paul Carls 3/20/04 09:10:13
 Released by (Signature), Date

Released by (Signature), Date

1 Weiss Assoc.
 Affiliation

3 Weiss Assoc.
 Affiliation

5 Affiliation

2 Paul Carls 3/20/04 09:14:00
 Received by (Signature), Date

4 Shipping Carrier, Method, Date

6 [Signature] 3/30/04
 Received by Lab Personnel, Date Seal intact? X

2 Weiss Assoc.
 Affiliation

4 Affiliation

6 C.T. 10:13
 Affiliation, Telephone

1 Sample Type Codes: W = Water, S = Soil, Describe Other; Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B - Clear/Brown Glass, Describe Other; Cap Codes: PT = Plastic, Teflon Lined
 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround [N = Normal, W = 1 Week, R = 24 Hour, HOLD (write out)]
 ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

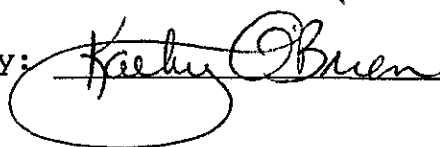
Weiss Associates
5500 Shellmound Street
Emeryville, CA 94608

Date: 18-APR-94
Lab Job Number: 115087
Project ID: 14-307-01
Location: N/A

Reviewed by:



Reviewed by:



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Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 115087
CLIENT: WEISS ASSOCIATES
PROJECT ID: 14-307-01

DATE SAMPLED: 04/05/94
DATE RECEIVED: 04/06/94
DATE EXTRACTED: 04/11/94
DATE ANALYZED: 04/17/94
DATE REPORTED: 04/18/94

Extractable Petroleum Hydrocarbons in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	KEROSENE RANGE (ug/L)	DIESEL RANGE (ug/L)	REPORTING LIMIT (ug/L)
115087-001	307-11	ND	ND	50
115087-002	307-12	ND	ND	50
115087-004	307-10	ND	ND	50

ND = Not detected at or above reporting limit. Reporting limit
applies to all analytes.

QA/QC SUMMARY:

=====
RPD, % 2
RECOVERY, % 103
=====



LABORATORY NUMBER: 115087
CLIENT: WEISS ASSOCIATES
PROJECT ID: 14-307-01

DATE SAMPLED: 04/05/94
DATE RECEIVED: 04/06/94
DATE ANALYZED: 04/07-08/94
DATE REPORTED: 04/18/94

Total Volatile Hydrocarbons with BTXE in Aqueous Solutions
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLENES (ug/L)
115087-001	307-11	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
115087-002	307-12	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
115087-003	307-09	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
115087-004	307-10	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
METHOD BLANK		ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, % 1
RECOVERY, % 111



LABORATORY NUMBER: 115087-001
CLIENT: WEISS ASSOCIATES
PROJECT ID: 14-307-01
SAMPLE ID: 307-11

DATE SAMPLED: 04/05/94
DATE RECEIVED: 04/06/94
DATE ANALYZED: 04/09/94
DATE REPORTED: 04/18/94

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

=====

Surrogate Recovery, %

=====

101

LABORATORY NUMBER: 115087-002
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-01
 SAMPLE ID: 307-12

DATE SAMPLED: 04/05/94
 DATE RECEIVED: 04/06/94
 DATE ANALYZED: 04/09/94
 DATE REPORTED: 04/18/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

=====

Surrogate Recovery, %

=====

102

LABORATORY NUMBER: 115087-003
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-01
 SAMPLE ID: 307-09

DATE SAMPLED: 04/05/94
 DATE RECEIVED: 04/06/94
 DATE ANALYZED: 04/09/94
 DATE REPORTED: 04/18/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

=====

Surrogate Recovery, %

=====

100

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LABORATORY NUMBER: 115087-004
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-01
 SAMPLE ID: 307-10

DATE SAMPLED: 04/05/94
 DATE RECEIVED: 04/06/94
 DATE ANALYZED: 04/09/94
 DATE REPORTED: 04/18/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	98
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LABORATORY NUMBER: 115087 METHOD BLANK
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-01

DATE SAMPLED: N/A
 DATE RECEIVED: N/A
 DATE ANALYZED: 04/09/94
 DATE REPORTED: 04/18/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

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Surrogate Recovery, %	100
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8010 MS/MSD Report

Matrix Sample Number: QC60887
 Matrix Sample File: 094W104.raw
 Matrix: WATER
 Batch No: 94 9410449 9410450 9410448

Date Analyzed: 08-APR-94
 Spike File: 094W105.raw
 Spike Dup File: 094W106.raw
 Analyst: JM

	Instrdg	SpikeAmt	% Rec	Limits
<u>MS RESULTS</u>				
1,1-Dichloroethene	23.3099	20	117 %	61-145%
Trichloroethene	22.2832	20	85 %	71-120%
Chlorobenzene	17.4645	20	87 %	75-130%
Surrogate Recovery				
Bromobenzene	100.0841	100	100 %	75-125%
<u>MSD RESULTS</u>				
1,1-Dichloroethene	23.062	20	115 %	61-145%
Trichloroethene	22.2194	20	85 %	71-120%
Chlorobenzene	17.6486	20	88 %	75-130%
Surrogate Recovery				
Bromobenzene	100.0486	100	100 %	75-125%
<u>MATRIX RESULTS</u>				
1,1-Dichloroethene	0			
Trichloroethene	5.2812			
Chlorobenzene	0			
<u>RPD DATA</u>				
1,1-Dichloroethene	1 %			< 14%
Trichloroethene	0 %			< 14%
Chlorobenzene	1 %			< 13%

Column: Rtx 502.2
 Limits based on 3/90 SOW CLP

Results within Specifications - PASS

115084

Please send analytic results and a copy of the signed chain of custody form to:

JOHN DUEY

Project ID: 14-307-01

Lab Personnel:

PLEASE INCLUDE QA/QC DATA IF BOX IS CHECKED.

- 1) Specify analytic method and detection limit in report.
- 2) Notify us if there are any anomalous peaks in GC or other scans.
- 3) ANY QUESTIONS/CLARIFICATIONS: CALL US.

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sampled by: HT

Laboratory Name: CURTIS & TOMPKINS

No. of Containers	Sample ID	Container Type	Sample Date	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analyze for	Analytic Method	Turn ⁵	COMMENTS
4	307-11	W/V	4/5/94	40ml	N	Y	HCl	TUH/BTEX/HVOCs	LUFT/8020/8010	N	
1	↓	W/BG	↓	1L	↓	↓	None	TEH	None LUFT	↓	
4	307-12	W/V		40ml			HCl	TUH/BTEX/HVOCs	LUFT/8020/8010		
1	↓	W/BG	↓	1L	↓	↓	None	TEH	LUFT	↓	
4	307-09	W/V		40ml			HCl	TUH/BTEX/HVOCs	LUFT/8020/8010		
4	307-10	W/V		↓	↓	↓	HCl	↓	↓	↓	
1	↓	W/BG	↓	1L	↓	↓	None	TEH	LUFT	↓	

1 Herb Zorn 4/6/94 1450
 Released by (Signature), Date

1 WEISS ASSOC.
 Affiliation

2 _____
 Received by (Signature), Date

2 _____
 Affiliation

3 _____
 Released by (Signature), Date

3 _____
 Affiliation

4 _____
 Shipping Carrier, Method, Date

4 _____
 Affiliation

5 _____
 Released by (Signature), Date

5 _____
 Affiliation

6 Tracy E. [Signature] 4-6-94
 Received by Lab Personnel, Date Seal intact?

6 CJT 486-0900
 Affiliation, Telephone

1 Sample Type Codes: W = Water, S = Soil, Describe Other; Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B - Clear/Brown Glass, Describe Other; Cap Codes: PT = Plastic, Teflon Lined 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround (N = Normal, W = 1 Week, R = 24 Hour, HOLD (write out))

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

Stored over night in secure Area



4080 Pike Lane
Concord, CA 94520
(510) 685-7852
(800) 544-3422 Inside CA
(800) 423-7143 Outside CA
(510) 825-0720 FAX

April 18, 1994

John Duey
Weiss Associates
5500 Shellmound Street
Emeryville, CA 94608

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 04/06/94.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria, unless otherwise stated in the footnotes.

GTEL is certified by the California State Department of Health Services, Laboratory certification number E1075, to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

If you have any questions concerning this analysis or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
GTEL Environmental Laboratories, Inc.

A handwritten signature in black ink, appearing to read 'Rashmi Shah', is written over a faint, illegible typed name.

Rashmi Shah
Laboratory Director

ANALYTICAL RESULTS

**Aromatic Volatile Organics and
 Total Petroleum Hydrocarbons as Gasoline and Mineral Spirits in Water**

EPA Methods 5030, 8020, and Modified 8015a

GTEL Sample Number		01	02	Q040894	
Client Identification		307-11	307-09	METHOD BLANK	
Date Sampled		04/05/94	04/05/94	--	
Date Analyzed		04/14/94	04/08/94	04/08/94	
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.3	<0.3	<0.3	<0.3	
Toluene	0.3	0.4	0.6	<0.3	
Ethylbenzene	0.3	<0.3	<0.3	<0.3	
Xylene, total	0.5	<0.5	0.8	<0.5	
TPH as Gasoline	10	<10	<10	<10	
TPH as Mineral Spirits	10	<10	<10	<10	
Detection Limit Multiplier		1	1	1	
TFT surrogate, % recovery		90.4	93.0	102	

- a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision. TFT surrogate recovery acceptability limits are 70-130%.

ANALYTICAL RESULTS

Hydrocarbons in Water

Method: GC-FID^a

GTEL Sample Number		01	GCO 040894		
Client Identification		307-11	METHOD BLANK		
Date Sampled		04/05/94	--		
Date Extracted		04/08/94	04/08/94		
Date Analyzed		04/14/94	04/11/94		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
TPH as gasoline	10	<10	<10		
TPH as mineral spirits	10	<10	<10		
TPH as kerosene	10	<10	<10		
TPH as diesel fuel	10	<10	<10		
TPH as motor oil	100	<100	<100		
Detection Limit Multiplier		1	1		
O-Terphenyl surrogate, % recovery		99.8	110		

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, USEPA, November, 1986. O-Terphenyl surrogate acceptability limits are 50-150%.

ANALYTICAL RESULTS
 Purgeable Halocarbons in Water
 EPA Method 8010^a

GTEL Sample Number		01	02	C041194	
Client Identification		307-11	307-09	METHOD BLANK	
Date Sampled		04/05/94	04/05/94	-	
Date Analyzed		04/12/94	04/12/94	04/11/94	
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Chloromethane	0.5	<0.5	<0.5	<0.5	
Bromomethane	0.5	<0.5	<0.5	<0.5	
Vinyl chloride	1	<1	<1	<1	
Chloroethane	0.5	<0.5	<0.5	<0.5	
Methylene chloride	0.5	<0.5	<0.5	<0.5	
1,1-Dichloroethene	0.5	<0.5	<0.5	<0.5	
1,1-Dichloroethane	0.5	<0.5	<0.5	<0.5	
1,2-Dichloroethene	0.5	<0.5	<0.5	<0.5	
Chloroform	0.5	<0.5	<0.5	<0.5	
1,2-Dichloroethane	0.5	<0.5	<0.5	<0.5	
1,1,1-Trichloroethane	0.5	<0.5	<0.5	<0.5	
Carbon tetrachloride	0.5	<0.5	<0.5	<0.5	
Bromodichloromethane	0.5	<0.5	<0.5	<0.5	
1,2-Dichloropropane	0.5	<0.5	<0.5	<0.5	
cis-1,3-Dichloropropene	0.5	<0.5	<0.5	<0.5	
Trichloroethene	0.5	<0.5	<0.5	<0.5	
Dichlorodifluoromethane	0.5	<0.5	<0.5	<0.5	
Dibromochloromethane	0.5	<0.5	<0.5	<0.5	
1,1,2-Trichloroethane	0.5	<0.5	<0.5	<0.5	
trans-1,3-Dichloropropene	0.5	<0.5	<0.5	<0.5	
2-Chloroethylvinyl ether	1	<1	<1	<1	
Bromoform	0.5	<0.5	<0.5	<0.5	
Tetrachloroethene	0.5	<0.5	<0.5	<0.5	
1,1,2,2-Tetrachloroethane	0.5	<0.5	<0.5	<0.5	
Chlorobenzene	0.5	<0.5	<0.5	<0.5	
1,2-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	
1,3-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	
1,4-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	
Trichlorofluoromethane	0.5	<0.5	<0.5	<0.5	
Detection Limit Multiplier		1	1	1	
BFB surrogate, % recovery		101	98.8	90.8	

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Bromofluorobenzene surrogate recovery acceptability limits are 65-135%.

Please send analytic results and a copy of the signed chain of custody form to:

JOHN DUGY

Project ID: 14-307-01

Lab Personnel:

PLEASE INCLUDE QA/QC DATA IF BOX IS CHECKED.

- 1) Specify analytic method and detection limit in report.
- 2) Notify us if there are any anomalous peaks in GC or other scans.
- 3) ANY QUESTIONS/CLARIFICATIONS: CALL US.

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sampled by: HT Laboratory Name: GTEL

No. of Containers	Sample ID	Container Type	Sample Date	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analyze for	Analytic Method	Turn ⁵	COMMENTS
1 { 4	307-11	W/U	4/5/94	4cc	N	Y	HCl	TUH/BTEX/HUX	LUFT/8020/810	N	
1		W/BG		1L			None	TEH	LUFT		
2 4	307-09	W/U		4cc			HCl	TUH/BTEX/HUX	LUFT/8020/810		
Empty											

1 John For 4/6/94
 Released by (Signature), Date 14:23
 1 WEISS ASSOCIATES
 Affiliation
 2 John Weber 4-6-94
 Received by (Signature), Date 14:25
 2 GTEL
 Affiliation

3 John Weber 4/6/94
 Released by (Signature), Date 16:00
 3 GTEL
 Affiliation
 4 _____
 Shipping Carrier, Method, Date
 4 _____
 Affiliation

5 _____
 Released by (Signature), Date
 5 _____
 Affiliation
 6 Kevin Molander 4-6-94 16:00
 Received by Lab Personnel, Date Seal intact? x Yes
 6 _____
 Affiliation, Telephone

C4040088
6°

1 Sample Type Codes: W = Water, S = Soil, Describe Other; Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B - Clear/Brown Glass, Describe Other;
 Cap Codes: PT = Plastic, Teflon Lined 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround [N = Normal, W = 1 Week, R = 24 Hour, HOLD (write out)]
 ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

Stored overnight in secure area



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

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

Prepared for:

Weiss Associates
5500 Shellmound Street
Emeryville, CA 94608

Date: 26-MAY-94
Lab Job Number: 115717
Project ID: 14-307-02
Location: N/A

Reviewed by:

Teresa K. Morrison

Reviewed by:

J. L. B.

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LABORATORY NUMBER: 115717
CLIENT: WEISS ASSOCIATES
PROJECT ID: 14-307-02

DATE SAMPLED: 05/20/94
DATE RECEIVED: 05/23/94
DATE ANALYZED: 05/24/94
DATE REPORTED: 05/24/94

Total Volatile Hydrocarbons as Gasoline in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	TVH AS MINERAL SPIRITS (ug/L)	TVH AS GASOLINE (ug/L)	REPORTING LIMIT (ug/L)	SURROGATE RECOVERIES TFT BB	
115717-1	307-01	ND	ND	50	86%	88%
115717-3	307-03	ND	ND	50	86%	88%
115717-4	307-04	**	220	50	85%	88%
115717-7	307-07	ND	ND	50	86%	88%
115717-8	307-08	ND	ND	50	86%	88%
115717-9	307-09	ND	ND	50	86%	88%
115717-10	307-10	ND	ND	50	83%	85%
115717-11	307-11	ND	ND	50	84%	85%
115717-12	307-12	ND	ND	50	84%	86%
115717-METHOD BLANK		ND	ND	50	98%	95%

**Mineral spirits range not reported due to overlap of hydrocarbon ranges.

TFT = Trifluorotoluene (Limits: 69-120)

BB = Bromobenzene (Limits: 70-122)

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: BS/BSD

RPD, %	3	(Limit: <25)
RECOVERY, %	90	(Limit: 75-125)



LABORATORY NUMBER: 115717
CLIENT: WEISS ASSOCIATES
PROJECT ID: 14-307-02

DATE SAMPLED: 05/20/94
DATE RECEIVED: 05/23/94
DATE ANALYZED: 05/24/94
DATE REPORTED: 05/24/94

Total Volatile Hydrocarbons as Gasoline in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	TVH AS	TVH AS	REPORTING	SURROGATE	
		MINERAL SPIRITS (ug/L)	GASOLINE (ug/L)		LIMIT (ug/L)	RECOVERIES TFT
115717-2	307-02	**	1,900	50	105%	120%
115717-5	307-05	**	2300	400	106%	108%
115717-6	307-06	ND	ND	50	86%	88%
115717-METHOD BLANK		ND	ND	50	105%	106%

**Mineral spirits range not reported due to overlap of hydrocarbon ranges.

TFT = Trifluorotoluene (Limits: 69-120)

BB = Bromobenzene (Limits: 70-122)

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: BS/BSD

RPD, %	<1	(Limit: <25)
RECOVERY, %	99	(Limit: 75-125)

LABORATORY NUMBER: 115717
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-02

DATE SAMPLED: 05/20/94
 DATE RECEIVED: 05/23/94
 DATE ANALYZED: 05/24/94
 DATE REPORTED: 05/24/94

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020
 Extraction by EPA 5030 Purge and Trap

LAB ID	CLIENT ID	BENZENE	TOLUENE	ETHYL	TOTAL	REPORTING	SURROGATE	
		(ug/L)	(ug/L)	BENZENE (ug/L)	XYLENES (ug/L)	LIMIT (ug/L)	TFT	BB
115717-1	307-01	ND	ND	ND	ND	0.5	95 %	95 %
115717-3	307-03	ND	ND	ND	ND	0.5	96 %	95 %
115717-4	307-04	0.6	1.5	1.1	3.5	0.5	98 %	96 %
115717-7	307-07	ND	ND	ND	ND	0.5	96 %	95 %
115717-8	307-08	ND	ND	ND	ND	0.5	95 %	95 %
115717-9	307-09	ND	ND	ND	ND	0.5	95 %	95 %
115717-10	307-10	ND	ND	ND	ND	0.5	95 %	95 %
115717-11	307-11	ND	ND	ND	ND	0.5	96 %	95 %
115717-12	307-12	ND	ND	ND	ND	0.5	96 %	95 %
115717-METHOD BLANK		ND	ND	ND	ND	0.5	97 %	96 %

TFT = Trifluorotoluene (Limits: 58-130)
 BB = Bromobenzene (Limits: 62-131)

ND = Not detected at or above reporting limit.
 Reporting Limit applies to all analytes.

* Presence of this compound confirmed by second column; however, the confirmation concentration differed from the reported result by more than a factor of two.

LABORATORY NUMBER: 115717
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-02

DATE SAMPLED: 05/20/94
 DATE RECEIVED: 05/23/94
 DATE ANALYZED: 05/24/94
 DATE REPORTED: 05/24/94

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020
 Extraction by EPA 5030 Purge and Trap

LAB ID	CLIENT ID	BENZENE	TOLUENE	ETHYL	TOTAL	REPORTING	SURROGATE	
		(ug/L)	(ug/L)	BENZENE (ug/L)	XYLENES (ug/L)	LIMIT (ug/L)	TFT	BB
115717-2	307-02	21	8.6	6.1	5.9	0.5	74 %	99 %
115717-5	307-05	490	5	33*	230	4	88 %	96 %
115717-6	307-06	ND	ND	ND	ND	0.5	94 %	95 %
115717-METHOD BLANK		ND	ND	ND	ND	0.5	88 %	95 %

TFT = Trifluorotoluene (Limits: 58-130)
 BB = Bromobenzene (Limits: 62-131)

ND = Not detected at or above reporting limit.
 Reporting Limit applies to all analytes.

* Presence of this compound confirmed by second column; however, the confirmation concentration differed from the reported result by more than a factor of two.

LABORATORY NUMBER: 115717
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-02

 DATE SAMPLED: 05/20/94
 DATE RECEIVED: 05/23/94
 DATE EXTRACTED: 05/24/94
 DATE ANALYZED: 05/25/94
 DATE REPORTED: 05/25/94

 Extractable Petroleum Hydrocarbons in Aqueous Solutions
 California DOHS Method
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (ug/L)	DIESEL RANGE (ug/L)	MOTOR OIL RANGE (ug/L)	SURROGATE RECOVERY (Hexacosane)
115717-1	307-01	ND(50)	ND(50)	ND(1,000)	126 %
115717-2	307-02	***	6,700	ND(1,000)	140 %
115717-3	307-03	ND(50)	ND(50)	ND(1,000)	134 %
115717-4	307-04	***	310	ND(1,000)	133 %
115717-5	307-05	***	2,700	ND(1,000)	122 %
115717-6	307-06	ND(50)	2,400	ND(1,000)	127 %
115717-7	307-07	ND(50)	ND(50)	ND(1,000)	116 %
115717-8	307-08	***	ND(50)	ND(1,000)	120 %
115717-9	307-09	ND(50)	ND(50)	ND(1,000)	132 %
115717-11	307-11	**	420	ND(1,000)	145 %
115717-12	307-12	**	450	ND(1,000)	125 %
115717-METHOD BLANK		ND(50)	ND(50)	ND(1,000)	113 %

Surrogate recovery limits: 60% - 150%

ND = Not detected at or above the reporting limit. Reporting limit indicated at parentheses.

** Kerosene range not reported due to overlap of hydrocarbon ranges.

*** Kerosene range not reported due to overlap of hydrocarbon ranges. Gasoline range hydrocarbons may be contributing to kerosene contribution.

QA/QC SUMMARY: BS/BSD

RPD, %	12	(Limit: <25)
RECOVERY, %	74	(Limits: 75 - 125)

LABORATORY NUMBER: 115717-1
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-02
 SAMPLE ID: 307-01

DATE SAMPLED: 05/20/94
 DATE RECEIVED: 05/23/94
 DATE ANALYZED: 05/25/94
 DATE REPORTED: 05/25/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

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Surrogate Recovery, %

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111

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LABORATORY NUMBER: 115717-2
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-02
 SAMPLE ID: 307-02

DATE SAMPLED: 05/20/94
 DATE RECEIVED: 05/23/94
 DATE ANALYZED: 05/25/94
 DATE REPORTED: 05/26/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

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Surrogate Recovery, %

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99

LABORATORY NUMBER: 115717-3
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-02
 SAMPLE ID: 307-03

DATE SAMPLED: 05/20/94
 DATE RECEIVED: 05/23/94
 DATE ANALYZED: 05/25/94
 DATE REPORTED: 05/25/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	109
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LABORATORY NUMBER: 115717-4
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-02
 SAMPLE ID: 307-04

DATE SAMPLED: 05/20/94
 DATE RECEIVED: 05/23/94
 DATE ANALYZED: 05/25/94
 DATE REPORTED: 05/26/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	17	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	5	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

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Surrogate Recovery, %

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102

LABORATORY NUMBER: 115717-5
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-02
 SAMPLE ID: 307-05

DATE SAMPLED: 05/20/94
 DATE RECEIVED: 05/23/94
 DATE ANALYZED: 05/25/94
 DATE REPORTED: 05/26/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

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Surrogate Recovery, %

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106

LABORATORY NUMBER: 115717-6
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-02
 SAMPLE ID: 307-06

DATE SAMPLED: 05/20/94
 DATE RECEIVED: 05/23/94
 DATE ANALYZED: 05/25/94
 DATE REPORTED: 05/25/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

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Surrogate Recovery, %	107
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LABORATORY NUMBER: 115717-7
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-02
 SAMPLE ID: 307-07

DATE SAMPLED: 05/20/94
 DATE RECEIVED: 05/23/94
 DATE ANALYZED: 05/25/94
 DATE REPORTED: 05/25/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

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Surrogate Recovery, %

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110

LABORATORY NUMBER: 115717-8
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-02
 SAMPLE ID: 307-08

DATE SAMPLED: 05/20/94
 DATE RECEIVED: 05/23/94
 DATE ANALYZED: 05/25/94
 DATE REPORTED: 05/25/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

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Surrogate Recovery, %

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97

LABORATORY NUMBER: 115717-9
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-02
 SAMPLE ID: 307-09

DATE SAMPLED: 05/20/94
 DATE RECEIVED: 05/23/94
 DATE ANALYZED: 05/25/94
 DATE REPORTED: 05/25/94

EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	91
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LABORATORY NUMBER: 115717-10
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-02
 SAMPLE ID: 307-10

 DATE SAMPLED: 05/20/94
 DATE RECEIVED: 05/23/94
 DATE ANALYZED: 05/25/94
 DATE REPORTED: 05/25/94

 EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %

114



LABORATORY NUMBER: 115717-11
CLIENT: WEISS ASSOCIATES
PROJECT ID: 14-307-02
SAMPLE ID: 307-11

DATE SAMPLED: 05/20/94
DATE RECEIVED: 05/23/94
DATE ANALYZED: 05/25/94
DATE REPORTED: 05/25/94

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

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Surrogate Recovery, %

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107



LABORATORY NUMBER: 115717-12
CLIENT: WEISS ASSOCIATES
PROJECT ID: 14-307-02
SAMPLE ID: 307-12

DATE SAMPLED: 05/20/94
DATE RECEIVED: 05/23/94
DATE ANALYZED: 05/25/94
DATE REPORTED: 05/25/94

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

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Surrogate Recovery, %	107
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LABORATORY NUMBER: 115717-METHOD BLANK
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-02

 DATE ANALYZED: 05/25/94
 DATE REPORTED: 05/26/94

 EPA 8010
 Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

 =====
 Surrogate Recovery, %

 106
 =====

LCS SUMMARY SHEET FOR EPA 8010

Laboratory Number: 115717
 Client: Weiss Associates
 Analysis date: 05/24/94
 Sample type: Water

LCS spike file: 144w004

8010 LCS DATA (spiked at 20 ppb)

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	21.55	108 %	OK	61 - 145
Trichloroethene	19.56	98 %	OK	71 - 120
Chlorobenzene	21.03	105 %	OK	75 - 130
SURROGATES				
Bromobenzene (LCS)	115.90	116 %	OK	75 - 125



MS/MSD SUMMARY SHEET FOR EPA 8010

Laboratory Number: 115717
 Client: Weiss Associates
 Analysis date: 05/24/94
 Sample type: Water
 Sample spiked: 115717-004

Spike file: 144w006
 Spike dup file: 144w007

8010 MS/MSD DATA (spiked at 20 ppb)

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	17.78	89 %	OK	61 - 145
Trichloroethene	18.19	91 %	OK	71 - 120
Chlorobenzene	17.81	89 %	OK	75 - 130
SPIKE DUP COMPOUNDS				
1,1-Dichloroethene	19.18	96 %	OK	61 - 145
Trichloroethene	21.08	105 %	OK	71 - 120
Chlorobenzene	19.45	97 %	OK	75 - 130
SURROGATES				
Bromobenzene (MS)	103.48	103 %	OK	75 - 125
Bromobenzene (MSD)	111.00	111 %	OK	75 - 125
MATRIX RESULTS				
1,1-Dichloroethene	0			
Trichloroethene	0			
Chlorobenzene	0			

RPD DATA

8010 COMPOUNDS	SPIKE	SPIKE DUP	RPD	STATUS	LIMITS
1,1-Dichloroethene	17.78	19.18	8 %	OK	<= 14
Trichloroethene	18.19	21.08	15 %	NOT OK	<= 14
Chlorobenzene	17.81	19.45	9 %	OK	<= 13

Please send analytic results and a copy of the signed chain of custody form to:

John Dray

Project ID: 14-307-02

US717

- 1) Specify analytic method and detection limit in report.
- 2) Notify us if there are any anomalous peaks in GC or other scans.
- 3) ANY QUESTIONS/CLARIFICATIONS: CALL US.

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sampled by: AEK, HT

Laboratory Name: Curtis & Tompkins

No. of Containers	Sample ID	Container Type	Sample Date	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analyze for	Analytic Method	Turn ⁵	COMMENTS
4	307-01	W/V	5/20/94	40ml	N	Y	HCR	TVH/BETH/HNOCs	LMFT/2020/8010	R	Expected high fuel conc.
	-02 ✓										
	-03 ✓										
	-04 ✓										
	-05 ✓										Expected high fuel conc.
	-06 ✓										
	-07 ✓										
	-08 ✓										
	-09 ✓										
	-10 ✓										
	-11 ✓										
	-12 ✓										

Released by (Signature), Date
John Dray 5/20/94
 Weiss 2000

Released by (Signature), Date
Rudolph R. Manriquez 5/23/95

Released by (Signature), Date
[Signature]

Affiliation
 Weiss

Affiliation
 WEISS ASSOC 13.56

Affiliation
 May 23 5-23-94

Received by (Signature), Date
Rudolph R. Manriquez 5/23/94
 Weiss ASSOCIATES 2000

Shipping Carrier, Method, Date
[Signature]

Received by Lab Personnel, Date Seal intact?
 CJT 486-0900

Affiliation
 Weiss ASSOCIATES

Affiliation

Affiliation, Telephone
 CJT 486-0900

1. Sample Type Codes: W = Water, S = Soil, Describe Other; Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B - Clear/Brown Glass, Describe Other; Cap Codes: PT = Plastic, Teflon Lined 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5. Turnaround (N = Normal, W = 1 Week, R = 24 Hour, HOLD (write out))
 ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

* Compare chromatograms to gasoline, mineral spirits, kerosene, diesel & motor oil standards for all TVH/TEH analyses.

Please send analytic results and a copy of the signed chain of custody form to:

John Dray
 Project ID: 14-307-02

115717

Lab Personnel:

PLEASE INCLUDE QA/QC DATA IF BOX IS CHECKED.

- 1) Specify analytic method and detection limit in report.
- 2) Notify us if there are any anomalous peaks in GC or other scans.
- 3) ANY QUESTIONS/CLARIFICATIONS; CALL US.

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sampled by: AEK, HT Laboratory Name: C&T

No. of Containers	Sample ID	Container Type	Sample Date	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analyze for	Analytic Method	Turn ⁵	COMMENTS
1	307-01V	WG	5/21/94	1L	N	Y	None	TEH	LUFT	R	
	-02 ✓										Expected high fuel conc.
	-03 ✓										
	-04 ✓										
	-05 ✓										Expected high fuel conc.
	-06 ✓										
	-07 ✓										
	-08 ✓										
	-09 ✓										
	-10 ✓										
	-11 ✓										
	-12 ✓										
	10										NO SAMPLE (ANALYSIS NOT REQ)

1 San Francisco 5/21/94
 Released by (Signature), Date 2000
 1 Weiss
 Affiliation
 2 Perley R. Margary 5/29/94
 Received by (Signature), Date 20:00
 2 WEISS ASSOCIATES
 Affiliation

3 Perley R. Margary 5/23/94
 Released by (Signature), Date 13:56
 3 WEISS ASSOC.
 Affiliation
 4 [Signature]
 Shipping Carrier, Method, Date
 4 [Signature]
 Affiliation

5 [Signature]
 Released by (Signature), Date
 5 [Signature]
 Affiliation
 6 [Signature] 5-23-94
 Received by Lab/Personnel, Date Seal Intact? x
 6 C&T 406-0900
 Affiliation, Telephone

1 Sample Type Codes: W = Water, S = Soil, Describe Other; Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B - Clear/Brown Glass, Describe Other; Cap Codes: PT = Plastic, Teflon Lined 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround (N = Normal, W = 1 Week, R = 24 Hour, HOLD (write out))
 ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS: (*) see note, pg. 1



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

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

Prepared for:

Weiss Associates
5500 Shellmound Street
Emeryville, CA 94608

Date: 07-JUN-94
Lab Job Number: 115813
Project ID: 14-307-02
Location: N/A

Reviewed by:

Reviewed by:

This package may be reproduced only in its entirety.

LABORATORY NUMBER: 115813
 CLIENT: WEISS ASSOCIATES
 PROJECT ID: 14-307-02

DATE SAMPLED: 06/01/94
 DATE RECEIVED: 06/01/94
 DATE EXTRACTED: 06/06/94
 DATE ANALYZED: 06/06/94
 DATE REPORTED: 06/07/94

Extractable Petroleum Hydrocarbons in Aqueous Solutions
 California DOHS Method
 LUFT Manual October 1989

LAB ID	CLIENT ID	KEROSENE RANGE (ug/L)	DIESEL RANGE (ug/L)	REPORTING LIMIT (ug/L)
115813-001	307-04	ND	ND	50

ND = Not detected at or above reporting limit. Reporting limit indicated in parentheses.

QA/QC SUMMARY:

RPD, %	13
RECOVERY, %	86



LABORATORY NUMBER: 115813
CLIENT: WEISS ASSOCIATES
PROJECT ID: 14-307-02

DATE SAMPLED: 06/01/94
DATE RECEIVED: 06/01/94
DATE EXTRACTED: 06/02/94
DATE ANALYZED: 06/02/94
DATE REPORTED: 06/03/94

Extractable Petroleum Hydrocarbons in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	KEROSENE RANGE (ug/L)	DIESEL RANGE (ug/L)	REPORTING LIMIT (ug/L)
115813-002	307-07	ND	ND	50

ND = Not detected at or above reporting limit. Reporting limit applies to all analytes.

QA/QC SUMMARY:

RPD, %	9
RECOVERY, %	86

Please send analytic results and a copy of the signed chain of custody form to:

JOHN DUEY
 Project ID: 14-307-02

Lab Personnel:

PLEASE INCLUDE QA/QC DATA IF BOX IS CHECKED.

- 1) Specify analytic method and detection limit in report.
- 2) Notify us if there are any anomalous peaks in GC or other scans.
- 3) ANY QUESTIONS/CLARIFICATIONS: CALL US.

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sampled by: RRM

Laboratory Name: CURTIS + TOMAKIOS

No. of Containers	Sample ID	Container Type	Sample Date	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analyze for	Analytic Method	Turn ⁵	COMMENTS	
1	2	307-04	W/BG	6/1/94	LIT.	N	Y	NONE	TEH. KEROSENE + DIESEL	LUFT	24 HR.	
2	↓	307-07	↓	↓	↓	↓	↓	↓	↓	↓	↓	
3	↓	307-08	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD		"HOLD"
4	↓	307-11	↓	↓	↓	↓	↓	↓	↓	↓		

1 Randy R. Marquis
 Released by (Signature), Date

1 WEISS ASSOCIATES
 Affiliation

2 _____
 Received by (Signature), Date

2 _____
 Affiliation

3 _____
 Released by (Signature), Date

3 _____
 Affiliation

4 _____
 Shipping Carrier, Method, Date

4 _____
 Affiliation

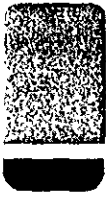
5 _____
 Released by (Signature), Date

5 _____
 Affiliation

6 Trusale Morrison x
 Received by Lab Personnel, Date Seal Intact?

6 CET 6/1/94 1:55pm
 Affiliation, Telephone

1 Sample Type Codes: W = Water, S = Soil, Describe Other; Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B - Clear/Brown Glass, Describe Other;
 Cap Codes: PT = Plastic, Teflon Lined 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround (N = Normal, W = 1 Week, R = 24 Hour, HOLD (write out))
 ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



GTEL

ENVIRONMENTAL
LABORATORIES, INC.

Western Region

4080 Pike Lane, Suite C
Concord, CA 94520
(510) 685-7852
(800) 544-3422 Inside CA
FAX (510) 825-0720

Project ID: 14-307-02
Work Order Number: C4-05-0345

May 26, 1994

John Duey
Weiss Associates
5500 Shellmound St.
Emeryville, CA 94608

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 05/23/94.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria, unless otherwise stated in the footnotes.

GTEL is certified by the California State Department of Health Services, Laboratory certification number E1075, to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

If you have any questions concerning this analysis or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
GTEL Environmental Laboratories, Inc.

Rashmi Shah
Laboratory Director

ANALYTICAL RESULTS
Aromatic Volatile Organics and
Total Petroleum Hydrocarbons as Gasoline in Water
EPA Methods 5030, 8020, and Modified 8015^a

GTEL Sample Number		01	052394E		
Client Identification		307-07	METHOD BLANK		
Date Sampled		05/20/94	--		
Date Analyzed		05/24/94	05/23/94		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	<0.5		
Toluene	0.5	<0.5	<0.5		
Ethylbenzene	0.5	<0.5	<0.5		
Xylene, total	0.5	<0.5	<0.5		
TPH as Gasoline	50	<50	<50		
Detection Limit Multiplier		1	1		
BFB surrogate, % recovery		105	90.2		

- a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Board LUFT Manual procedures. Bromofluorobenzene surrogate recovery acceptability limits are 70-130%.

ANALYTICAL RESULTS

Hydrocarbons in Water

Method: GC-FID^a

GTEL Sample Number		01	GCJ052494		
Client Identification		307-07	METHOD BLANK		
Date Sampled		05/20/94	--		
Date Extracted		05/24/94	05/24/94		
Date Analyzed		05/25/94	05/25/94		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
TPH as gasoline	10	<10	<10		
TPH as mineral spirits	10	<10	<10		
TPH as kerosene	10	<10	<10		
TPH as diesel fuel	10	<10	<10		
TPH as motor oil	100	<100	<100		
Detection Limit Multiplier		1	1		
O-Terphenyl surrogate, % recovery		109	69.4		

- a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, USEPA, November, 1986. O-Terphenyl surrogate acceptability limits are 50-150%.

ANALYTICAL RESULTS
Purgeable Halocarbons in Water
EPA Method 8010a

GTEL Sample Number		01	052394P		
Client Identification		307-07	METHOD BLANK		
Date Sampled		05/20/94	-		
Date Analyzed		05/24/94	05/23/94		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Chloromethane	0.5	<0.5	<0.5		
Bromomethane	0.5	<0.5	<0.5		
Vinyl chloride	1	<1	<1		
Chloroethane	0.5	<0.5	<0.5		
Methylene chloride	0.5	<0.5	<0.5		
1,1-Dichloroethene	0.5	<0.5	<0.5		
1,1-Dichloroethane	0.5	<0.5	<0.5		
1,2-Dichloroethene	0.5	<0.5	<0.5		
Chloroform	0.5	<0.5	<0.5		
1,2-Dichloroethane	0.5	<0.5	<0.5		
1,1,1-Trichloroethane	0.5	<0.5	<0.5		
Carbon tetrachloride	0.5	<0.5	<0.5		
Bromodichloromethane	0.5	<0.5	<0.5		
1,2-Dichloropropane	0.5	<0.5	<0.5		
cis-1,3-Dichloropropene	0.5	<0.5	<0.5		
Trichloroethene	0.5	<0.5	<0.5		
Dichlorodifluoromethane	0.5	<0.5	<0.5		
Dibromochloromethane	0.5	<0.5	<0.5		
1,1,2-Trichloroethane	0.5	<0.5	<0.5		
trans-1,3-Dichloropropene	0.5	<0.5	<0.5		
2-Chloroethylvinyl ether	1	<1	<1		
Bromoform	0.5	<0.5	<0.5		
Tetrachloroethene	0.5	<0.5	<0.5		
1,1,2,2-Tetrachloroethane	0.5	<0.5	<0.5		
Chlorobenzene	0.5	<0.5	<0.5		
1,2-Dichlorobenzene	0.5	<0.5	<0.5		
1,3-Dichlorobenzene	0.5	<0.5	<0.5		
1,4-Dichlorobenzene	0.5	<0.5	<0.5		
Trichlorofluoromethane	0.5	<0.5	<0.5		
Detection Limit Multiplier		1	1		
BFB surrogate, % recovery		79.0	85.8		

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Bromofluorobenzene surrogate recovery acceptability limits are 65-135%.

Please send analytic results and a copy of the signed chain of custody form to:

John Dwey
 Project ID: 14-307-02

- IN QA/C A II S
 CHECKED.
- Specify analytic method and detection limit in report.
 - Notify us if there are any anomalous peaks in GC or other scans.
 - ANY QUESTIONS/CLARIFICATIONS: CALL US.

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sampled by: AEK Laboratory Name: GTEL

(6°) C4050345

No. of Containers	Sample ID	Container Type	Sample Date	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analyze for	Analytic Method	Turn ⁵	COMMENTS
01 4	307-07	w/v	5/20/94	40ml	N	Y	HCL	TUH/BTEX/HVOCs	LUFT/8020/8010	R	det. lim: gas/diel
1	↓	w/A	↓	↓	↓	↓	None	TEH	LUFT	↓	50ppb; BTEX 0.5pp
2 4	307-10	w/v	5/20/94	40ml	N	Y	HCL	TUH/BTEX/HVOCs	LUFT/8020/8010	HOLD	

Sealed over waiver

Ken Frank 5/20/94
 Released by (Signature), Date
 2000
 1 Weiss
 Affiliation
 2 Ken Frank 5/20/94
 Received by (Signature), Date
 2 WEISS ASSOCIATES
 Affiliation

Rudolf M. ... 5/23/94
 Released by (Signature), Date
 3 WEISS ASSOCIATES 1610
 Affiliation
 4 Ken Weber 5/23
 Shipping Carrier, Method, Date
 1610
 4 GTEL
 Affiliation

Joe Weber 5-23-94
 Released by (Signature), Date
 5 GTEL
 Affiliation
 6 Kevin Molander 5-23-94 5:15
 Received by Lab Personnel, Date Seal intact? YES
 6 GTEL
 Affiliation, Telephone

1 Sample Type Codes: W = Water, S = Soil, Describe Other; Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B - Clear/Brown Glass, Describe Other; Cap Codes: PT = Plastic, Teflon Lined 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround [N = Normal, W = 1 Week, R = 24 Hour, HOLD (write out)]
 ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS: