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Atlantic Richfield Company
(a BP affiliated company)

P.O. Box 1257
San Ramon, CA 94583
Phone: (925) 275-3801
Fax: (925) 275-3815

29 December 2006

Re: Corrective Action Plan
Former BP Station # 11117
7210 Bancroft Avenue
Oakland, California
ACEH Case # RO0000356

"I declare, that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct."

Submitted by:

Paul Supple

Paul Supple
Environmental Business Manger

A BP affiliated company

Broadbent & Associates, Inc.
1324 Mangrove Ave., Suite 212
Chico, CA 95926
Voice (530) 566-1400
Fax (530) 566-1401

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

29 December 2006 Job No. 06-08-649

Mr. Paul Supple
Environmental Business Manager
Atlantic Richfield Company (a BP affiliated company)
PO Box 1257
San Ramon, California 94583
Submitted via ENFOS

RE: CORRECTIVE ACTION PLAN, FORMER BP SERVICE STATION No. 11117
7210 BANCROFT AVENUE, OAKLAND, CALIFORNIA
ACEHS CASE No. RO0000356

Dear Mr. Supple,

Broadbent & Associates, Inc. is pleased to present the enclosed *Corrective Action Plan* for the above-referenced facility. This Corrective Action Plan was prepared in response to a letter request from the Alameda County Environmental Health Services (ACEHS) dated 2 June 2006. In accordance with that request, this Corrective Action Plan includes discussion of the site background, previous investigations, regional and site geology and hydrogeology, preferential pathways, sensitive receptors, risk assessment and cleanup objectives, remediation options, and recommended approach.

Should you have any questions concerning this Corrective Action Plan, please do not hesitate to contact us at (530) 566-1400.

Sincerely,
BROADBENT & ASSOCIATES, INC.

Thomas A. Venus, P.E.
Senior Engineer

Robert H. Miller, P.G.
Principal Hydrogeologist

PROFESSIONAL GEOLOGIST
ROBERT H. MILLER
No. 4893
12-29-06
STATE OF CALIFORNIA

Enclosure

cc: Mr. Steven Plunkett, ACEHS (Submitted via ACEHS ftp site)
Ms. Liz Sewell, ConocoPhillips (Submitted via COC ftp site)
Mr. Jim Givens, One Eastmont Town Center, Oakland, California 94605-1907
Ms. Diane Clark, Eastmont Town Center CX LLC, 7200 Bancroft Avenue, Oakland, California 94605-2403

# CORRECTIVE ACTION PLAN

Former BP Service Station No. 11117
7210 Bancroft Avenue, Oakland, California
ACEH Case No. RO0000356

Prepared for

Mr. Paul Supple
Environmental Business Manager
Atlantic Richfield Company
P.O. Box 1257
San Ramon, California 94583

Prepared by

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

1324 Mangrove Avenue, Suite 212
Chico, California 95926
(530) 566-1400
*www.broadbentinc.com*

December 2006

Project No. 06-08-649

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# 1.0 INTRODUCTION

On behalf of the Atlantic Richfield Company, RM – a BP affiliated company, Broadbent & Associates, Inc. (BAI) has prepared this Corrective Action Plan (CAP) for the Former BP Service Station No.11117, located at 7210 Bancroft Avenue, Oakland, California (Site). This CAP was prepared in response to a letter request from the Alameda County Health Care Services Environmental Health Program (ACEH) dated 2 June 2006. Specifically, ACEH technical comments within the 2 June 2006 letter stated that the purpose of the CAP will be to propose cost-effective final cleanup objectives for the entire contaminant plume and remedial alternatives for soil and ground water that will adequately protect human health and safety, the environment, eliminate nuisance conditions, and protect water resources. Furthermore, the objectives of the CAP will be to detail at least three technically and economically feasible methods to restore and protect beneficial uses of water and to meet the cleanup objectives for each contaminant established in the CAP. In accordance with the letter request of 2 June 2006 and California Code of Regulations Title 23 Section 2725, this CAP includes discussions on the site background and previous investigations, regional and Site geology and hydrogeology, preferential pathways, sensitive receptors, risk assessment and cleanup objectives, remediation options, and recommended approach. Tables, figures, and appendices referenced within the CAP are provided following the conclusion of the document's text.

# 2.0 SITE BACKGROUND

## 2.1 Site Description

The Site is an active 76-brand gasoline retail outlet located on the northeastern corner of Bancroft Avenue and 73rd Avenue in Oakland, California (Figure 1). The land use in the immediate vicinity of the Site is mixed commercial and residential. BP acquired the facility from Mobil Oil Corporation in 1989. In January 1994, BP transferred the property to TOSCO Marketing Company and has not operated the facility since that time.

The Site consists of a service station building and three 12,000-gallon gasoline underground storage tanks (USTs) and one 10,000-gallon diesel UST with associated piping and dispensers. The Site is covered with asphalt or concrete surfacing except for planters along the southeastern and southwestern property boundaries and at the north corner of the property.

## 2.2 Previous Environmental Activities

A summary of environmental work previously performed at the Site is presented below.

*1984 UST Replacement:* In 1984, the pre-existing USTs at the Site were removed and three gasoline USTs (6,000-gallon, 10,000-gallon, and 12,000-gallon) and one 6,000-gallon diesel UST were installed immediately to the east. The newly installed USTs were single-walled fiberglass USTs. An associated UST removal report is not on file. It is unknown whether a UST removal report was in fact prepared. No documentation was reportedly found referencing the conditions of the removed USTs or reporting evidence of hydrocarbon impacts in the soil and ground water, if any, at the time of the UST removal.

*1989 Phase II Environmental Audit:* In December 1989, a Phase II environmental audit was conducted on the adjacent Eastmont Town Center site located to the north and northwest of the former BP Site. Part of the respective Phase II study relevant to the former BP Site included the installation of monitoring well MW-3 near the western boundary of the former BP Site. The analytical results of soil samples collected from 10 and 20 feet below ground surface (bgs) from MW-3 reported total petroleum hydrocarbons (TPH), benzene, toluene, ethyl benzene, and total xylenes (BTEX), and oil and grease concentrations below their respective laboratory reporting limits. The analytical results of ground-water samples from MW-3 reported TPH and benzene concentrations of 2,700 micrograms per liter (μg/L) and 530 μg/L, respectively.

***1991 Phase I Subsurface Investigation:*** In December 1991, two soil borings (MW-1 and MW-2) were drilled on-site to total depths of 40 feet bgs, soil samples were collected at 10 foot intervals between 5 and 25 feet bgs and the respective borings were subsequently converted into monitoring wells MW-1 and MW-2. First ground water was encountered at approximately 30 feet bgs. The analytical results of the soil samples from MW-1 and MW-2 reported total petroleum hydrocarbons as gasoline (TPH-g) and BTEX at concentrations below their respective laboratory reporting limits.

Borings MW-4 and MW-6 were advanced to total depths of 40 feet bgs, and boring B-5 was advanced to 50 feet bgs. First ground water was encountered at approximately 30 feet bgs in borings MW-4 and MW-6, and no free water was encountered in boring B-5. The analytical results of soil samples collected at 30 feet bgs from B-5 and MW-6 reported TPH-g and BTEX at concentrations below their respective laboratory reporting limits. The maximum TPH-g and BTEX concentrations in soil reported in MW-4 were 6,000 milligrams per kilograms (mg/kg) and 34 mg/kg, respectively, from 20 feet bgs. Borings MW-4 and MW-6 were subsequently converted into monitoring wells.

***1994 Baseline Assessment Report:*** In September 1994, a supplemental Site assessment was conducted at the Site. Four exploratory soil borings (THP-1, TB-2, TB-3, TB-4) were advanced to a maximum depth of 45 feet bgs, north of the former and existing UST complexes (THP-1), at the former service bays (TB-2), north of the northern pump island (TB-3), and at a former pump island (TB-4). Additionally, one soil sample was collected from beneath each of the five dispensers (TD-1 through TD-5). Ground water was encountered in TB-2 and TB-3 at approximately 33 to 36 feet bgs and ground-water samples were collected from TB-2 and TB-3 via temporary well points. Maximum concentrations of 16 mg/kg TPH-g (TD-3), TPH as diesel (TPH-d) at concentrations ranging from 110 mg/kg to 5,800 mg/kg (TD-1 through TD-5), and benzene at concentrations below laboratory reporting limits were reported in soil samples. No TPH-g was detected at concentrations above the laboratory reporting limits and a maximum concentration of 0.7 μg/L benzene (TB-3) was reported in ground-water samples. Boring MW-7 was advanced to a total depth of 45 feet bgs, and borings MW-8 and MW-9 were advanced to total depths of 40 feet bgs. First encountered ground water was at approximately 27 feet bgs to 32 feet bgs. No TPH-g or BTEX were detected above their respective laboratory reporting limits in soil samples collected from 25 feet bgs in each boring. The three borings were subsequently converted into monitoring wells MW-7 through MW-9.

***1997 Offsite Well Installation:*** In July 1997, one boring (MW-10) was drilled off-site to a depth of approximately 37.5 feet bgs. Soil samples were collected and the boring was subsequently converted into a monitoring well. First ground water was encountered at approximately 26 feet bgs. No TPH-g, BTEX or methyl tertiary butyl ether (MTBE) was detected in soil samples at concentrations above their respective laboratory reporting limits in MW-10. No TPH-g or BTEX was detected in the ground-water sample from MW-10 at concentrations above their respective laboratory reporting limits. However, MTBE was detected at a concentration of 13 μg/L using EPA Method 8020.

***1998 UST and Associated Piping and Dispenser Removal:*** In August 1998, the three gasoline USTs (6,000-gallon, 10,000-gallon, and 12,000-gallon) and one 6,000-gallon diesel UST, and associated dispensers and piping were removed from the Site. There was no visible evidence of leakage from the USTs removed. A total of eight native soil samples were collected from beneath each end of the removed USTs at depths of 14 to 16 feet bgs, and a total of 18 soil samples were collected from the former dispenser locations and from beneath the associated product lines at three feet bgs. TPH-g was detected in five of the eight UST excavation samples at concentrations ranging from 3.7 mg/kg (S-15-T2S) to 5,300 mg/kg (S-15-T1S). TPH-d was detected at 630 mg/kg (S-15-T1N) and 800 mg/kg (S-15-T1S) in two samples, benzene concentrations ranged between 0.40 mg/kg (S-15-T1N) to 0.95 mg/kg (S-16-T3N) in three samples, MTBE concentrations ranged between 0.028 mg/kg (S-14-T4S) to 5.3 mg/kg (S-16-T3N) in seven samples, and lead was not detected in the sample analyzed for lead. TPH-g was detected in nine of the eighteen dispenser and product line samples with concentrations ranging between 1.4 mg/kg (S-3-PL12) to 7,200 mg/kg (S-3-D4). TPH-d was detected between 4.8 mg/kg (S-3-PL3) to 190 mg/kg (S-3-PL11) in five samples, benzene was detected between 0.0089 mg/kg (S-3-PL-12) to 22 mg/kg (S-3-D4) in three samples, and MTBE was detected between 0.048 mg/kg (S-3-PL12) to 15 mg/kg (S-3-PL1) in ten samples. During the 1998 UST replacement activities, approximately 389 tons of soil and backfill were transported off-site for disposal. The existing 10,000-gallon diesel and three 12,000-gallon gasoline USTs were installed as replacements.

***1999 Ground-Water Recovery Test:*** In April 1999, a ground-water recovery test was performed on wells MW-1 through MW-4, MW-6, MW-7 and MW-10 to assess the spatial variation in hydraulic conductivity in the shallow water-bearing zone across the Site. The hydraulic conductivity values estimated from the recovery testing are presented in Alisto Engineering Group's *Results of Recovery Testing* dated 4 June 1999. Testing by the Bouwer-Rice method yielded hydraulic conductivities of 2.46 x $10^{-2}$ ft/min for MW-1, 2.42 x $10^{-4}$ ft/min for MW-2, 3.82 x $10^{-4}$ ft/min for MW-3, 5.75 x $10^{-4}$ ft/min for MW-4, 1.99 x $10^{-2}$ ft/min for MW-6, 1.09 x $10^{-4}$ ft/min for MW-7, and 8.78 x $10^{-5}$ ft/min for MW-10. The geometric mean of the hydraulic conductivity and flow velocity values were calculated to be 1.37 x $10^{-5}$ feet per second and 73.85 feet per year, respectively.

***1999 Extraction Well Installation:*** In November 1999, two 4-inch diameter wells (EX-1 and EX-2) were installed on-site to facilitate potential remedial activities at the Site. Well EX-1 was drilled to 39.5 feet bgs and EX-2 was drilled to 36.5 feet bgs. Ground water was first encountered at 26 feet bgs. No TPH-G or BTEX, and relatively low MTBE concentrations were reported in soil samples collected from EX-1 and EX-2.

***2000 Interim Remedial Action and Recovery Testing:*** Between March 16 and April 30, 2000, interim remedial activities were conducted at the Site to evaluate the effectiveness of hydrocarbon and MTBE reduction using short-term ground-water extraction. During eight extraction events, approximately 10,900 gallons of ground water was extracted from wells EX-1, EX-2 and MW-2. During the extraction events, stable to slightly decreasing hydrocarbon and MTBE concentration trends were exhibited in samples collected from wells MW-2 and EX-1, located immediately southwest of the existing USTs. Samples from well EX-2, located north of the existing USTs, exhibited lower hydrocarbon and MTBE concentrations than MW-2 and EX-1. In April 2000, during the batch extraction events, recovery tests were conducted on wells EX-1, EX-2 and MW-2. Based on the recovery test measurements, the calculated hydraulic conductivity values ranged from 1.85 x $10^{-4}$ ft/min to 8.33 x $10^{-4}$ ft/min with resulting flow velocities of 16 ft/year to 73 ft/year at well MW-2. The calculated hydraulic conductivity values ranged from 2.02 x $10^{-5}$ ft/min to 3.85 x $10^{-5}$ ft/min for well EX-1 with resulting flow velocities of 1.8 to 3.4 ft/yr. And a well EX-2, the calculated hydraulic conductivity values ranged from 3.04 x $10^{-4}$ ft/min to 2.13 x $10^{-3}$ ft/min for resulting flow velocities of 27 ft/year to 187 ft/year. The geometric mean of these values is a hydraulic conductivity of 3.0 x $10^{-4}$ ft/min and resulting flow velocity of 26 ft/year.

***2000 Potential Receptor Survey, Expanded Site Plan and Well Search:*** In October 2000, Alisto Engineering Group completed a potential receptor survey, prepared an expanded site plan with neighboring property parcel information and underground utilities mapped, and identified wells in the vicinity of the Site. A review of the files of the California Department of Water Resources (DWR) was performed to identify all known wells within a one-half mile radius of the Site. The results of the well search revealed that there were 17 wells other than the onsite monitoring wells. Of these, 11 were offsite monitoring wells, four were cathodic protection wells, one an industrial well, and one an irrigation well for a nearby cemetery. No domestic/municipal water supply wells were identified from review of the DWR files. Copies of the completion logs from the DWR files for these wells are contained within the 19 October 2000 Alisto report.

***2001 Dual-Phase Extraction Pilot Test:*** During October 29, through November 2, 2001, a dual-phase soil vapor and ground-water extraction (DPE) pilot test was performed on the monitoring wells with the highest historical hydrocarbon concentrations (i.e., MW-2 and MW-4) and the extraction wells (EX-1 and EX-2) at the Site. The DPE test results indicated that the vacuum influence was limited to within 18 to 28 feet of the extraction well. Water levels typically decreased several feet in the extraction wells and had a varied response in the observation wells. Estimated vapor-phase removal rates were approximately 200-pounds of hydrocarbon per day in wells MW-4 and EX-1, and less than 5-pounds of hydrocarbon per day in wells MW-2 and EX-2. Soil vapor concentrations showed a decreasing trend in wells MW-4 and EX-1 during the short-term pilot tests. Grab water samples collected before and after the pilot tests remained the same order of magnitude. A total of 6,500 gallons of water was extracted during the DPE pilot test and appropriately disposed off-Site. Overall, the test results indicated that DPE is a feasible remedial alternative for the Site and ACEH approved Cambria's August 8, 2002, *Dual Phase Extraction Pilot Test Report* as a Corrective Action Plan (CAP).

***2005 Soil and Water Investigation:*** In Fall 2005, URS completed nine Geoprobe soil borings with co-located Hydropunch borings. The first phase of the work was onsite source area characterization: five boring locations (A-1 through A-5) were advanced in the vicinity of the possible hydrocarbon source areas such as locations of the former and current USTs, product dispensers, and in the vicinity of MW-4 to adequately characterize the lateral and vertical extent of petroleum hydrocarbons in soils in the identified source areas. An offsite assessment was completed during the second phase of work (borings A-7 through A-10) to further define the downgradient, cross-gradient, and upgradient extent of the groundwater plume. (Soil boring A-6 was unable to be advanced due to close proximity to electric lines and product piping. Maximum concentrations of gasoline range organics (GRO), benzene, and methyl tert-butyl ether (MTBE) were detected in soil at concentrations of 490 mg/kg [A-4 (23.5-24')], 28 mg/kg [A-5 (35-35.5')], and 0.84 mg/kg [A-1 (46-46.5')], respectively. Maximum concentrations of GRO, benzene, and MTBE were detected in ground water at concentrations of 510,000 µg/L [A-2 (21.3')], 11,000 µg/L [A-4 (34-36')], and 39,000 µg/L [A-4 (34-36')], respectively.

The cross-gradient and downgradient lateral extents of the dissolved hydrocarbon plume were characterized during this last investigation. However, the vertical extent of dissolved phase hydrocarbons on the southern portion of the Site was not defined. Specifically, significantly elevated concentrations were detected in ground-water Hydropunch samples collected from the bottom depths of soil borings A-2, A-3, and A-4. The bottom Hydropunch sample from boring A-2 (40-42 ft bgs) contained concentrations of GRO, benzene, and MTBE at 36,000 µg/L, 1,800 µg/L, and 110 µg/L, respectively. The bottom Hydropunch sample from boring A-3 (34-36 ft bgs) contained concentrations of GRO, benzene, and MTBE at 12,000 µg/L, 21 µg/L, and 8.3 µg/L, respectively. The bottom Hydropunch sample from boring A-4 (34-36 ft bgs) contained GRO, benzene, and MTBE concentrations of 120,000 µg/L, 11,000µg/L, and 39,000 µg/L, respectively. Therefore, the vertical extent of dissolved phase petroleum hydrocarbon contamination remains unknown in this southern area of the Site. A work plan for soil and water investigation to delineate the vertical extent of contamination in the southern portion of the Site was submitted to ACEH in October 2006.

To date, a total of eleven wells have been installed at the Site: wells MW-1 through MW-4, MW-6 through MW-10, EX-1 and EX-2. Monitoring well locations are shown on Figure 2. Wells MW-1 and MW-2 are screened from approximately 20 feet bgs to 40 feet bgs; well MW-3 is screened from 30 to 45 feet bgs; wells MW-4 and MW-6 are screened from approximately 20 to 40 feet bgs; well MW-7 is screened from approximately 25 to 45 feet bgs; wells MW-8 and MW-9 are screened from approximately 25 to 40 feet bgs; and well MW-10 is screened from approximately 15 to 35 feet bgs. Wells EX-1 and EX-2 are screened from approximately 18 feet bgs to 38 feet bgs and 15 feet bgs to 35 feet bgs, respectively. Existing soil boring and well construction logs are provided in Appendix A.

A quarterly ground-water monitoring program was initiated at the Site in January 1992 and is ongoing. Currently this schedule stipulates quarterly monitoring of all wells and quarterly collection of samples from wells MW-2, MW-4, MW-7, MW-10, EX-1, and EX-2; semi-annual collection of samples from MW-9 (first and third quarters); and annual collection of samples from MW-1, MW-3, MW-6, and MW-8 (first quarter). The laboratory analytical data of the ground-water monitoring program are included as Table 1 and Table 2. Historical ground-water flow directions at the Site are presented in Table 3. Historic soil and water concentrations and sampling locations are shown in Appendix B.

## 3.0 SITE CONDITIONS

### 3.1 Regional Geology and Hydrogeology

According to the *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report* (California Regional Water Quality Control Board – San Francisco Bay Region/SFRWQCB, June 1999), the Site is located within the Oakland Sub-Area of the East Bay Plain of the San Francisco Basin. The Oakland Sub-Area contains a sequence of alluvial fans. The alluvial fill thickness ranges from 300 to 700 feet deep. There are no well-defined aquitards such as estuarine mud. The largest and deepest wells in this sub-area historically pumped one to two million gallons per day at depths greater than 200 feet. Overall, sustainable yields are low due in part to low recharge potential. The Merrit sand in West Oakland was an important part of the early water supply for the City of Oakland. However, it is shallow (less than 60 feet), and before the turn of the century, septic systems contaminated the water supply wells.

Throughout most of the Alameda County portion of the East Bay Plain, from Hayward north to Albany, water level contours show that the general direction of ground water flow is from east to west or from the Hayward Fault to the San Francisco Bay. Ground-water flow direction generally correlates to topography. Flow direction and velocity are also influenced by buried stream channels that typically are oriented in an east-west direction. In the southern end of the study area however, near the San Lorenzo Sub-Area, the direction of flow may not be this simple. According to information presented in *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report,* the small set of water level measurements available seemed to show that the ground water in the upper aquifers may be flowing south, with the deeper aquifers, the Alameda Formation, moving north. The nearest natural drainage is Arroyo Viejo, located approximately 1,300 feet south-southeast of the Site. The Arroyo Viejo channel flows generally east to west, but flows north-northwestward before turning southwest again south of the Site.

### 3.2 Site Geology and Hydrogeology

The Site elevation is approximately 50 feet above mean sea level. The water table fluctuates seasonally and has risen about 10 feet since 1992. Figure 3 presents historic depth to water measurements for wells MW-2, MW-4, EX-1, and EX-2 at the Site. The static depth to water in monitoring wells at the Site has ranged between an historic minimum of 9.49 ft bgs (MW-3 on 5/22/2000) and maximum of 34.07 feet bgs (MW-2 on 12/27/1993). However, it is possible that the minimum measurement was an anomaly, as the next minimum depth to water measurement was 12.04 ft bgs (MW-8 on 1/18/2005). Historically, depth-to-water measurements have more typically ranged around 15 to 20 feet bgs (Table 1). Ground-water flow direction during the third quarter monitoring event on 29 August 2006 was to the northeast at a gradient of 0.006 ft/ft (Figure 2). Based on historical quarterly ground-water monitoring data, potentiometric contours would indicate that local ground-water generally flows towards the north-northeast. Although this flow direction seems contrary to the surface topography and assumed flow direction towards the west-southwest, they are similar to the recent ground-water flow directions reported at the nearby Chevron Station across the street at 7225 Bancroft Avenue. Historic ground-water flow directions and gradients for the Site are summarized in Table 3, along with a rose diagram graphically illustrating this trend in flow directions.

The Site is typically underlain by clays with 1 to 4 foot thick intervals of sands and gravels to a total explored depth of approximately 45 feet bgs. Boring logs for wells MW-1, MW-2, MW-6 and MW-7 indicate less than 5 feet of sand and/or gravel encountered, while those for wells MW-3, MW-4, MW-8, MW-9, MW-10, EX-1 and EX-2 indicate more than 10 feet of sand and/or gravel encountered. The lithology observed in the most recent soil borings A-1 through A-5 and A-7 through A-10 was predominately a clay gravel layer in the first foot. Silty clays and clayey silts were then encountered to a depth of approximately 14 to 20 ft bgs. Clayey sands and sandy and clayey gravels were then encountered to a depth of approximately 25 to 30 ft bgs. Gravels and sands were then encountered to a depth of approximately 45 ft bgs. Silty clay was encountered below 45 ft bgs, specifically in boring A-1, where the total depth explored was 46 ft bgs. Off-site borings to the east were similar with the exception that clayey silt was encountered at a depth of approximately 35 ft bgs. Off-site boring A-10 varied greatly from all other borings. An angular gravel fill was encountered beneath a mulch layer to three feet bgs. Predominately silt or silty sand underlies the fill to approximately 35 feet bgs. Silty gravel was encountered from 35 to the total depth sampled of 39 feet bgs. Ground water was first encountered during drilling at depths ranging from 19 feet to 25 feet bgs. Soil boring logs are included within Appendix A. Geologic cross-sections of the Site are provided in Appendix C.

## 3.3 Distribution of Hydrocarbons in Soil

Previous soil borings and excavation samples found detectable concentrations of hydrocarbons above the ground-water table principally around the southern dispensers and southern end of the current UST pit. During the 1991 subsurface investigation, significant concentrations of TPH-G in soil above the ground-water tables were detected during the drilling of well MW-4 in the southeastern portion of the Site. In the boring of MW-4, TPH-G was reported at 240 mg/kg at 15 ft bgs, 6,000 mg/kg at 20 ft bgs, and 1,100 mg/kg at 25 ft bgs. Interestingly, petroleum hydrocarbons were not detected in soil samples from drilling of well MW-2 between the southern dispenser island and the former and existing UST pits.

During the 1998 environmental activities to remove and replace the USTs and associated piping and dispensers, soil sampling beneath the eastern product dispenser of the island south and closest to the station building detected contamination as TPH-G up to 7,200 mg/kg. Soil sampling also detected contamination as TPH-G up to 5,300 mg/kg at 15 ft bgs in the southwest corner of the UST pit, 480 mg/kg at 15 ft bgs in the southeast corner of the UST pit, and 810 mg/kg at 16 ft bgs from near the middle of the eastern side of the UST pit. Approximately 389 tons of soil and backfill from the UST cavity and product line trenches was excavated during replacement of the UST system in 1998. No detectable concentrations of TPH-G or BTEX in soil were found during drilling of extraction wells EX-1 and EX-2 in 1999, on either north or south sides of the present UST pit. During the 2005 soil and water investigation at the Site, low to significant concentrations of petroleum hydrocarbons were detected in soil samples during drilling of borings A-2, A-3, A-4, and A-5. TPH-G was detected at 120 mg/kg in boring A-2 at 30-30.5 ft bgs, 220 mg/kg in boring A-3 at 26-26.5 ft bgs, and 490 mg/kg in boring A-4 at 23.5-24 ft bgs. The available information seems to indicate that the majority of soil contamination is located under the vicinity of the southern dispenser islands.

## 3.4 Distribution of Hydrocarbons in Ground Water

The highest hydrocarbon concentrations in ground water have been found in the area below the southern dispenser island in wells MW-2, MW-4, and EX-1. As Separate Phase Hydrocarbons (SPH) were historically detected in well MW-2 between 1993 and 1998, samples were not routinely analyzed. When samples were analyzed, concentrations of TPH-G/GRO in well MW-2 ranged from 3,700 µg/L to 560,000 µg/L. Similarly, concentrations of Benzene and MTBE have ranged between 190 µg/L to 32,000 µg/L and 826 µg/L to 95,000 µg/L, respectively, from well MW-2. Similarly, measurable SPH was reported in well MW-4 in September 2001. Otherwise, concentrations of TPH-G/GRO in well MW-4 have ranged from 2,700 µg/L to 7,400,000 µg/L, while concentrations of Benzene and MTBE have ranged between 23 µg/L to 60,000 µg/L and 120 µg/L to 92,000 µg/L, respectively, from well MW-4. Concentrations of TPH-G/GRO in well EX-1 have ranged from 3,500 µg/L to 22,000 µg/L, while concentrations of Benzene and MTBE have ranged from <25 µg/L to 3,200 µg/L and 1,100 µg/L 3,000 µg/L, respectively.

High concentrations of petroleum hydrocarbons were also discovered in ground-water samples collected in 2005 from Hydropunch borings. Again, the highest concentrations appeared to be located under the southern end of the Site, southwest to southeast of the southern dispenser island at the Site. Boring A-2 southwest of the southern pump island detected concentrations of GRO at 510,000 µg/L, Benzene at 1,800 µg/L, and MTBE at 110 µg/L. Boring A-3 in the southern corner of the Site south of the southern pump island detected concentrations of GRO at 25,000 µg/L, Benzene at 21 µg/L, and MTBE at 8.3 µg/L. Boring A-4 southeast of the southern pump island and adjacent to well MW-4 detected concentrations of GRO at 150,000 µg/L, Benzene at 11,000 µg/L, and MTBE at 39,000 µg/L. Based on a review of the data from the 2005 investigation, URS concluded that the lateral extent of dissolved phase hydrocarbons in soil and ground water had been completed. The horizontal extents of GRO, Benzene, and MTBE in ground water are exhibited in iso-concentration contour maps, provided as Figure 3, Figure 4, and Figure 5, respectively.

## 3.5 Hydrocarbon Trends in Ground Water

Trends in depth to the potentiometric ground-water table and hydrocarbon concentrations in ground water were created from the historic data in Table 1. Figure 7 presents a chart of historic TPH-G/GRO, Benzene, and MTBE concentrations in samples from well MW-2. Figure 8 presents a chart of historic TPH-G/GRO, Benzene, and MTBE concentrations in samples from well MW-4. As can be seen in Figure 7 and Figure 8, concentration trends of hydrocarbons have been mostly stable with some notable exceptions. Concentrations of TPH-G/GRO, Benzene, and MTBE were simultaneously reduced several orders of magnitude in June 2002 in well MW-2 (Figure 7). It is unknown whether this observation was attributed to DPE testing in November 2001. Concentrations of TPH-G/GRO, Benzene, and MTBE were similarly reduced several orders of magnitude in well MW-4 in May 1999. It is not known with certainty whether this observation was an effect attributed to ground water recovery testing conducted in April 1999. In addition, it is not known with certainty the reasons for the relatively low concentration of MTBE in May 2004, or highly elevated concentration of GRO in November 2004 for well MW-4. However, these reported concentrations do not seem wholly consistent with hydrocarbon trends at the Site.

## 4.0 PREFERENTIAL PATHWAY ANALYSIS

An underground utility site survey was conducted in October 2000 by Alisto Engineering Group to identify potential man-made migration pathways and conduits, and to assess whether preferential pathways and conduits may promote the migration of petroleum hydrocarbons. An additional underground utility survey was recently conducted by URS Corporation to augment the previous survey and verify the depths of the underground utilities in the area of the Site. A map showing the locations of the underground utilities in the area of the Site is presented in Appendix D. As mentioned previously, geologic cross-sections showing the locations and depths of the underground utilities in the Site vicinity are presented in Appendix C. Based on the locations and relatively shallow depths of the underground utilities (maximum depth of approximately 10 ft), the lithology and the typical depth to water at the Site (dependably between approximately 12 and 34 ft bgs, but typically between 15 to 20 ft bgs), man-made preferential dissolved petroleum hydrocarbon migration pathways and conduits are unlikely to exist on or off the Site.

## 5.0 SENSITIVE RECEPTORS

In October 2000, Alisto Engineering Group completed a potential receptor survey, prepared an expanded site plan with neighboring property parcel information and underground utilities mapped, and identified wells in the vicinity of the Site. A review of the files of the California Department of Water Resources (DWR) was performed to identify all known wells within a one-half mile radius of the Site. The results of the well search revealed that there were 17 wells other than the onsite monitoring wells. Of these, 11 were offsite monitoring wells, four were cathodic protection wells, one an industrial well, and one an irrigation well for a nearby cemetery. No domestic/municipal water supply wells were identified from review of the DWR files. Copies of the completion logs from the DWR files for these wells are contained within the 19 October 2000 Alisto report.

## 6.0 RISK ASSESSMENT

A formal risk assessment has not been performed, nor is this section proposed to take the place of one. To have some understanding of the risks posed by contamination at the Site and approximate target concentrations for contamination cleanup however, hydrocarbon concentrations in soil and ground water were compared to the Environmental Screening Levels (ESLs) in the California Regional Water Quality Control Board's (RWQCB) *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, Volume 1, Summary Tier 1 Lookup Tables, Interim Final – February 2005. Although the historic past use of the Site is unknown, anticipated future Site activities and use will most probably remain commercial/industrial as at present, due in part to its high-visibility location to traffic at the corner of a principal street with a main regional thoroughfare. Therefore, the ESLs scenario that was considered in the lookup tables was for impacted shallow soil (less than approximately 10 ft bgs) under commercial/industrial land use with ground water not a current or potential source of drinking water. According to the *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report*, the City of Oakland does not have "any plans to develop local ground-water resources for drinking water purposes, because of existing or potential saltwater intrusion, contamination, or poor or limited quantity." However, the San Francisco RWQCB's basin plan denotes existing beneficial uses of municipal and domestic supply (MUN), industrial process supply (PROC), industrial service supply (IND), and agricultural supply (AGR) for the East Bay Plain ground-water basin.

Chemicals of potential concern are those hydrocarbons previously detected above background in soil and ground-water monitoring conducted at the Site. This list includes the compound identified as TPH-G/GRO, and the fuel constituents or additives Benzene, Toluene, Ethylbenzene, total Xylenes, MTBE, tert-Butyl Alcohol (TBA), and Tert-Amyl Methyl Ether (TAME). There is currently no ESL for TAME. However, it is believed likely that the higher concentrations of TPH-G/GRO, Benzene, and MTBE, will drive the scope and level of remediation. The relevant soil and ground-water ESLs for the Site are summarized below. As recommended in the referenced document, ESLs for residential land use are provided for comparison.

| Matrix | Units | TPH-G/ GRO | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | TBA |
|---|---|---|---|---|---|---|---|---|
| Shallow Soil – Residential Use (<3m bgs) | mg/kg | 100 | 0.18 | 9.3 | 32 | 11 | 2.0 | 57 |
| Shallow Soil – Commercial Use (<3m bgs) | mg/kg | 400 | 0.38 | 9.3 | 32 | 11 | 5.6 | 110 |
| Ground Water | µg/L | 500 | 46 | 130 | 290 | 100 | 1800 | 18000 |

## 7.0 REMEDIAL ACTIONS TAKEN

As mentioned previously in Section 2.2, during the 1998 UST replacement activities approximately 389 tons of excavated soil and backfill were transported offsite for disposal. TPH-G concentrations within soil stockpile samples ranged from 2.0 to 19 mg/kg, with an average concentration of 8.8 mg/kg TPH-G. Benzene concentrations ranged from non-detect (<0.0050 mg/kg) to 0.022 mg/kg, with an average concentration of 0.0095 mg/kg. MTBE was not analyzed for or reported.

As an interim remedial measure, Cambria Environmental Technology of Oakland and Onyx Industrial Services of Benicia, California conducted weekly vacuum extraction events from wells EX-1, EX-2 and MW-2 on March 16, March 23, March 30, April 6, April 27, and April 28, 2000. Laboratory analytical results of samples collected before and after most of the events showed that impacted ground water with significant and relatively stable concentrations of petroleum hydrocarbons was being extracted: TPH-G concentrations averaged 125,000 µg/L from MW-2, 44,000 µg/L from EX-1, and 250 µg/L from EX-2; Benzene concentrations averaged 15,000 µg/L from MW-2, and 4,700µg/L from EX-1, but <0.5 µg/L from EX-2; MTBE concentrations averaged 28,000 µg/L from MW-2, 5,700 µg/L from EX-1, and 790 µg/L from EX-2. Between 900 and 1,700 gallons were extracted from the wells during each event, for a total of approximately 10,900 gallons extracted. However, no estimate of gallons extracted from each well per event was reported. Therefore, total pounds of petroleum contaminants removed were not able to be calculated.

Between 29 October and 2 November 2001, a Dual-Phase Extraction pilot test was performed on monitoring wells with the highest historical hydrocarbon concentrations (i.e. MW-2 and MW-4) and the extraction wells (EX-1 and EX-2). During the first day of testing, step vacuum tests were conducted on the four wells. Field measurements of organic vapors from wells MW-4 and EX-1 increased to more than 13,000 parts per million by volume (ppmv) with increasing applied vacuum. Field organic vapor readings for wells MW-2 and EX-2 were generally less than 1,000 ppmv and did not show a systematic variation with applied vacuum. Constant vacuum tests were performed during the remaining four days of pilot testing: three days on well MW-4 and an eight hour test on well EX-1. Due to the observed SPH sheen and proximity to wells MW-4 and EX-1, a short-duration (50-minute) constant vacuum test was conducted on well MW-2. During the step vacuum tests, the estimated vapor-phase hydrocarbon removal rates were less than five pounds of hydrocarbon per day at wells MW-2 and EX-2, less than 31 pounds of hydrocarbon per day at well MW-4, and less than 160 pounds of hydrocarbon per day at well EX-1. During the constant vacuum tests, the estimated hydrocarbon removal rates ranged from approximately 21 to 194 pounds of hydrocarbon per day at well MW-4, and 49 to 193 pounds of hydrocarbon per day at well EX-1. These removal rates were based on field readings of organic vapors, which included a combined measure of soil vapors and hydrocarbons stripped from ground water under vacuum. Following the conclusion of the DPE pilot test, approximately 6,500 gallons of extracted ground water containing 26,000 µg/L GRO, 890 µg/L Benzene, and 9,500 µg/L MTBE was transported from the Site for offsite treatment and disposal.

## 8.0 SCREENING OF REMEDIATION TECHNOLOGIES

The technologies listed in the Central Valley Regional Water Quality Control Board 16 April 2004 *Appendix A – Reports Tri-Regional Board Staff Recommendations for Preliminary Investigation and Evaluation of Underground Tank Sites* are screened for viability in this section. In addition to the technologies listed, a No-Action option will be evaluated. The No-Action option is typically included in feasibility studies to represent the baseline do-nothing action for comparison purposes. The technologies assessed in this initial screening are listed in the matrix below. Also presented is the media each technology would address.

**Summary of Technologies Evaluated**

| Technology | Media<br>Soil | Water |
|---|---|---|
| No Action | X | X |
| Excavation | X | |
| Soil Vapor Extraction | X | |
| Bioventing | X | |
| Bioremediation | X | X |
| Ground Water Extraction and Treatment | | X |
| Biosparging | | X |
| In-Situ Oxidation | | X |
| Dual-Phase Extraction and Treatment | X | X |
| Monitored Natural Attenuation | | X |

## 8.1 No Action and Monitored Natural Attenuation

Based on the hydrocarbon concentration trends in ground water, the no action option or a remediation strategy that employs monitored natural attenuation (MNA) would not be expected to be acceptable to ACEH unless implemented in conjunction with an active form of remediation or unless MNA-specific monitoring indicates that natural attenuation processes are occurring at the Site. The no-action option is retained as a baseline for comparison. MNA is retained for possible combination with other active technologies.

## 8.2 Excavation, Soil Vapor Extraction, and Bioventing

At this time, deeper soil impacts are known to exist in the vicinity of the southern dispenser. These technologies would not address the significant concentrations of hydrocarbons in ground water at the Site. The technologies specific to soil – excavation, soil vapor extraction (SVE), and bioventing – are therefore screened from consideration at this time. These technologies may be reassessed at a future date, however, if future data indicates a change in the status of the impacts and if the work could be performed to coincide with an action such as a line upgrade where excavation or drilling activities would not disrupt station operations.

## 8.3 Bioremediation

Bioremediation can be promoted in ground water through a variety of techniques, including bioaugmentation, or nutrient addition. For petroleum hydrocarbon sites, bioremediation is typically a component of MNA, SVE, bioventing, biosparging, in-situ oxidation, and DPE. This technology is retained for use in conjunction with other technologies, but will not be implemented as a stand-alone technology.

## 8.4 Ground Water Extraction and Treatment

In Ground Water Extraction and Treatment (GWET), ground water is pumped through a series of canisters containing activated carbon to which dissolved organic contaminants adsorb. This technology requires periodic replacement or regeneration of saturated carbon. Costs are typically high if used as the primary treatment on waste streams with high contaminant concentration levels. GWET will not be retained for further evaluation based on poor cost-effectiveness when compared to other technologies.

## 8.5 Biosparging

In biosparging, air is injected under pressure below the water table to increase ground water oxygen concentrations and enhance the rate of biological degradation of organic contaminants by naturally-occurring microbes. Biosparging increases mixing in the saturated zone, which increases the contact between ground water and soil. The ease and low cost of installing small-diameter air injection points allows considerable flexibility in the design and construction of a remediation system. Biosparging is a full-scale technology.

The following general factors may limit the applicability and effectiveness of the process:

- A permeability differential, such as a clay layer, above the air injection zone can reduce the effectiveness of biosparging.
- Where vertical air flow is restricted due to the presence of less permeable strata, sparging can push contaminated ground water away from the injection point. In these cases, a ground water recovery system may be needed.
- Vapors may rise through the vadose zone and be released into the atmosphere.

The predominant clay layer from the surface to ground water in the presumed source area near the southern dispenser island is thought to reduce the likely effectiveness of biosparging at the Site. Therefore, biosparging will not be retained for further evaluation.

## 8.6 In-Situ Oxidation

In-situ oxidation encompasses a wide range of technologies, including liquid chemical oxidant injection (e.g., hydrogen peroxide) and injection of air or ozone into the subsurface. The objective is to increase the oxygen content of ground water and enhance the rate of aerobic degradation of organic contaminants by naturally occurring microbes. For best results, factors that must be considered include redox conditions, saturation rates, presence of nutrient trace elements, pH, temperature, and permeability of the subsurface materials. In-Situ Oxidation is a full-scale technology.

The following general factors may limit the applicability and effectiveness of the process:

- A ground-water circulation system may need to be created so that contaminants do not escape from zones of active biodegradation.
- Where the subsurface is heterogeneous, it is difficult to circulate the oxygenated solution throughout every portion of the contaminated zone. Higher permeability zones are cleaned up much faster because ground water flow rates are greater.
- High iron content in subsurface materials can rapidly reduce concentrations of oxygenated solutions.
- Amended hydrogen peroxide can be consumed very rapidly near the injection well, which can create two significant problems: biological growth can be limited to the region near the injection well, limiting adequate contamination/micro-organism contact throughout the contaminated zone; and biofouling of wells can retard the input of nutrients.
- A surface treatment system, such as air stripping or carbon adsorption, may be required to treat extracted ground water prior to re-injection or disposal.

In-situ oxidation is a potentially effective treatment technology for the Site and will be retained for further evaluation and comparison of viable treatment alternatives.

## 8.7 Dual-Phase Extraction and Treatment

In DPE, a high vacuum system is applied to simultaneously remove liquid and gas from low permeability or heterogeneous formations. The vacuum extraction well(s) include a screened section in the zone of contaminated soils and ground water. As vacuum is applied to an extraction well, soil vapor is extracted, and ground water is entrained by the extracted vapors. Once above grade, the extracted vapors and ground water are separated and treated. DPE is a full scale technology.

Results of pilot testing in Fall 2001 indicate that DPE and treatment is a feasible remedial alternative for the Site.

# 9.0 ALTERNATIVES EVALUATION

Based on the initial technology screening above, the following technologies have been retained to assemble the alternatives that will be evaluated:

- Alternative 1: No Action/MNA
- Alternative 2: In-Situ Oxidation
- Alternative 3: DPE

Using the July 1993 joint US EPA/US Air Force *Remediation Technologies Screening Matrix and Reference Guide*, each of the alternatives are evaluated against the following screening factors:

- **Overall Cost?** Design, construction, and operation and maintenance (O&M) costs of the core process that defines each technology, exclusive of mobilization, demobilization, and pre- and post-treatment costs.
- **Capital or O&M Intensive?** Is the technology capital-intensive, with significant costs for design and construction; O&M-intensive, with significant costs for labor, operation, maintenance, and repair; both; or neither?
- **Commercial Availability?** Relative number of vendors that can design, construct, and maintain the technology.
- **Typically Part of a Treatment Train?** Is additional treatment necessary, after the use of this technology, to clean up the contaminated media?
- **Residuals Produced (Solid, Liquid, Vapor)?** If use of the technology produces residuals that require management, are they solids, liquids, or vapors?
- **Minimum Contaminant Concentration Achievable?** Minimum contaminant concentration achievable by the technology, measured in mg/kg for soil technologies, µg/L for ground water, and mg/kg and µg/kg for air emissions/off-gases.
- **Addresses Toxicity, Mobility, or Volume?** What parameter(s) of the contaminated media – toxicity, mobility, or volume – is the technology primarily designed to address?
- **Long-Term Effectiveness/Permanence?** Does use of the technology maintain protection of human health and the environment, over time, after cleanup objectives have been met?
- **Time to Complete Cleanup?** Time required to clean up a "standard" site using the technology ("Standard" site is 20,000 tons for soil and 1,000,000 gallons for ground water).

- **System Reliability/Maintainability?** Degree of system reliability and level of maintenance required when using the technology.
- **Awareness of Remediation Consulting Community?** Degree to which the technology is known to remediation consultants.
- **Regulatory/Permitting Acceptability?** Degree to which use of the technology is acceptable to regulating and permitting agencies.
- **Community Acceptability?** Degree to which use of the technology is acceptable to the public.

The following table presents relative ratings per screening factor for the three alternatives retained from the screening process above. The relative ratings are from the previously referenced US EPA/US Air Force guide.

| Screening Factor | No Action/MNA | In-Situ Oxidation | DPE |
|---|---|---|---|
| Overall cost | Better | Average | Average |
| Capital or O&M intensive? | O&M | O&M | O&M |
| Commercial availability | Not Applicable | Better | Better |
| Typically part of a treatment train? | No | No | Yes |
| Residuals produced? | None | None | Liquid, Vapor |
| Minimum contaminant concentrations achievable | Worse | Better | Average |
| Addresses toxicity, mobility or volume? | None | Toxicity | Volume |
| Long-term effectiveness/permanence | No | Yes | Yes |
| Time to complete cleanup | Worse | Average | Average |
| System reliability/ maintainability | Better | Worse | Average |
| Awareness of remediation consulting community | Better | Better | Better |
| Regulatory/permitting acceptability | Worse | Average | Average |
| Community acceptability | Worse | Better | Better |

## 10.0 RECOMMENDED APPROACH

Based upon the alternatives evaluation, the proposed remedy for implementation at Station No. 11117 is Alternative 3: DPE. Adding to its favor is the fact that pilot testing has proven DPE a viable treatment technology at the Site.

## 11.0 CLOSURE

The findings presented in this document are based upon: observation of field personnel from previous consultants, the points investigated, and results of laboratory tests performed by various laboratories. Our services were performed in accordance with the generally accepted standard of practice at the time this document was written. No other warranty, expressed on implied was made. This report has been prepared for the exclusive use of Atlantic Richfield Company. It is possible that variations in soil or ground-water conditions could exist beyond points explored in this investigation. Also changes in site conditions could occur in the future due to variations in rainfall, temperature, regional water usage, or other factors.

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# LIST OF TABLES

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

### Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | Concentrations in (μg/L) | | | | | | (mg/L) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO/ TPHg | Benzene | Toluene | Ethyl-Benzene | Total Xylenes | MTBE | DO | Lab | pH | Comments |
| **EX-1** | | | | | | | | | | | | | | | |
| 05/04/2004 | P | -- | 16.29 | -- | -- | 12,000 | 2,300 | 430 | 740 | 1,100 | 2,500 | -- | SEQM | 6.8 | h |
| 08/31/2004 | P | -- | 19.39 | -- | -- | 13,000 | 2,500 | 95 | 650 | 1,500 | 2,100 | -- | SEQM | 6.7 | h |
| 11/23/2004 | P | -- | 17.90 | -- | -- | 13,000 | 2,700 | 94 | 460 | 1,700 | 3,000 | -- | SEQM | 6.9 | |
| 01/18/2005 | P | -- | 14.20 | -- | -- | 16,000 | 2,100 | 390 | 570 | 2,500 | 2,200 | -- | SEQM | 6.6 | |
| 06/29/2005 | P | -- | 14.22 | -- | -- | 6,400 | 1,100 | 52 | 280 | 790 | 1,400 | -- | SEQM | 7.2 | |
| 09/01/2005 | P | -- | 17.22 | -- | -- | 7,900 | 2,000 | 94 | 400 | 870 | 2,000 | -- | SEQM | 6.7 | |
| 11/03/2005 | P | -- | 19.92 | -- | -- | 22,000 | 3,200 | 640 | 550 | 3,300 | 3,000 | 0.88 | SEQM | 6.8 | |
| 02/14/2006 | P | -- | 15.40 | -- | -- | 3,500 | <25 | <25 | <25 | 74 | 1,100 | -- | SEQM | 6.8 | |
| 5/30/2006 | P | -- | 13.43 | -- | -- | 8,600 | 1,400 | 120 | 490 | 1,300 | 1,400 | -- | SEQM | 6.8 | |
| **8/29/2006** | **--** | **--** | **17.74** | **--** | **--** | **22,000** | **2,900** | **210** | **1,400** | **3,600** | **2,500** | **--** | **TAMC** | **6.9** | |
| **EX-2** | | | | | | | | | | | | | | | |
| 05/04/2004 | P | -- | 16.65 | -- | -- | <50 | 0.63 | <0.50 | <0.50 | 0.66 | 46 | -- | SEQM | 6.7 | h |
| 08/31/2004 | P | -- | 19.90 | -- | -- | <250 | <2.5 | <2.5 | <2.5 | <2.5 | 130 | -- | SEQM | 6.9 | h |
| 11/23/2004 | P | -- | 18.36 | -- | -- | <50 | 0.74 | <0.50 | 0.83 | 3.0 | 5.8 | -- | SEQM | 6.6 | |
| 01/18/2005 | P | -- | 14.67 | -- | -- | <50 | <0.50 | <0.50 | <0.50 | 0.69 | 6.5 | -- | SEQM | 6.5 | |
| 06/29/2005 | P | -- | 14.60 | -- | -- | <50 | <0.50 | <0.50 | <0.50 | 0.50 | 24 | -- | SEQM | 6.8 | s |
| 09/01/2005 | P | -- | 17.28 | -- | -- | <50 | <0.50 | 1.4 | <0.50 | 1.4 | 55 | -- | SEQM | 7.0 | |
| 11/03/2005 | P | -- | 20.42 | -- | -- | <50 | 0.50 | <0.50 | <0.50 | 1.4 | 39 | 0.77 | SEQM | 6.9 | |
| 02/14/2006 | P | -- | 14.54 | -- | -- | 220 | <0.50 | 3.2 | 7.5 | 33 | 0.72 | -- | SEQM | 7.0 | |
| 5/30/2006 | P | -- | 13.35 | -- | -- | <50 | <0.50 | <0.50 | <0.50 | 0.70 | 7.8 | -- | SEQM | 6.9 | |
| **8/29/2006** | **--** | **--** | **17.92** | **--** | **--** | **66** | **0.67** | **<0.50** | **0.79** | **1.9** | **94** | **--** | **TAMC** | **7.0** | |
| **MW-1** | | | | | | | | | | | | | | | |
| 1/5/1992 | -- | 49.8 | 33.16 | -- | 16.64 | 57,000 | 2,400 | 1,000 | 1,100 | 3,100 | -- | -- | -- | -- | |
| 1/10/1992 | -- | 49.8 | 33.16 | -- | 16.64 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 6/5/1992 | -- | 49.8 | 29.01 | -- | 20.79 | 31,000 | 2,800 | 2,100 | 800 | 2,300 | -- | -- | -- | -- | |
| 7/24/1992 | -- | 49.8 | 29.45 | -- | 20.35 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 7/27/1992 | -- | 49.8 | 29.45 | -- | 20.35 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/15/1992 | -- | 49.8 | 30.53 | -- | 19.27 | 40,000 | 3,400 | 3,000 | 1,300 | 3,400 | -- | -- | ANA | -- | c |
| 9/15/1992 | -- | -- | -- | -- | -- | 36,000 | 3,800 | 3,400 | 1,400 | 3,800 | -- | -- | ANA | -- | d |

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

### Station #11117, 7210 Bancroft Ave., Oakland, CA

| | | | | | | Concentrations in (µg/L) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | GRO/ TPHg | Benzene | Toluene | Ethyl-Benzene | Total Xylenes | MTBE | (mg/L) DO | Lab | pH | Comments |
| **MW-1 Cont.** | | | | | | | | | | | | | | | |
| 12/15/1992 | -- | 49.8 | 31.26 | -- | 18.54 | 27,000 | 1,700 | 580 | 700 | 1,900 | -- | -- | ANA | -- | c |
| 12/15/1992 | -- | -- | -- | -- | -- | 22,000 | 1,500 | 440 | 510 | 1,300 | -- | -- | ANA | -- | d |
| 3/15/1993 | -- | -- | -- | -- | -- | 15,000 | 1,100 | 860 | 440 | 1,400 | -- | -- | PACE | -- | d, l |
| 3/15/1993 | -- | 49.8 | 24.8 | -- | 25 | 17,000 | 1,700 | 1,200 | 590 | 1,800 | -- | -- | PACE | -- | l |
| 6/7/1993 | -- | 49.8 | 25.01 | -- | 24.79 | 750 | 0.8 | 0.8 | <0.5 | <0.5 | -- | -- | PACE | -- | l |
| 6/7/1993 | -- | -- | -- | -- | -- | 720 | 0.7 | 0.7 | <0.5 | <0.5 | -- | -- | PACE | -- | d, l |
| 9/23/1993 | -- | 49.8 | 28.7 | -- | 21.1 | 40,000 | 4,000 | 500 | 920 | 3,000 | 6,619 | -- | PACE | -- | e, l |
| 12/27/1993 | -- | -- | -- | -- | -- | 21,000 | 1,700 | 380 | 830 | 2,400 | 9,219 | -- | PACE | -- | e,l, d |
| 12/27/1993 | -- | 49.8 | 28.66 | -- | 21.14 | 27,000 | 2,000 | 400 | 940 | 2,600 | 13,558 | -- | PACE | -- | e, l |
| 4/5/1994 | -- | -- | -- | -- | -- | 29,000 | 3,700 | 1,000 | 1,000 | 3,100 | 9,672 | 1.3 | PACE | -- | e,l, d |
| 4/5/1994 | -- | 49.8 | 26.37 | -- | 23.43 | 27,000 | 3,400 | 930 | 950 | 2,900 | 8,595 | -- | PACE | -- | e,l, |
| 7/22/1994 | -- | 49.8 | 26.54 | -- | 23.26 | 1,700 | 220 | 2.3 | 2 | 3.4 | 262 | 2.0 | PACE | -- | e,l |
| 10/13/1994 | -- | 49.8 | 27.46 | -- | 22.34 | 1,200 | 250 | 21 | <0.5 | 3.2 | 321 | 2.6 | PACE | -- | e,l |
| 1/25/1995 | -- | 49.8 | 20.96 | -- | 28.84 | 1,000 | 420 | 8 | 13 | 4 | -- | -- | ATI | -- | |
| 4/19/1995 | -- | 49.8 | 19.59 | -- | 30.21 | 5,200 | 420 | 51 | 230 | 340 | -- | 6.0 | ATI | -- | |
| 7/5/1995 | -- | 49.8 | 19.61 | -- | 30.19 | 320 | 4.2 | <0.50 | <0.50 | <1.0 | -- | 4.6 | ATI | -- | |
| 10/5/1995 | -- | 49.8 | 24.4 | -- | 25.4 | 5,800 | 1,000 | 40 | 31 | 180 | 7,800 | 2.3 | ATI | -- | |
| 1/12/1996 | -- | 49.8 | 25.44 | -- | 24.36 | 370 | <0.50 | <0.50 | <0.50 | <1.0 | <5.0 | 3.7 | ATI | -- | |
| 4/22/1996 | -- | 49.8 | 18.02 | -- | 31.78 | <50 | <0.5 | <1 | <1 | <1 | <10 | 3.9 | SPL | -- | |
| 7/2/1996 | -- | 49.8 | 19.72 | -- | 30.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 7/3/1996 | -- | 49.8 | -- | -- | -- | <250 | <2.5 | <5 | <5 | <5 | <50 | 3.6 | SPL | -- | |
| 11/8/1996 | -- | 49.8 | 19.98 | -- | 29.82 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.3 | SPL | -- | |
| 1/3/1997 | -- | 49.8 | 19.49 | -- | 30.31 | <50 | <0.5 | 14 | <1.0 | <1.0 | <10 | 4.6 | SPL | -- | |
| 4/28/1997 | -- | 49.8 | 20.2 | -- | 29.6 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 3.9 | SPL | -- | |
| 7/1/1997 | -- | 49.8 | 22.53 | -- | 27.27 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 3.9 | SPL | -- | |
| 10/2/1997 | -- | 49.8 | 24.27 | -- | 25.53 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.6 | SPL | -- | |
| 1/9/1998 | -- | 49.8 | 21.07 | -- | 28.73 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.2 | SPL | -- | |
| 5/6/1998 | -- | 49.8 | 14.94 | -- | 34.86 | 60 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 3.8 | SPL | -- | |
| 7/21/1998 | -- | 49.8 | 15.11 | -- | 34.69 | 70 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 3.8 | SPL | -- | |
| 12/30/1998 | -- | 49.8 | 19.95 | -- | 29.85 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 2/2/1999 | -- | 49.8 | 19.12 | -- | 30.68 | 420 | <1.0 | <1.0 | <1.0 | <1.0 | 390 | -- | SPL | -- | |

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

### Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | Concentrations in (µg/L) | | | | | | (mg/L) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO/ TPHg | Benzene | Toluene | Ethyl-Benzene | Total Xylenes | MTBE | DO | Lab | pH | Comments |
| **MW-1 Cont.** | | | | | | | | | | | | | | | |
| 5/10/1999 | -- | 49.8 | 15.51 | -- | 34.29 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/23/1999 | -- | 49.8 | 21.65 | -- | 28.15 | 440 | 49 | <1.0 | <1.0 | <1.0 | 910 | -- | SPL | -- | |
| 12/23/1999 | -- | 49.8 | 22.32 | -- | 27.48 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3/27/2000 | -- | 49.8 | 15.72 | -- | 34.08 | 2,500 | 230 | 3 | 83 | 36 | 4,400 | -- | PACE | -- | |
| 5/22/2000 | -- | 49.8 | 16.92 | -- | 32.88 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8/31/2000 | -- | 49.8 | 20.12 | -- | 29.68 | 1,700 | 18 | 5.5 | 7.9 | 5 | 510 | -- | PACE | -- | |
| 12/11/2000 | -- | 49.8 | 20.72 | -- | 29.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3/20/2001 | -- | 49.8 | 15.91 | -- | 33.89 | 880 | 38.2 | <0.5 | 24.1 | <1.5 | 391 | -- | PACE | -- | |
| 6/19/2001 | -- | 49.8 | 18.38 | -- | 31.42 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/20/2001 | -- | 49.8 | 21.23 | -- | 28.57 | 3,200 | 400 | 19.8 | 42 | 32.5 | 2,510 | -- | PACE | -- | |
| 12/27/2001 | -- | 49.8 | 16.72 | -- | 33.08 | 750 | 70.1 | 0.536 | 4.74 | 3.76 | 649 | -- | PACE | -- | |
| 2/28/2002 | -- | 49.8 | 15.25 | -- | 34.55 | <50 | <0.5 | <0.5 | <0.5 | <1.0 | 8.7 | -- | PACE | -- | |
| 6/28/2002 | -- | 49.8 | 16.57 | -- | 33.23 | 110 | 0.977 | <0.5 | 0.818 | <1.0 | 8.35 | -- | PACE | -- | |
| 9/12/2002 | -- | 49.8 | 18.41 | -- | 31.39 | 98 | 2.7 | 1.5 | 1.5 | 5.4 | 48 | -- | SEQ | 6.9 | |
| 12/12/2002 | -- | 49.8 | 20.26 | -- | 29.54 | 210 | 1.9 | <0.50 | <0.50 | <0.50 | 32 | -- | SEQ | 6.8 | |
| 3/10/2003 | -- | 49.8 | 16.22 | -- | 33.58 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 3.2 | -- | SEQ | 6.9 | |
| 5/12/2003 | -- | 49.8 | 14.3 | -- | 35.5 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | -- | SEQ | 7.1 | |
| 8/27/2003 | -- | 49.8 | 18.15 | -- | 31.65 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 4.2 | -- | SEQ | 7.1 | n |
| 11/10/2003 | P | 49.80 | 19.24 | -- | 30.56 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 0.51 | -- | SEQM | 6.8 | |
| 02/03/2004 | P | 49.80 | 14.84 | -- | 34.96 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | SEQM | 7.0 | |
| 05/04/2004 | P | 49.80 | 14.67 | -- | 35.13 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | SEQM | 7.1 | |
| 08/31/2004 | P | 49.80 | 17.75 | -- | 32.05 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | -- | SEQM | 7.1 | |
| 11/23/2004 | -- | 49.80 | 16.03 | -- | 33.77 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 01/18/2005 | P | 49.80 | 12.47 | -- | 37.33 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | SEQM | 6.9 | |
| 06/29/2005 | -- | 49.80 | 12.65 | -- | 37.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09/01/2005 | -- | 49.80 | 15.79 | -- | 34.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 11/03/2005 | -- | 49.80 | 18.55 | -- | 31.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 02/14/2006 | P | 49.80 | 12.29 | -- | 37.51 | 51 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | SEQM | 7.0 | w |
| 5/30/2006 | -- | 49.80 | 12.15 | -- | 37.65 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8/29/2006 | -- | 49.80 | 16.37 | -- | 33.43 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

### Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | Concentrations in (µg/L) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO/ TPHg | Benzene | Toluene | Ethyl-Benzene | Total Xylenes | MTBE | (mg/L) DO | Lab | pH | Comments |
| MW-2 | | | | | | | | | | | | | | | |
| 1/5/1992 | -- | 51.07 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | r |
| 1/10/1992 | -- | 51.07 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | r |
| 6/5/1992 | -- | 51.07 | 30.05 | -- | 21.02 | 11,000 | 2,000 | 180 | 490 | 1,900 | -- | -- | -- | -- | |
| 7/24/1992 | -- | 51.07 | 30.72 | -- | 20.35 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 7/27/1992 | -- | 51.07 | 30.52 | -- | 20.55 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/15/1992 | -- | 51.07 | 31.56 | -- | 19.51 | 75,000 | 2,000 | 6,500 | 2,300 | 13,000 | -- | -- | ANA | -- | c |
| 12/15/1992 | -- | 51.07 | 32.4 | -- | 18.67 | 34,000 | 6,200 | 8,900 | 2,000 | 7,900 | -- | -- | ANA | -- | c |
| 3/15/1993 | -- | 51.07 | 26.14 | -- | 24.93 | 150,000 | 12,000 | 18,000 | 3,200 | 22,000 | 82,000 | -- | PACE | -- | e |
| 6/7/1993 | -- | 51.07 | 26.38 | -- | 24.69 | -- | -- | -- | -- | -- | -- | -- | -- | -- | f |
| 9/23/1993 | -- | 51.07 | 31.43 | -- | 17.72 | -- | -- | -- | -- | -- | -- | -- | -- | -- | f |
| 12/27/1993 | -- | 51.07 | 34.07 | -- | 15.93 | -- | -- | -- | -- | -- | -- | -- | -- | -- | f |
| 4/5/1994 | -- | 51.07 | 30.44 | -- | 17.33 | -- | -- | -- | -- | -- | -- | -- | -- | -- | f |
| 7/22/1994 | -- | 51.07 | 28.51 | -- | 21.76 | -- | -- | -- | -- | -- | -- | -- | -- | -- | f |
| 10/13/1994 | -- | 51.07 | 29.33 | -- | 21.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | f |
| 1/25/1995 | -- | 51.07 | 25.55 | -- | 21.27 | -- | -- | -- | -- | -- | -- | -- | -- | -- | f |
| 4/19/1995 | -- | 51.07 | 19.78 | -- | 31.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | f |
| 7/5/1995 | -- | 51.07 | 20.88 | -- | 30.1 | 140,000 | 14,000 | 30,000 | 3,500 | 26,000 | -- | -- | ATI | -- | |
| 10/5/1995 | -- | 51.07 | 24.68 | -- | 26.29 | -- | -- | -- | -- | -- | -- | -- | -- | -- | f |
| 1/12/1996 | -- | 51.07 | 25.72 | -- | 25.29 | -- | -- | -- | -- | -- | -- | -- | -- | -- | f |
| 4/22/1996 | -- | 51.07 | 19.33 | -- | 31.66 | -- | -- | -- | -- | -- | -- | -- | -- | -- | f |
| 7/2/1996 | -- | 51.07 | 20.01 | -- | 31.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | f |
| 11/8/1996 | -- | 51.07 | 20.28 | -- | 30.78 | -- | -- | -- | -- | -- | -- | -- | -- | -- | f |
| 1/3/1997 | -- | 51.07 | 19.87 | -- | 31.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | f |
| 4/28/1997 | -- | 51.07 | 20.59 | -- | 30.47 | 560,000 | 1,200 | 1,300 | 290 | 2,310 | 6,100 | 3.9 | SPL | -- | |
| 7/1/1997 | -- | -- | -- | -- | -- | 150,000 | 14,000 | 13,000 | 1,800 | 14,200 | 57,000 | -- | SPL | -- | d |
| 7/1/1997 | -- | 51.07 | 22.9 | -- | 28.16 | 24,000 | 15,000 | 16,000 | 4,900 | 24,400 | 63,000 | 3.7 | SPL | -- | |
| 10/2/1997 | -- | 51.07 | 24.65 | -- | 26.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 10/3/1997 | -- | 51.07 | -- | -- | -- | 250,000 | 32,000 | 39,000 | 6,000 | 42,000 | 160,000 | 4.5 | SPL | -- | |
| 1/9/1998 | -- | -- | -- | -- | -- | 300,000 | 20,000 | 25,000 | 5,200 | 37,000 | 84,000 | -- | SPL | -- | d |
| 1/9/1998 | -- | 51.07 | 21.22 | -- | 29.84 | 420,000 | 23,000 | 29,000 | 5,800 | 43,000 | 75,000 | 4.0 | SPL | -- | |
| 2/2/1998 | -- | 51.07 | 20.11 | -- | 30.96 | 410,000 | 27,000 | 43,000 | 6,700 | 50,000 | 20,000 | -- | SPL | -- | |

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

### Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | Concentrations in (µg/L) | | | | | | (mg/L) | Lab | pH | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO/ TPHg | Benzene | Toluene | Ethyl-Benzene | Total Xylenes | MTBE | DO | | | |
| MW-2 Cont. | | | | | | | | | | | | | | | |
| 5/6/1998 | -- | 51.07 | 15.1 | -- | 35.96 | 180,000 | 25,000 | 26,000 | 3,400 | 22,900 | 35,000 | 3.7 | SPL | -- | |
| 7/21/1998 | -- | 51.07 | 15.31 | -- | 35.75 | 270,000 | 21,000 | 20,000 | 2,700 | 18,800 | 34,000 | 3.8 | SPL | -- | |
| 12/30/1998 | -- | 51.07 | 21.1 | -- | 29.87 | 300,000 | 22,000 | 24,000 | 4,200 | 26,000 | 89000/95000 | -- | SPL | -- | j |
| 5/10/1999 | -- | 51.07 | 16.68 | -- | 34.39 | 220,000 | 20,000 | 20,000 | 2,800 | 20,000 | 100,000 | -- | SPL | -- | |
| 9/23/1999 | -- | 51.07 | 22.5 | -- | 28.57 | 160,000 | 21,000 | 24,000 | 2,900 | 20,000 | 44,000 | -- | SPL | -- | |
| 12/23/1999 | -- | 51.07 | 22.64 | -- | 28.43 | 170,000 | 25,000 | 41,000 | 3,100 | 24,000 | 40,000 | -- | PACE | -- | k |
| 3/27/2000 | -- | 51.07 | 16.88 | -- | 34.19 | 140,000 | 15,000 | 25,000 | 3,400 | 21,000 | 19,000 | -- | PACE | -- | |
| 5/22/2000 | -- | 51.07 | 17.75 | -- | 33.32 | 150,000 | 18,000 | 31,000 | 3,500 | 22,000 | 26,000 | -- | PACE | -- | |
| 8/31/2000 | -- | 51.07 | 21.97 | -- | 29.1 | 200,000 | 16,000 | 26,000 | 2,500 | 16,000 | 38,000 | -- | PACE | -- | |
| 12/11/2000 | -- | 51.07 | 22.05 | -- | 29.02 | 130,000 | 18,600 | 30,000 | 3,250 | 20,600 | 21,700 | -- | PACE | -- | |
| 3/20/2001 | -- | 51.07 | 17.75 | -- | 33.32 | 140,000 | 15,900 | 24,800 | 3,700 | 22,100 | 12,900 | -- | PACE | -- | |
| 6/19/2001 | -- | 51.07 | 20.15 | -- | 30.92 | 130,000 | 15,100 | 19,500 | 3,300 | 21,400 | 20,300 | -- | PACE | -- | |
| 9/20/2001 | -- | 51.07 | 22.14 | -- | 28.93 | 110,000 | 12,400 | 12,600 | 2,230 | 13,000 | 39,500 | -- | PACE | -- | |
| 12/27/2001 | -- | 51.07 | 18.17 | -- | 32.9 | 150,000 | 17,500 | 26,000 | 3,050 | 19,500 | 27,500 | -- | PACE | -- | |
| 2/28/2002 | -- | 51.07 | 17.42 | -- | 33.65 | 120,000 | 13,900 | 18,800 | 3,030 | 19,600 | 17,300 | -- | PACE | -- | |
| 6/28/2002 | -- | 51.07 | 17.04 | -- | 34.03 | 3,700 | 190 | 23.3 | 139 | 287 | 826 | -- | PACE | -- | u |
| 9/12/2002 | -- | 51.07 | 19.52 | -- | 31.55 | 100,000 | 13,000 | 22,000 | 3,600 | 20,000 | 18,000 | -- | SEQ | 6.6 | |
| 12/12/2002 | -- | 51.07 | 21.08 | -- | 29.99 | 120,000 | 13,000 | 21,000 | 4,400 | 25,000 | 16,000 | -- | SEQ | 6.6 | |
| 3/10/2003 | -- | 51.07 | 17.84 | -- | 33.23 | 100,000 | 17,000 | 21,000 | 3,400 | 20,000 | 4,400 | -- | SEQ | 6.8 | |
| 5/12/2003 | -- | 51.07 | 16.66 | -- | 34.41 | 150,000 | 16,000 | 24,000 | 3,500 | 22,000 | 3,600 | -- | SEQ | 7.1 | |
| 8/27/2003 | -- | 51.07 | 19.65 | -- | 31.42 | 120,000 | 14,000 | 12,000 | 3,900 | 20,000 | 5,100 | -- | SEQ | 6.9 | n |
| 11/10/2003 | P | 51.07 | 20.80 | -- | 30.27 | 97,000 | 12,000 | 9,500 | 3,600 | 15,000 | 4,200 | -- | SEQM | 6.7 | |
| 02/03/2004 | P | 51.07 | 16.82 | -- | 34.25 | 130,000 | 14,000 | 19,000 | 3,400 | 20,000 | 1,900 | -- | SEQM | 6.8 | |
| 05/04/2004 | P | 51.07 | 16.19 | -- | 34.88 | 120,000 | 12,000 | 16,000 | 3,700 | 22,000 | 2,500 | -- | SEQM | 6.7 | |
| 08/31/2004 | P | 51.07 | 19.50 | -- | 31.57 | 99,000 | 10,000 | 13,000 | 3,700 | 18,000 | 3,400 | -- | SEQM | 6.8 | |
| 11/23/2004 | P | 51.07 | 18.20 | -- | 32.87 | 110,000 | 8,200 | 17,000 | 4,000 | 23,000 | 2,400 | -- | SEQM | 6.7 | s |
| 01/18/2005 | P | 51.07 | 14.91 | -- | 36.16 | 96,000 | 6,500 | 14,000 | 3,500 | 21,000 | 3,700 | -- | SEQM | 6.6 | |
| 06/29/2005 | P | 51.07 | 13.98 | -- | 37.09 | 54,000 | 6,200 | 4,900 | 3,300 | 12,000 | 3,600 | -- | SEQM | 7.3 | |
| 09/01/2005 | P | 51.07 | 17.00 | -- | 34.07 | 58,000 | 6,300 | 6,000 | 3,300 | 15,000 | 5,100 | -- | SEQM | 7.0 | |
| 11/03/2005 | P | 51.07 | 20.25 | -- | 30.82 | 63,000 | 7,400 | 3,700 | 3,300 | 10,000 | 3,700 | 0.66 | SEQM | 6.7 | |
| 02/14/2006 | P | 51.07 | 13.72 | -- | 37.35 | 97,000 | 7,500 | 11,000 | 4,300 | 16,000 | 3,400 | -- | SEQM | 6.9 | |

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

### Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | Concentrations in (µg/L) | | | | | | (mg/L) | Lab | pH | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO/ TPHg | Benzene | Toluene | Ethyl- Benzene | Total Xylenes | MTBE | DO | | | |
| **MW-2 Cont.** | | | | | | | | | | | | | | | |
| 5/30/2006 | P | 51.07 | 13.50 | -- | 37.57 | 28,000 | 5,200 | 2,500 | 1,500 | 3,300 | 2,300 | -- | SEQM | 6.7 | |
| **8/29/2006** | **--** | **51.07** | **18.16** | **--** | **32.91** | **65,000** | **7,200** | **4,500** | **3,200** | **11,000** | **13,000** | **--** | **TAMC** | **6.7** | |
| **MW-3** | | | | | | | | | | | | | | | |
| 1/5/1992 | -- | 49.95 | 33.69 | -- | 16.26 | 7,400 | 790 | 23 | 210 | 40 | -- | -- | -- | -- | |
| 1/10/1992 | -- | 49.95 | 33.74 | -- | 16.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 6/5/1992 | -- | 49.95 | 29.65 | -- | 20.3 | 2,000 | 130 | 5.3 | 93 | 20 | -- | -- | -- | -- | |
| 7/24/1992 | -- | 49.95 | 30.14 | -- | 19.81 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 7/27/1992 | -- | 49.95 | 30.14 | -- | 19.81 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/15/1992 | -- | 49.95 | 31.07 | -- | 18.88 | 450 | 55 | 3.1 | 34 | 7.1 | -- | -- | ANA | -- | |
| 12/15/1992 | -- | 49.95 | 31.93 | -- | 18.02 | 12,000 | 940 | <50 | 310 | 120 | -- | -- | ANA | -- | c |
| 3/15/1993 | -- | 49.95 | 25.71 | -- | 24.24 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | PACE | -- | l |
| 6/7/1993 | -- | 49.95 | 25.8 | -- | 24.15 | 150 | 3.6 | <0.5 | 0.9 | 1.3 | -- | -- | PACE | -- | l |
| 9/23/1993 | -- | 49.95 | 29.18 | -- | 20.77 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/24/1993 | -- | 49.95 | -- | -- | -- | 160 | 8.4 | <0.5 | 3.7 | 1.3 | 15.3 | -- | PACE | -- | l |
| 12/27/1993 | -- | 49.95 | 29.25 | -- | 20.7 | 9,400 | 1,100 | 48 | 530 | 120 | 2,871 | -- | PACE | -- | e,l |
| 4/5/1994 | -- | 49.95 | 26.84 | -- | 23.11 | 7,000 | 860 | 19 | 330 | 52 | 10,414 | 2.0 | PACE | -- | l |
| 7/22/1994 | -- | 49.95 | 26.9 | -- | 23.11 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | 2.1 | PACE | -- | l |
| 10/13/1994 | -- | 49.95 | 27.83 | -- | 22.12 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | 2.6 | PACE | -- | l |
| 1/25/1995 | -- | 49.95 | 21.65 | -- | 28.3 | <50 | <0.5 | <0.5 | <0.5 | <1 | -- | -- | ATI | -- | |
| 4/19/1995 | -- | 49.95 | 19.33 | -- | 30.62 | 2,400 | 170 | 8 | 130 | 27 | -- | 5.0 | ATI | -- | |
| 7/5/1995 | -- | 49.95 | 20.27 | -- | 29.68 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | -- | 4.4 | ATI | -- | |
| 10/5/1995 | -- | 49.95 | 23.73 | -- | 26.22 | 2,300 | 210 | 3.1 | 10 | 5.1 | 2,400 | 4.2 | ATI | -- | |
| 1/12/1996 | -- | 49.95 | 24.84 | -- | 25.11 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <5.0 | 4.1 | ATI | -- | |
| 4/22/1996 | -- | 49.95 | 18.6 | -- | 31.35 | <50 | <0.5 | <1 | <1 | <1 | <10 | 4.4 | SPL | -- | |
| 7/2/1996 | -- | 49.95 | 18.88 | -- | 31.07 | <50 | <0.5 | <1 | <1 | <1 | <10 | 4.2 | SPL | -- | |
| 11/8/1996 | -- | 49.95 | 19.14 | -- | 30.81 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.4 | SPL | -- | |
| 1/3/1997 | -- | 49.95 | 18.72 | -- | 31.23 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.6 | SPL | -- | |
| 4/28/1997 | -- | 49.95 | 19.38 | -- | 30.57 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.2 | SPL | -- | |
| 7/1/1997 | -- | 49.95 | 21.65 | -- | 28.3 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 3.8 | SPL | -- | |
| 10/2/1997 | -- | 49.95 | 23.45 | -- | 26.5 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.5 | SPL | -- | |

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

## Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | Concentrations in (µg/L) | | | | | | (mg/L) | Lab | pH | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO/ TPHg | Benzene | Toluene | Ethyl-Benzene | Total Xylenes | MTBE | DO | | | |
| **MW-3 Cont.** | | | | | | | | | | | | | | | |
| 1/9/1998 | -- | 49.95 | 20.1 | -- | 29.85 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.1 | SPL | -- | |
| 5/6/1998 | -- | 49.95 | 15.57 | -- | 34.38 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 3.8 | SPL | -- | |
| 7/21/1998 | -- | 49.95 | 15.88 | -- | 34.07 | 51 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 3.8 | SPL | -- | |
| 7/21/1998 | -- | -- | -- | -- | -- | 60 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | -- | SPL | -- | d |
| 12/30/1998 | -- | 49.95 | 20.3 | -- | 29.65 | -- | -- | -- | -- | -- | -- | -- | SPL | -- | |
| 2/2/1999 | -- | 49.95 | 19.75 | -- | 30.2 | <50 | <1.0 | <1.0 | <1.0 | <1.0 | <10 | -- | SPL | -- | |
| 5/10/1999 | -- | 49.95 | 16.17 | -- | 33.78 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/23/1999 | -- | 49.95 | 22.05 | -- | 27.9 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 12/23/1999 | -- | 49.95 | 22.55 | -- | 27.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3/27/2000 | -- | 49.95 | 16.4 | -- | 33.55 | 350 | 22 | <0.5 | <0.5 | <0.5 | 580 | -- | PACE | -- | |
| 5/22/2000 | -- | 49.95 | 9.49 | -- | 40.46 | -- | -- | -- | -- | -- | -- | -- | -- | -- | t |
| 8/31/2000 | -- | 49.95 | 13.02 | -- | 36.93 | -- | -- | -- | -- | -- | -- | -- | -- | -- | t |
| 12/11/2000 | -- | 49.95 | 13.30 | -- | 36.65 | -- | -- | -- | -- | -- | -- | -- | -- | -- | t |
| 3/20/2001 | -- | 49.95 | 16.49 | -- | 33.46 | 1,000 | 66.4 | 0.597 | 6.96 | <1.5 | 398 | -- | PACE | -- | |
| 6/19/2001 | -- | 49.95 | 18.82 | -- | 31.13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/20/2001 | -- | 49.95 | 21.59 | -- | 28.36 | 230 | <0.5 | 0.593 | <0.5 | <1.5 | 289 | -- | PACE | -- | |
| 12/27/2001 | -- | 49.95 | 17.37 | -- | 32.58 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 2/28/2002 | -- | 49.95 | 15.81 | -- | 34.14 | <50 | <0.5 | <0.5 | <0.5 | <1.0 | 0.58 | -- | PACE | -- | |
| 6/28/2002 | -- | 49.95 | 17.09 | -- | 32.86 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/12/2002 | -- | 49.95 | 18.8 | -- | 31.15 | 52 | 3.3 | 8.6 | 1.7 | 12 | 11 | -- | SEQ | 7.0 | |
| 12/12/2002 | -- | 49.95 | 20.57 | -- | 29.38 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3/10/2003 | -- | 49.95 | 16.68 | -- | 33.27 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | -- | SEQ | 7.0 | |
| 5/12/2003 | -- | 49.95 | 14.72 | -- | 35.23 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8/27/2003 | -- | 49.95 | 18.5 | -- | 31.45 | <50 | <0.50 | <0.50 | <0.50 | 0.5 | <0.50 | -- | -- | 7.1 | n |
| 11/10/2003 | -- | 49.95 | 19.66 | -- | 30.29 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 02/03/2004 | P | 49.95 | 15.33 | -- | 34.62 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | SEQM | 7.0 | |
| 08/31/2004 | P | 49.95 | 18.13 | -- | 31.82 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | SEQM | 7.1 | |
| 11/23/2004 | -- | 49.95 | 16.48 | -- | 33.47 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 01/18/2005 | P | 49.95 | 13.06 | -- | 36.89 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | SEQM | 6.9 | |
| 06/29/2005 | -- | 49.95 | 13.00 | -- | 36.95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09/01/2005 | -- | 49.95 | 16.00 | -- | 33.95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

## Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | Concentrations in (µg/L) GRO/ TPHg | Benzene | Toluene | Ethyl- Benzene | Total Xylenes | MTBE | (mg/L) DO | Lab | pH | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-3 Cont. | | | | | | | | | | | | | | | |
| 11/03/2005 | -- | 49.95 | 18.91 | -- | 31.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 02/14/2006 | P | 49.95 | 12.90 | -- | 37.05 | 86 | <0.50 | <0.50 | <0.50 | 0.55 | <0.50 | -- | SEQM | 7.3 | |
| 5/30/2006 | -- | 49.95 | 12.55 | -- | 37.40 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8/29/2006 | -- | 49.95 | 16.68 | -- | 33.27 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-4 | | | | | | | | | | | | | | | |
| 7/24/1992 | -- | 50.76 | 30.02 | -- | 20.74 | 42,000 | 3,200 | 3,600 | 1,400 | 4,100 | -- | -- | -- | -- | |
| 7/27/1992 | -- | 50.76 | 30.02 | -- | 20.74 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/15/1992 | -- | 50.76 | 31.14 | -- | 19.62 | 55,000 | 7,600 | 13,000 | 2,800 | 9,500 | -- | -- | ANA | -- | c |
| 12/15/1992 | -- | 50.76 | 31.98 | -- | 18.78 | 36,000 | 3,700 | 4,700 | 1,200 | 4,000 | -- | -- | ANA | -- | c |
| 3/15/1993 | -- | 50.76 | 25.34 | -- | 25.42 | 69,000 | 7,600 | 15,000 | 2,500 | 11,000 | -- | -- | PACE | -- | l |
| 6/7/1993 | -- | 50.76 | 25.67 | -- | 25.09 | 73,000 | 10,000 | 19,000 | 3,400 | 14,000 | -- | -- | PACE | -- | l |
| 9/23/1993 | -- | 50.76 | 29.37 | -- | 21.39 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/24/1993 | -- | -- | -- | -- | -- | 59,000 | 5,300 | 10,000 | 2,200 | 8,400 | 309 | -- | PACE | -- | d |
| 9/24/1993 | -- | 50.76 | -- | -- | -- | 68,000 | 11,000 | 2,100 | 8,600 | 990 | 390 | -- | PACE | -- | l |
| 12/27/1993 | -- | 50.76 | 29.4 | -- | 21.36 | 32,000 | 2,500 | 4,400 | 1,300 | 4,400 | 387 | -- | PACE | -- | l |
| 4/5/1994 | -- | 50.76 | 27.09 | -- | 23.67 | 64,000 | 6,500 | 14,000 | 1,900 | 9,600 | 413 | 1.4 | PACE | -- | l |
| 7/22/1994 | -- | -- | -- | -- | -- | 85,000 | 11,000 | 21,000 | 3,300 | 14,000 | 435 | -- | PACE | -- | d, l |
| 7/22/1994 | -- | 50.76 | 27.33 | -- | 23.43 | 85,000 | 10,000 | 20,000 | 3,200 | 13,000 | 796 | 0.8 | PACE | -- | l |
| 10/13/1994 | -- | -- | -- | -- | -- | 51,000 | 7,400 | 13,000 | 2,100 | 9,100 | 773 | -- | PACE | -- | d, l |
| 10/13/1994 | -- | 50.76 | 28.25 | -- | 22.51 | 51,000 | 7,100 | 13,000 | 2,100 | 8,900 | 506 | 2.9 | PACE | -- | e,l |
| 1/25/1995 | -- | 50.76 | 21.85 | -- | 28.91 | 26,000 | 3,600 | 9,600 | 1,200 | 6,400 | -- | -- | ATI | -- | |
| 1/25/1995 | -- | -- | -- | -- | -- | 28,000 | 4,200 | 12,000 | 1,500 | 7,800 | -- | -- | ATI | -- | d, l |
| 4/19/1995 | -- | 50.76 | 19.44 | -- | 31.32 | 89,000 | 12,000 | 24,000 | 3,500 | 18,000 | -- | 5.1 | ATI | -- | |
| 4/19/1995 | -- | -- | -- | -- | -- | 100,000 | 12,000 | 26,000 | 3,800 | 21,000 | -- | -- | ATI | -- | d |
| 7/5/1995 | -- | 50.76 | 20.52 | -- | 30.24 | 130,000 | 13,000 | 29,000 | 3,300 | 25,000 | -- | 4.3 | ATI | -- | |
| 10/5/1995 | -- | 50.76 | 24.23 | -- | 26.53 | 110,000 | 10,000 | 23,000 | 3,600 | 17,000 | 34,000 | 2.1 | ATI | -- | |
| 1/12/1996 | -- | 50.76 | 25.34 | -- | 25.42 | 46,000 | 3,500 | 8,300 | 1,100 | 8,000 | 3,000 | 3.3 | ATI | -- | |
| 1/12/1996 | -- | -- | -- | -- | -- | 40,000 | 3,500 | 9,000 | 1,200 | 8,700 | 4,300 | -- | ATI | -- | d |
| 4/22/1996 | -- | 50.76 | 19.13 | -- | 31.63 | 40,000 | 5,100 | 9,600 | 980 | 11,800 | 29,000 | 3.2 | SPL | -- | |
| 4/22/1996 | -- | -- | -- | -- | -- | 61,000 | 8,300 | 16,000 | 1,600 | 15,200 | 36,000 | -- | SPL | -- | d |

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

### Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | Concentrations in (µg/L) | | | | | | (mg/L) | Lab | pH | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO/ TPHg | Benzene | Toluene | Ethyl- Benzene | Total Xylenes | MTBE | DO | | | |
| **MW-4 Cont.** | | | | | | | | | | | | | | | |
| 7/2/1996 | -- | -- | -- | -- | -- | 78,000 | 9,800 | 21,000 | 1,900 | 15,300 | 42,000 | -- | SPL | -- | d |
| 7/2/1996 | -- | 50.76 | 20.67 | -- | 30.09 | 74,000 | 9,800 | 21,000 | 2,100 | 16,600 | 41,000 | 3.4 | SPL | -- | |
| 11/8/1996 | -- | 50.76 | 20.95 | -- | 29.81 | 100,000 | 7,900 | 16,000 | 2,500 | 13,700 | 37,000 | 3.7 | SPL | -- | |
| 11/8/1996 | -- | -- | -- | -- | -- | 110,000 | 9,100 | 20,000 | 3,000 | 15,400 | 39,000 | -- | SPL | -- | d |
| 1/3/1997 | -- | 50.76 | 20.54 | -- | 30.22 | 99,000 | 17,000 | 30,000 | 4,300 | 22,700 | 79,000 | 4.2 | SPL | -- | |
| 1/3/1997 | -- | -- | -- | -- | -- | 66,000 | 12,000 | 19,000 | 2,900 | 15,000 | 69,000 | -- | SPL | -- | d |
| 4/28/1997 | -- | 50.76 | 21.28 | -- | 29.48 | 130,000 | 12,000 | 28,000 | 3,800 | 21,000 | 37,000 | 3.9 | SPL | -- | |
| 4/28/1997 | -- | -- | -- | -- | -- | 110,000 | 11,000 | 26,000 | 3,200 | 18,200 | 34,000 | -- | SPL | -- | d |
| 7/1/1997 | -- | 50.76 | 23.61 | -- | 27.15 | 110,000 | 16,000 | 25,000 | 4,900 | 24,400 | 37,000 | 3.6 | SPL | -- | |
| 10/2/1997 | -- | 50.76 | 25.39 | -- | 25.37 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 10/3/1997 | -- | -- | -- | -- | -- | 71,000 | 8,600 | 8,700 | 2,900 | 13,500 | 84,000 | -- | SPL | -- | d |
| 10/3/1997 | -- | 50.76 | -- | -- | -- | 66,000 | 8,200 | 8,600 | 2,700 | 13,400 | 80,000 | 4.4 | SPL | -- | |
| 1/9/1998 | -- | 50.76 | 21.25 | -- | 29.51 | 100,000 | 9,700 | 3,200 | 1,500 | 4,700 | 92,000 | 3.8 | SPL | -- | |
| 5/6/1998 | -- | -- | -- | -- | -- | 440,000 | 8,000 | 39,000 | 14,000 | 70,000 | <5000 | -- | SPL | -- | d |
| 5/6/1998 | -- | 50.76 | 15.96 | -- | 34.8 | 430,000 | 6,900 | 31,000 | 11,000 | 56,000 | <5000 | 3.9 | SPL | -- | |
| 7/21/1998 | -- | -- | -- | -- | -- | 210,000 | 11,000 | 27,000 | 5,600 | 26,800 | 29,000 | -- | SPL | -- | d |
| 7/21/1998 | -- | 50.76 | 16.1 | -- | 34.66 | 250,000 | 11,000 | 26,000 | 5,500 | 26,900 | 29,000 | 3.7 | SPL | -- | |
| 12/30/1998 | -- | 50.76 | 20.91 | -- | 29.85 | 370,000 | 11,000 | 22,000 | 8,500 | 40,000 | 90000/92000 | -- | SPL | -- | j |
| 2/2/1999 | -- | 50.76 | 20.13 | -- | 30.63 | 190,000 | 4,100 | 19,000 | 4,800 | 32,000 | 28,000 | -- | SPL | -- | |
| 5/10/1999 | -- | 50.76 | 16.63 | -- | 34.13 | 2,700 | 23 | 7.1 | 8.1 | 25 | 120 | -- | SPL | -- | |
| 9/23/1999 | -- | 50.76 | 22.48 | -- | 28.28 | 180,000 | 11,000 | 29,000 | 7,000 | 38,000 | 12,000 | -- | SPL | -- | |
| 12/23/1999 | -- | 50.76 | 22.94 | -- | 27.82 | 66,000 | 6,300 | 5,200 | 2,200 | 7,800 | 35,000 | -- | PACE | -- | k |
| 3/27/2000 | -- | 50.76 | 16.84 | -- | 33.92 | 120,000 | 8,700 | 12,000 | 3,800 | 16,000 | 27,000 | -- | PACE | -- | |
| 5/22/2000 | -- | 50.76 | 17.85 | -- | 32.91 | 110,000 | 7,600 | 16,000 | 4,400 | 20,000 | 25,000 | -- | PACE | -- | |
| 8/31/2000 | -- | 50.76 | 21.71 | -- | 29.05 | 110,000 | 8,800 | 7,600 | 3,400 | 14,000 | 18,000 | -- | PACE | -- | |
| 12/11/2000 | -- | 50.76 | 22.05 | -- | 28.71 | 70,000 | 4,580 | 3,480 | 2,550 | 9,220 | 24,400 | -- | PACE | -- | |
| 3/20/2001 | -- | 50.76 | 17.68 | -- | 33.08 | 100,000 | 7,100 | 4,530 | 2,540 | 9,370 | 63,100 | -- | PACE | -- | |
| 6/19/2001 | -- | 50.76 | 19.4 | -- | 31.36 | 180,000 | 7,430 | 14,600 | 5,400 | 25,300 | 36,100 | -- | PACE | -- | |
| 9/20/2001 | -- | 50.76 | 22.01 | -- | 28.75 | -- | -- | -- | -- | -- | -- | -- | -- | -- | f, m |
| 12/27/2001 | -- | 50.76 | 17.96 | -- | 32.8 | 120,000 | 6,880 | 9,030 | 2,840 | 14,600 | 32,300 | -- | PACE | -- | |
| 2/28/2002 | -- | 50.76 | 17.06 | -- | 33.7 | 80,000 | 4,920 | 5,450 | 2,220 | 12,300 | 35,900 | -- | PACE | -- | |

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

### Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | Concentrations in (µg/L) | | | | | | (mg/L) DO | Lab | pH | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO/ TPHg | Benzene | Toluene | Ethyl-Benzene | Total Xylenes | MTBE | | | | |
| MW-4 Cont. | | | | | | | | | | | | | | | |
| 6/28/2002 | -- | 50.76 | 17.76 | -- | 33 | 48,000 | 2,780 | 2,770 | 1,530 | 6,790 | 25,100 | -- | PACE | -- | |
| 9/12/2002 | -- | 50.76 | 19.45 | -- | 31.31 | 46,000 | 4,500 | 6,800 | 2,600 | 10,000 | 9,100 | -- | SEQ | 6.8 | |
| 12/12/2002 | -- | 50.76 | 21.29 | -- | 29.47 | 36,000 | 5,200 | 3,400 | 2,000 | 6,500 | 12,000 | -- | SEQ | 6.7 | |
| 3/10/2003 | -- | 50.76 | 17.16 | -- | 33.6 | 70,000 | 7,000 | 4,800 | 3,300 | 13,000 | 29,000 | -- | SEQ | 6.7 | |
| 5/12/2003 | -- | 50.76 | 14.51 | -- | 36.25 | 75,000 | 7,600 | 3,700 | 3,400 | 13,000 | 26,000 | -- | SEQ | 6.8 | |
| 8/27/2003 | -- | 50.76 | 19.32 | -- | 31.44 | 77,000 | 7,500 | 1,300 | 2,100 | 4,000 | 32,000 | -- | SEQ | 6.8 | n, s |
| 11/10/2003 | P | 50.76 | 20.36 | -- | 30.40 | 110,000 | 7,100 | 3,100 | 2,100 | 5,800 | 25,000 | -- | SEQM | 6.6 | |
| 02/03/2004 | P | 50.76 | 16.51 | -- | 34.25 | 160,000 | 8,400 | 9,700 | 5,000 | 23,000 | 26,000 | -- | SEQM | 6.7 | |
| 05/04/2004 | P | 50.76 | 16.47 | -- | 34.29 | 110,000 | 8,100 | 7,500 | 4,300 | 17,000 | <250 | -- | SEQM | 6.7 | |
| 08/31/2004 | P | 50.76 | 19.16 | -- | 31.60 | 91,000 | 6,600 | 8,400 | 3,700 | 14,000 | 14,000 | -- | SEQM | 6.7 | |
| 11/23/2004 | P | 50.76 | 18.02 | -- | 32.74 | 7,400,000 | 20,000 | 150,000 | 320,000 | 1,400,000 | 23,000 | -- | SEQM | 6.6 | s |
| 01/18/2005 | P | 50.76 | 14.21 | -- | 36.55 | 170,000 | 5,400 | 14,000 | 6,900 | 33,000 | 8,800 | -- | SEQM | 6.5 | s |
| 06/29/2005 | P | 50.76 | 13.86 | -- | 36.90 | 640,000 | 3,500 | 25,000 | 24,000 | 110,000 | 1,700 | -- | SEQM | 7.2 | |
| 09/01/2005 | P | 50.76 | 16.89 | -- | 33.87 | 100,000 | 3,800 | 11,000 | 4,900 | 33,000 | 1,100 | -- | SEQM | 6.7 | |
| 11/03/2005 | P | 50.76 | 19.33 | -- | 31.43 | 490,000 | 4,700 | 11,000 | 10,000 | 49,000 | 1,500 | 0.5 | SEQM | 6.6 | |
| 02/14/2006 | P | 50.76 | 13.55 | -- | 37.21 | 970,000 | 60,000 | 7,000 | 36,000 | 140,000 | 38,000 | -- | SEQM | 6.8 | s |
| 5/30/2006 | P | 50.76 | 13.52 | -- | 37.24 | 140,000 | 3,000 | 6,600 | 6,200 | 29,000 | 560 | -- | SEQM | 6.6 | |
| **8/29/2006** | **--** | **50.76** | **17.52** | **--** | **33.24** | **52,000** | **4,700** | **2,500** | **3,500** | **12,000** | **1,800** | **--** | **TAMC** | **6.7** | |
| MW-6 | | | | | | | | | | | | | | | |
| 7/24/1992 | -- | 50.32 | 30.63 | -- | 19.69 | ND | 1.6 | ND | ND | ND | -- | -- | -- | -- | |
| 7/27/1992 | -- | 50.32 | 30.63 | -- | 19.69 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/15/1992 | -- | 50.32 | 31.52 | -- | 18.8 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | ANA | -- | |
| 12/15/1992 | -- | 50.32 | 32.42 | -- | 17.9 | 58 | 1.3 | <0.5 | <0.5 | <0.5 | -- | -- | ANA | -- | |
| 3/15/1993 | -- | 50.32 | 26.29 | -- | 24.03 | <50 | <0.5 | 0.6 | <0.5 | 0.7 | -- | -- | PACE | -- | l |
| 6/7/1993 | -- | 50.32 | 26.33 | -- | 23.99 | <50 | <0.5 | <0.5 | <0.5 | 1.5 | -- | -- | PACE | -- | l |
| 9/23/1993 | -- | 50.32 | 29.64 | -- | 20.68 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/24/1993 | -- | 50.32 | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 28.5 | -- | PACE | -- | l |
| 12/27/1993 | -- | 50.32 | 29.75 | -- | 20.57 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 55.4 | -- | PACE | -- | e,l |
| 4/5/1994 | -- | 50.32 | 27.26 | -- | 23.06 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 295 | 1.7 | PACE | -- | e,l |
| 7/22/1994 | -- | 50.32 | 27.34 | -- | 22.98 | 350 | <0.5 | <0.5 | <0.5 | <0.5 | 419 | 4.5 | PACE | -- | e,l |

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

### Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | Concentrations in (μg/L) | | | | | | (mg/L) | Lab | pH | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO/ TPHg | Benzene | Toluene | Ethyl- Benzene | Total Xylenes | MTBE | DO | | | |
| **MW-6 Cont.** | | | | | | | | | | | | | | | |
| 10/13/1994 | -- | 50.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | g |
| 1/25/1995 | -- | 50.32 | 22.16 | -- | 28.16 | 240 | 6 | <0.5 | <0.5 | <1 | -- | -- | ATI | -- | |
| 4/19/1995 | -- | 50.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | g |
| 7/5/1995 | -- | 50.32 | 20.8 | -- | 29.52 | 180 | <0.50 | <0.50 | <0.50 | <1.0 | -- | 4.9 | ATI | -- | |
| 10/5/1995 | -- | 50.32 | 24.2 | -- | 26.12 | 860 | <5.0 | <5.0 | <5.0 | <10 | 3,600 | 2.8 | ATI | -- | |
| 1/12/1996 | -- | 50.32 | 25.3 | -- | 25.02 | 860 | <5.0 | <5.0 | <5.0 | <10 | 2,800 | 4.2 | ATI | -- | |
| 4/22/1996 | -- | 50.32 | 19.13 | -- | 31.19 | <50 | <0.5 | <1 | <1 | <1 | 470 | 4.3 | SPL | -- | |
| 7/2/1996 | -- | 50.32 | 20.66 | -- | 29.66 | 100 | <0.5 | <1 | <1 | <1 | 1,100 | 4.2 | SPL | -- | |
| 11/8/1996 | -- | 50.32 | 20.98 | -- | 29.34 | 1,100 | <5 | <10 | <10 | <10 | 1,500 | 4.3 | SPL | -- | |
| 1/3/1997 | -- | 50.32 | 20.53 | -- | 29.79 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | 450 | 4.5 | SPL | -- | |
| 4/28/1997 | -- | 50.32 | 21.25 | -- | 29.07 | 1,400 | <0.5 | <1.0 | <1.0 | <1.0 | 3,500 | 4.4 | SPL | -- | |
| 7/1/1997 | -- | 50.32 | 23.4 | -- | 26.92 | 6,100 | <0.5 | <1.0 | <1.0 | <1.0 | 9,100 | 3.9 | SPL | -- | |
| 10/2/1997 | -- | 50.32 | 25.16 | -- | 25.16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 10/3/1997 | -- | 50.32 | -- | -- | -- | 330 | <0.5 | <1.0 | <1.0 | <1.0 | 2,600 | 4.4 | SPL | -- | |
| 1/9/1998 | -- | 50.32 | 21.13 | -- | 29.19 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.3 | SPL | -- | |
| 5/6/1998 | -- | 50.32 | 16.11 | -- | 34.21 | 410 | <0.5 | <1.0 | <1.0 | <1.0 | 500 | 3.6 | SPL | -- | |
| 7/21/1998 | -- | 50.32 | 16.33 | -- | 33.99 | 4,300 | <5 | <10 | <10 | <10 | 3,800 | 4.0 | SPL | -- | |
| 12/30/1998 | -- | 50.32 | 20.89 | -- | 29.43 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 2/2/1999 | -- | 50.32 | 20.2 | -- | 30.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 5/10/1999 | -- | 50.32 | 16.75 | -- | 33.57 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/23/1999 | -- | 50.32 | 22.55 | -- | 27.77 | <50 | <1.0 | <1.0 | <1.0 | <1.0 | 1,600 | -- | SPL | -- | |
| 12/23/1999 | -- | 50.32 | 23 | -- | 27.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3/27/2000 | -- | 50.32 | 16.89 | -- | 33.43 | 1,700 | 4.4 | 0.54 | <0.5 | 1 | 14,000 | -- | PACE | -- | |
| 5/22/2000 | -- | 50.32 | 18.02 | -- | 32.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8/31/2000 | -- | 50.32 | 21.62 | -- | 28.7 | 1,200 | <0.5 | <0.5 | <0.5 | <0.5 | 3,900 | -- | PACE | -- | |
| 12/11/2000 | -- | 50.32 | 21.81 | -- | 28.51 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3/20/2001 | -- | 50.32 | 16.97 | -- | 33.35 | 3,300 | <0.5 | <0.5 | <0.5 | <1.5 | 3,760 | -- | PACE | -- | |
| 6/19/2001 | -- | 50.32 | 19.3 | -- | 31.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/20/2001 | -- | 50.32 | 22 | -- | 28.32 | 2,200 | 2.04 | 8.1 | 3.62 | 13.7 | 2,460 | -- | PACE | -- | |
| 12/27/2001 | -- | 50.32 | 17.85 | -- | 32.47 | 830 | 0.59 | <0.5 | <0.5 | <1.0 | 1,040 | -- | PACE | -- | |
| 2/28/2002 | -- | 50.32 | 16.31 | -- | 34.01 | 1,100 | <0.5 | <0.5 | <0.5 | <1.0 | 1,450 | -- | PACE | -- | |

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

### Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | Concentrations in (µg/L) | | | | | | (mg/L) | Lab | pH | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO/ TPHg | Benzene | Toluene | Ethyl-Benzene | Total Xylenes | MTBE | DO | | | |
| **MW-6 Cont.** | | | | | | | | | | | | | | | |
| 6/28/2002 | -- | 50.32 | 17.57 | -- | 32.75 | <50 | <0.5 | <0.5 | <0.5 | <1.0 | 1,020 | -- | PACE | -- | |
| 9/12/2002 | -- | 50.32 | 19.27 | -- | 31.05 | 190 | 1.9 | 4.6 | 1 | 7.3 | 480 | -- | SEQ | 7.1 | |
| 12/12/2002 | -- | 50.32 | 20.94 | -- | 29.38 | 270 | <2.5 | <2.5 | <2.5 | <2.5 | 500 | -- | SEQ | 6.9 | |
| 3/10/2003 | -- | 50.32 | 17.11 | -- | 33.21 | 110 | <0.50 | <0.50 | <0.50 | <0.50 | 190 | -- | SEQ | 7.0 | |
| 5/12/2003 | -- | 50.32 | 15.18 | -- | 35.14 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 36 | -- | SEQ | 7.0 | |
| 8/27/2003 | -- | 50.32 | 18.9 | -- | 31.42 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 8.9 | -- | SEQ | 7.0 | n |
| 11/10/2003 | P | 50.32 | 20.13 | -- | 30.19 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 4.5 | -- | SEQM | 6.8 | |
| 02/03/2004 | NP | 50.32 | 15.83 | -- | 34.49 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | SEQM | 6.9 | |
| 05/04/2004 | P | 50.32 | 15.62 | -- | 34.70 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 24 | -- | SEQM | 6.9 | |
| 08/31/2004 | P | 50.32 | 18.56 | -- | 31.76 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 27 | -- | SEQM | 7.0 | |
| 11/23/2004 | -- | 50.32 | 16.95 | -- | 33.37 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 01/18/2005 | P | 50.32 | 13.61 | -- | 36.71 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 1.3 | -- | SEQM | 6.8 | |
| 06/29/2005 | -- | 50.32 | 13.55 | -- | 36.77 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09/01/2005 | -- | 50.32 | 16.52 | -- | 33.80 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 11/03/2005 | -- | 50.32 | 19.28 | -- | 31.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 02/14/2006 | -- | 50.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | g |
| 5/30/2006 | -- | 50.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | g |
| 8/29/2006 | -- | 50.32 | 17.15 | -- | 33.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-7** | | | | | | | | | | | | | | | |
| 1/25/1995 | -- | 51.4 | 21.67 | -- | 29.73 | <50 | <0.5 | <0.5 | <0.5 | <1 | -- | 7.0 | ATI | -- | |
| 4/19/1995 | -- | 51.4 | 25.27 | -- | 26.13 | <50 | <0.5 | <0.5 | <0.5 | <1 | -- | 5.0 | ATI | -- | |
| 7/5/1995 | -- | 51.4 | 24.63 | -- | 26.77 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | -- | 4.2 | ATI | -- | |
| 10/5/1995 | -- | 51.4 | 28.21 | -- | 23.19 | 83 | <0.50 | <0.50 | <0.50 | <1.0 | 77 | 4.5 | ATI | -- | |
| 1/12/1996 | -- | 51.4 | 29.29 | -- | 22.11 | 63 | <0.50 | <0.50 | <0.50 | <1.0 | 120 | 4.8 | ATI | -- | |
| 4/22/1996 | -- | 51.4 | 23.11 | -- | 28.29 | <50 | <0.5 | <1 | <1 | <1 | 13 | 4.8 | SPL | -- | |
| 7/2/1996 | -- | 51.4 | 23.56 | -- | 27.84 | <50 | <0.5 | <1 | <1 | <1 | <10 | 4.8 | SPL | -- | |
| 11/8/1996 | -- | 51.4 | 20.06 | -- | 31.34 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 5.1 | SPL | -- | |
| 1/3/1997 | -- | 51.4 | 23.42 | -- | 27.98 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.7 | SPL | -- | |
| 4/28/1997 | -- | 51.4 | 24.12 | -- | 27.28 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 3.9 | SPL | -- | |
| 7/1/1997 | -- | 51.4 | 26.4 | -- | 25 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.2 | SPL | -- | |

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

### Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | Concentrations in (µg/L) | | | | | | (mg/L) DO | Lab | pH | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO/ TPHg | Benzene | Toluene | Ethyl-Benzene | Total Xylenes | MTBE | | | | |
| **MW-7 Cont.** | | | | | | | | | | | | | | | |
| 10/2/1997 | -- | 51.4 | 28.14 | -- | 23.26 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.7 | SPL | -- | |
| 1/9/1998 | -- | 51.4 | 24.02 | -- | 27.38 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.1 | SPL | -- | |
| 5/6/1998 | -- | 51.4 | 21 | -- | 30.4 | 1,900 | <0.5 | <1.0 | <1.0 | <1.0 | 1,800 | 3.5 | SPL | -- | |
| 7/21/1998 | -- | 51.4 | 21.17 | -- | 30.23 | 50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 3.7 | SPL | -- | |
| 12/30/1998 | -- | 51.4 | 22.13 | -- | 29.27 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 2/2/1999 | -- | 51.4 | 22.08 | -- | 29.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 5/10/1999 | -- | 51.4 | 18.58 | -- | 32.82 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/23/1999 | -- | 51.4 | 24.29 | -- | 27.11 | 70 | <1.0 | <1.0 | <1.0 | <1.0 | 4,700 | -- | SPL | -- | |
| 12/23/1999 | -- | 51.4 | 24.53 | -- | 26.87 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3/27/2000 | -- | 51.4 | 18.58 | -- | 32.82 | 910 | <0.5 | <0.5 | <0.5 | <0.5 | 2,600 | -- | PACE | -- | |
| 5/22/2000 | -- | 51.4 | 19.49 | -- | 31.91 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8/31/2000 | -- | 51.4 | 22.53 | -- | 28.87 | 440 | <0.5 | <0.5 | <0.5 | <0.5 | 900 | -- | PACE | -- | |
| 12/11/2000 | -- | 51.4 | 22.75 | -- | 28.65 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3/20/2001 | -- | 51.4 | 18.79 | -- | 32.61 | 1,100 | <0.5 | <0.5 | <0.5 | <1.5 | 1,210 | -- | PACE | -- | |
| 6/19/2001 | -- | 51.4 | 19.82 | -- | 31.58 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/20/2001 | -- | 51.4 | 21.35 | -- | 30.05 | 1,300 | 1.21 | <0.5 | <0.5 | <1.5 | 1,550 | -- | PACE | -- | |
| 12/27/2001 | -- | 51.4 | 20.36 | -- | 31.04 | 510 | <0.5 | <0.5 | <0.5 | <1.0 | 643 | -- | PACE | -- | |
| 2/28/2002 | -- | 51.4 | 21.86 | -- | 29.54 | 250 | <0.5 | <0.5 | <0.5 | <1.0 | 317 | -- | PACE | -- | |
| 6/28/2002 | -- | 51.4 | 22.64 | -- | 28.76 | <50 | <0.5 | <0.5 | <0.5 | <1.0 | 102 | -- | PACE | -- | |
| 9/12/2002 | -- | 51.4 | 23.51 | -- | 27.89 | <50 | <0.5 | <0.5 | <0.5 | 1 | 14 | -- | SEQ | 7.5 | |
| 12/12/2002 | -- | 51.4 | 23.75 | -- | 27.65 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | -- | SEQ | 7.5 | |
| 3/10/2003 | -- | 51.4 | 21.25 | -- | 30.15 | 61 | <0.50 | <0.50 | <0.50 | <0.50 | 99 | -- | SEQ | 7.6 | |
| 5/12/2003 | -- | 51.4 | 21.44 | -- | 29.96 | <100 | <1.0 | <1.0 | <1.0 | <1.0 | 120 | -- | SEQ | 7.6 | |
| 8/27/2003 | -- | 51.4 | 23.3 | -- | 28.1 | 120 | <0.50 | <0.50 | <0.50 | <0.50 | 84 | -- | SEQ | 7.6 | n |
| 11/10/2003 | P | 51.40 | 20.24 | -- | 31.16 | 230 | <1.0 | <1.0 | <1.0 | <1.0 | 92 | -- | SEQM | 6.7 | o |
| 02/03/2004 | P | 51.40 | 20.63 | -- | 30.77 | <250 | <2.5 | <2.5 | <2.5 | <2.5 | 91 | -- | SEQM | 7.5 | |
| 05/04/2004 | P | 51.40 | 21.89 | -- | 29.51 | <250 | <2.5 | <2.5 | <2.5 | <2.5 | 190 | -- | SEQM | 7.6 | k |
| 08/31/2004 | P | 51.40 | 23.16 | -- | 28.24 | <500 | <5.0 | <5.0 | <5.0 | <5.0 | 220 | -- | SEQM | 7.3 | |
| 11/23/2004 | P | 51.40 | 21.65 | -- | 29.75 | 590 | <2.5 | 5.0 | 11 | 51 | 290 | -- | SEQM | 7.1 | |
| 01/18/2005 | P | 51.40 | 16.28 | -- | 35.12 | <250 | <2.5 | <2.5 | <2.5 | 2.5 | 92 | -- | SEQM | 7.3 | |
| 06/29/2005 | P | 51.40 | 14.50 | -- | 36.90 | 2,200 | 43 | 97 | 92 | 390 | 250 | -- | SEQM | 8.0 | |

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

### Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | Concentrations in (μg/L) GRO/ TPHg | Benzene | Toluene | Ethyl-Benzene | Total Xylenes | MTBE | (mg/L) DO | Lab | pH | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-7 Cont. | | | | | | | | | | | | | | | |
| 09/01/2005 | P | 51.40 | 20.41 | -- | 30.99 | <500 | <5.0 | <5.0 | <5.0 | <5.0 | 60 | -- | SEQM | 7.5 | |
| 11/03/2005 | P | 51.40 | 21.00 | -- | 30.40 | 130 | <1.0 | <1.0 | <1.0 | 1.0 | 130 | 0.63 | SEQM | 7.2 | w |
| 02/14/2006 | P | 51.40 | 16.31 | -- | 35.09 | 100 | <0.50 | <0.50 | <0.50 | 0.87 | 62 | -- | SEQM | 7.4 | |
| 5/30/2006 | P | 51.40 | 17.58 | -- | 33.82 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 9.1 | -- | SEQM | 7.2 | |
| **8/29/2006** | **--** | **51.40** | **18.64** | **--** | **32.76** | **100** | **<2.5** | **<2.5** | **<2.5** | **<2.5** | **140** | **--** | **TAMC** | **6.9** | |
| MW-8 | | | | | | | | | | | | | | | |
| 1/25/1995 | -- | 50.88 | 31.59 | -- | 19.29 | 54 | <0.5 | <0.5 | <0.5 | <1 | -- | 7.1 | ATI | -- | |
| 4/19/1995 | -- | 50.88 | 19.18 | -- | 31.7 | <50 | <0.5 | <0.5 | <0.5 | <1 | -- | 5.1 | ATI | -- | |
| 7/5/1995 | -- | 50.88 | 19.03 | -- | 31.85 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | -- | 4.5 | ATI | -- | |
| 10/5/1995 | -- | 50.88 | 24.4 | -- | 26.48 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <5.0 | 4.1 | ATI | -- | |
| 1/12/1996 | -- | 50.88 | 25.51 | -- | 25.37 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <5.0 | 4.6 | ATI | -- | |
| 4/22/1996 | -- | 50.88 | 18 | -- | 32.88 | <50 | <0.5 | <1 | <1 | <1 | <10 | 4.8 | SPL | -- | |
| 7/2/1996 | -- | 50.88 | 19.83 | -- | 31.05 | <50 | <0.5 | <1 | <1 | <1 | <10 | 4.5 | SPL | -- | |
| 11/8/1996 | -- | 50.88 | 20.09 | -- | 30.79 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.7 | SPL | -- | |
| 1/3/1997 | -- | 50.88 | 19.72 | -- | 31.16 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.4 | SPL | -- | |
| 4/28/1997 | -- | 50.88 | 20.44 | -- | 30.44 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.1 | SPL | -- | |
| 7/1/1997 | -- | 50.88 | 22.72 | -- | 28.16 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 3.8 | SPL | -- | |
| 10/2/1997 | -- | 50.88 | 24.51 | -- | 26.37 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.2 | SPL | -- | |
| 1/9/1998 | -- | 50.88 | 21.17 | -- | 29.71 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 3.5 | SPL | -- | |
| 5/6/1998 | -- | 50.88 | 18.34 | -- | 32.54 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 3.6 | SPL | -- | |
| 7/21/1998 | -- | 50.88 | 18.55 | -- | 32.33 | 90 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 3.3 | SPL | -- | |
| 12/30/1998 | -- | 50.88 | 20.4 | -- | 30.48 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 2/2/1999 | -- | 50.88 | 19.28 | -- | 31.6 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 5/10/1999 | -- | 50.88 | 15.62 | -- | 35.26 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/23/1999 | -- | 50.88 | 21.74 | -- | 29.14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 12/23/1999 | -- | 50.88 | 22.83 | -- | 28.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3/27/2000 | -- | 50.88 | 16.25 | -- | 34.63 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | PACE | -- | |
| 5/22/2000 | -- | 50.88 | 17.06 | -- | 33.82 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8/31/2000 | -- | 50.88 | 21.72 | -- | 29.16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 12/11/2000 | -- | 50.88 | 22.03 | -- | 28.85 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

### Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | Concentrations in (μg/L) | | | | | | (mg/L) | Lab | pH | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO/ TPHg | Benzene | Toluene | Ethyl- Benzene | Total Xylenes | MTBE | DO | | | |
| **MW-8 Cont.** | | | | | | | | | | | | | | | |
| 3/20/2001 | -- | 50.88 | 16.23 | -- | 34.65 | <50 | <0.5 | <0.5 | <0.5 | <1.5 | 0.991 | -- | PACE | -- | |
| 6/19/2001 | -- | 50.88 | 19.35 | -- | 31.53 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/20/2001 | -- | 50.88 | 21.95 | -- | 28.93 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 12/27/2001 | -- | 50.88 | 16.98 | -- | 33.9 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 2/28/2002 | -- | 50.88 | 15.38 | -- | 35.5 | <50 | <0.5 | <0.5 | <0.5 | <1.0 | <0.5 | -- | PACE | -- | |
| 6/28/2002 | -- | 50.88 | 16.97 | -- | 33.91 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/12/2002 | -- | 50.88 | 19.47 | -- | 31.41 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 12/12/2002 | -- | 50.88 | 20.84 | -- | 30.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3/10/2003 | -- | 50.88 | 16.56 | -- | 34.32 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 3 | -- | SEQ | 7.1 | |
| 5/12/2003 | -- | 50.88 | 13.63 | -- | 37.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8/27/2003 | -- | 50.88 | 18.9 | -- | 31.98 | -- | -- | -- | -- | -- | -- | -- | -- | -- | n |
| 11/10/2003 | -- | 50.88 | 19.68 | -- | 31.20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 02/03/2004 | P | 50.88 | 14.76 | -- | 36.12 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | SEQM | 7.5 | |
| 05/04/2004 | -- | 50.88 | 14.69 | -- | 36.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 08/31/2004 | -- | 50.88 | 18.08 | -- | 32.80 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 11/23/2004 | NP | 50.88 | 15.77 | -- | 35.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 01/18/2005 | P | 50.88 | 12.04 | -- | 38.84 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | SEQM | 7.0 | |
| 06/29/2005 | -- | 50.88 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | v |
| 09/01/2005 | -- | 50.88 | 16.12 | -- | 34.76 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 11/03/2005 | -- | 50.88 | 19.42 | -- | 31.46 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 02/14/2006 | P | 50.88 | 12.43 | -- | 38.45 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | SEQM | 7.0 | |
| 5/30/2006 | -- | 50.88 | 12.40 | -- | 38.48 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **8/29/2006** | -- | **50.88** | **17.16** | -- | **33.72** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-9** | | | | | | | | | | | | | | | |
| 1/25/1995 | -- | 51.05 | 22.32 | -- | 28.73 | <50 | <0.5 | <0.5 | <0.5 | <1 | -- | 7.4 | ATI | -- | |
| 4/19/1995 | -- | 51.05 | 19.86 | -- | 31.19 | <50 | <0.5 | <0.5 | <0.5 | <1 | -- | 5.2 | ATI | -- | |
| 7/5/1995 | -- | 51.05 | 20.78 | -- | 30.27 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | -- | 4.4 | ATI | -- | |
| 10/5/1995 | -- | -- | -- | -- | -- | 52 | <0.50 | <0.50 | <0.50 | <1.0 | 160 | -- | ATI | -- | d |
| 10/5/1995 | -- | 51.05 | 24.33 | -- | 26.72 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | -- | 2.3 | ATI | -- | |
| 1/12/1996 | -- | 51.05 | 25.44 | -- | 25.61 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <5.0 | 3.2 | ATI | -- | |

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

## Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | Concentrations in (µg/L) | | | | | | (mg/L) | Lab | pH | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO/ TPHg | Benzene | Toluene | Ethyl- Benzene | Total Xylenes | MTBE | DO | | | |
| MW-9 Cont. | | | | | | | | | | | | | | | |
| 4/22/1996 | -- | 51.05 | 18.01 | -- | 33.04 | <50 | <0.5 | <1 | <1 | <1 | 11 | 3.5 | SPL | -- | |
| 7/2/1996 | -- | 51.05 | 19.7 | -- | 31.35 | <50 | <0.5 | <1 | <1 | <1 | <10 | 3.3 | SPL | -- | |
| 11/8/1996 | -- | 51.05 | 19.96 | -- | 31.09 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 3.7 | SPL | -- | |
| 1/3/1997 | -- | 51.05 | 19.52 | -- | 31.53 | <250 | <2.5 | <5.0 | <5.0 | <5.0 | <50 | 4.4 | SPL | -- | |
| 4/28/1997 | -- | 51.05 | 20.22 | -- | 30.83 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.0 | SPL | -- | |
| 7/1/1997 | -- | 51.05 | 22.59 | -- | 28.46 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 3.9 | SPL | -- | |
| 10/2/1997 | -- | 51.05 | 24.33 | -- | 26.72 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 10/3/1997 | -- | 51.05 | -- | -- | -- | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.4 | SPL | -- | |
| 1/9/1998 | -- | 51.05 | 21.11 | -- | 29.94 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 3.9 | SPL | -- | |
| 5/6/1998 | -- | 51.05 | 18.26 | -- | 32.79 | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.0 | SPL | -- | |
| 7/21/1998 | -- | 51.05 | 18.46 | -- | 32.59 | 70 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 3.7 | SPL | -- | |
| 12/30/1998 | -- | 51.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | g |
| 2/2/1999 | -- | 51.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | g |
| 5/10/1999 | -- | 51.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | g |
| 9/23/1999 | -- | 51.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | g |
| 12/23/1999 | -- | 51.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | g |
| 3/27/2000 | -- | 51.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | g |
| 5/22/2000 | -- | 51.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | g |
| 8/31/2000 | -- | 51.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | g |
| 12/11/2000 | -- | 51.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | g |
| 3/20/2001 | -- | 51.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | g |
| 6/19/2001 | -- | 51.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | g |
| 9/20/2001 | -- | 51.05 | 22.2 | -- | 28.85 | 6,300 | 2.87 | <0.5 | <0.5 | <1.5 | 8,640 | -- | PACE | -- | |
| 12/27/2001 | -- | 51.05 | 18.92 | -- | 32.13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 2/28/2002 | -- | 51.05 | 17.22 | -- | 33.83 | 19,000 | 1,560 | 61.3 | 84 | 111 | 20,200 | -- | PACE | -- | |
| 6/28/2002 | -- | 51.05 | 18.2 | -- | 32.85 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9/12/2002 | -- | 51.05 | 19.92 | -- | 31.13 | 5,100 | 570 | 180 | <25 | 220 | 6,400 | -- | SEQ | 6.8 | |
| 12/12/2002 | -- | 51.05 | 21.78 | -- | 29.27 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3/10/2003 | -- | 51.05 | 18.25 | -- | 32.8 | 26,000 | 2,500 | <100 | <100 | <100 | 33,000 | -- | SEQ | 6.9 | |
| 5/12/2003 | -- | 51.05 | 16.29 | -- | 34.76 | -- | -- | -- | -- | -- | -- | -- | SEQ | -- | |
| 8/27/2003 | -- | 51.05 | 19.69 | -- | 31.36 | 11,000 | 830 | <50 | <50 | <50 | 6,300 | -- | SEQ | 7.1 | n |

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

### Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | Concentrations in (µg/L) | | | | | | (mg/L) | Lab | pH | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO/ TPHg | Benzene | Toluene | Ethyl- Benzene | Total Xylenes | MTBE | DO | | | |
| **MW-9 Cont.** | | | | | | | | | | | | | | | |
| 11/10/2003 | -- | 51.05 | 19.97 | -- | 31.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 02/03/2004 | P | 51.05 | 17.23 | -- | 33.82 | 6,200 | 180 | <50 | <50 | <50 | 2,100 | -- | SEQM | 7.2 | |
| 05/04/2004 | -- | 51.05 | 17.17 | -- | 33.88 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 08/31/2004 | P | 51.05 | 19.71 | -- | 31.34 | <2,500 | 210 | <25 | <25 | <25 | 1,500 | -- | SEQM | 7.0 | |
| 11/23/2004 | -- | 51.05 | 18.58 | -- | 32.47 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 01/18/2005 | P | 51.05 | 14.98 | -- | 36.07 | 490 | 32 | <2.5 | <2.5 | 8.9 | 130 | -- | SEQM | 6.9 | |
| 06/29/2005 | -- | 51.05 | 14.74 | -- | 36.31 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09/01/2005 | P | 51.05 | 17.42 | -- | 33.63 | 3,500 | 1,300 | <25 | <25 | 28 | 240 | -- | SEQM | 6.9 | |
| 11/03/2005 | -- | 51.05 | 19.90 | -- | 31.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 02/14/2006 | P | 51.05 | 12.95 | -- | 38.10 | 2,700 | <25 | <25 | <25 | <25 | 2,200 | -- | SEQM | 7.0 | w |
| 5/30/2006 | -- | 51.05 | 13.76 | -- | 37.29 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **8/29/2006** | **--** | **51.05** | **17.86** | **--** | **33.19** | **1,200** | **580** | **<25** | **<25** | **<25** | **<25** | **--** | **TAMC** | **6.9** | |
| **MW-10** | | | | | | | | | | | | | | | |
| 1/9/1998 | -- | -- | 20.97 | -- | -- | <50 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.3 | SPL | -- | h |
| 5/6/1998 | -- | -- | 18.07 | -- | -- | 800 | <0.5 | <1.0 | <1.0 | <1.0 | 980 | 3.9 | SPL | -- | h |
| 7/21/1998 | -- | -- | 18.28 | -- | -- | 80 | <0.5 | <1.0 | <1.0 | <1.0 | <10 | 4.0 | SPL | -- | h |
| 12/30/1998 | -- | -- | 22.22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | h |
| 2/2/1999 | -- | -- | 21.83 | -- | -- | 940 | <10 | <10 | <10 | <10 | 690 | -- | SPL | -- | h |
| 5/10/1999 | -- | -- | 17.99 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | h |
| 9/23/1999 | -- | -- | 22.61 | -- | -- | <50 | <1.0 | <1.0 | <1.0 | 1.4 | 1,000 | -- | SPL | -- | h |
| 12/23/1999 | -- | -- | 23.75 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | h |
| 3/27/2000 | -- | -- | 18.83 | -- | -- | 1,900 | <0.5 | <0.5 | <0.5 | <0.5 | 28,000 | -- | PACE | -- | h |
| 5/22/2000 | -- | -- | 19.47 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | h |
| 8/31/2000 | -- | -- | 22.64 | -- | -- | 1,700 | <0.5 | <0.5 | <0.5 | <0.5 | 13,000 | -- | PACE | -- | h |
| 12/11/2000 | -- | -- | 22.84 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | h |
| 3/20/2001 | -- | -- | 19.57 | -- | -- | 16,000 | <0.5 | <0.5 | <0.5 | <1.5 | 11,900 | -- | PACE | -- | h |
| 6/19/2001 | -- | -- | 20.63 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | h |
| 9/20/2001 | -- | -- | 23.07 | -- | -- | 5,800 | <0.5 | <0.5 | <0.5 | <1.5 | 8,160 | -- | PACE | -- | h |
| 12/27/2001 | -- | -- | 20.92 | -- | -- | 6,600 | 17.3 | 14.5 | <12.5 | <25 | 7,750 | -- | PACE | -- | h |
| 2/28/2002 | -- | -- | 18.52 | -- | -- | 3,600 | 10.8 | <0.5 | <0.5 | <1.0 | 5,380 | -- | PACE | -- | h |

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

## Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | Concentrations in (µg/L) | | | | | | (mg/L) DO | Lab | pH | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO/ TPHg | Benzene | Toluene | Ethyl- Benzene | Total Xylenes | MTBE | | | | |
| **MW-10 Cont.** | | | | | | | | | | | | | | | |
| 6/28/2002 | -- | -- | 18.41 | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <1.0 | 2,570 | -- | PACE | -- | h |
| 9/12/2002 | -- | -- | 20.57 | -- | -- | 660 | <5.0 | <5.0 | <5.0 | <5.0 | 3,300 | -- | SEQ | 7.2 | h |
| 12/12/2002 | -- | -- | 22.8 | -- | -- | 1,400 | <5.0 | <5.0 | <5.0 | <5.0 | 3,300 | -- | SEQ | 6.9 | h |
| 3/10/2003 | -- | -- | 19.26 | -- | -- | 1,700 | <5.0 | <5.0 | 5.3 | 15 | 2,800 | -- | SEQ | 6.9 | h |
| 5/12/2003 | -- | -- | 17.9 | -- | -- | 1,500 | <12 | <12 | <12 | <12 | 2,200 | -- | SEQ | 6.9 | h |
| 8/27/2003 | -- | -- | 20.82 | -- | -- | 4,100 | <25 | <25 | <25 | <25 | 2,800 | -- | SEQ | 7.0 | n, h |
| 11/10/2003 | P | -- | 21.92 | -- | -- | <5,000 | <50 | <50 | <50 | <50 | 3,300 | -- | SEQM | 6.8 | |
| 02/03/2004 | P | -- | 18.52 | -- | -- | 5,100 | <50 | <50 | <50 | <50 | 2,300 | -- | SEQM | 7.0 | q |
| 05/04/2004 | P | -- | 17.63 | -- | -- | <2,500 | <25 | <25 | <25 | <25 | 1,600 | -- | SEQM | 6.8 | |
| 08/31/2004 | P | -- | 20.67 | -- | -- | <5,000 | <50 | <50 | <50 | <50 | 1,900 | -- | SEQM | 7.0 | |
| 11/23/2004 | P | -- | 19.79 | -- | -- | 2,600 | <25 | <25 | <25 | <25 | 2,300 | -- | SEQM | 6.8 | |
| 01/18/2005 | P | -- | 16.13 | -- | -- | 560 | <5.0 | <5.0 | <5.0 | <5.0 | 530 | -- | SEQM | 6.9 | |
| 06/29/2005 | P | -- | 15.56 | -- | -- | 110 | 1.9 | 4.6 | 4.2 | 17 | 71 | -- | SEQM | 6.8 | |
| 09/01/2005 | P | -- | 18.10 | -- | -- | <250 | <2.5 | <2.5 | <2.5 | <2.5 | 280 | -- | SEQM | 6.9 | |
| 11/03/2005 | P | -- | 20.90 | -- | -- | 800 | <5.0 | <5.0 | <5.0 | 7.0 | 770 | 0.71 | SEQM | 6.8 | w |
| 02/14/2006 | P | -- | 15.58 | -- | -- | 600 | <0.50 | <0.50 | <0.50 | <0.50 | 400 | -- | SEQM | 7.1 | x |
| 5/30/2006 | P | -- | 14.70 | -- | -- | 95 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | SEQM | 6.7 | |
| **8/29/2006** | **--** | **--** | **18.69** | **--** | **--** | **250** | **<5.0** | **<5.0** | **<5.0** | **<5.0** | **490** | **--** | **TAMC** | **6.7** | |
| **QC-2** | | | | | | | | | | | | | | | |
| 9/15/1992 | -- | -- | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | ANA | -- | i |
| 12/15/1992 | -- | -- | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | ANA | -- | i |
| 3/15/1993 | -- | -- | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | PACE | -- | i, l |
| 6/7/1993 | -- | -- | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | PACE | -- | i, l |
| 9/24/1993 | -- | -- | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | -- | PACE | -- | i, l |
| 12/27/1993 | -- | -- | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | -- | PACE | -- | i, l |
| 4/5/1994 | -- | -- | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | -- | PACE | -- | i, l |
| 7/22/1994 | -- | -- | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | -- | PACE | -- | i, l |
| 10/13/1994 | -- | -- | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | -- | PACE | -- | i, l |
| 1/25/1995 | -- | -- | -- | -- | -- | <50 | <0.5 | 2 | 0.6 | 1 | -- | -- | ATI | -- | i |
| 4/19/1995 | -- | -- | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | ATI | -- | i |

## Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

### Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | P/NP | TOC Elevation (feet msl) | Depth to Water (feet bgs) | Product Thickness (feet) | Water Level Elevation (feet msl) | Concentrations in (µg/L) | | | | | | (mg/L) | Lab | pH | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | GRO/ TPHg | Benzene | Toluene | Ethyl- Benzene | Total Xylenes | MTBE | DO | | | |
| **QC-2 Cont.** | | | | | | | | | | | | | | | |
| 7/5/1995 | -- | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | -- | -- | ATI | -- | i |
| 10/5/1995 | -- | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <5.0 | -- | ATI | -- | i |
| 1/12/1996 | -- | -- | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <5.0 | -- | ATI | -- | i |
| 4/22/1996 | -- | -- | -- | -- | -- | <50 | <0.5 | <1 | <1 | <1 | <10 | -- | SPL | -- | i |
| 7/2/1996 | -- | -- | -- | -- | -- | <50 | <0.5 | <1 | <1 | <1 | <10 | -- | SPL | -- | i |

ABBREVIATIONS AND SYMBOLS:
< = Not detected at or laboratory reporting limit
--- = Not analyzed/applicable/measurable
µg/L = Micrograms per liter
ANA = Anamatrix, Inc.
ATI = Analytical Technologies, Inc.
DO = Dissolved oxygen
DTW = Depth to water in ft bgs
ft bgs = Feet below ground surface
ft MSL = Feet above mean sea level
GRO = Gasoline range organics
GWE = Groundwater elevation in ft MSL
mg/L = Milligrams per liter
MTBE = Methyl tert butyl ether
NP = Well not purged prior to sampling
P = Well purged prior to sampling
PACE = Pace, Inc.
SEQ/SEQM = Sequoia/Sequoia Morgan Hill Analytical
SPL = Southern Petroleum Laboratories
TOC = Top of casing in ft MSL
TPH-g = Total petroleum hydrocarbons as gasoline

FOOTNOTES:
c = Concentrations reported as diesel from MW-1, MW-2 and MW-4 are primarily due to the presence of a lighter petroleum product, possibly gasoline or kerosene.
d = Blind duplicate.
e = A copy of the documentation for this data is included in Appendix C of Alisto report 10-018-05-004.
f = Well not sampled due to presence of free product (FP).
g = Well inaccessible.
h = TOC not surveyed.
i = Travel blank.
j = EPA method by 8020\8260.
k = Samples ran outside of EPA recommended hold time.
l = A copy of the documentation for this data can be found in Blaine Tech Services report 010619-C-2. The MTBE data for the March 15, 1993 and June 7, 1993 events have been destroyed.
m = Thickness of SPH is only an estimate. The resulting GWE will not be used in contouring.
n = Samples analyzed by EPA Method 8260B for TPH-g, benzene, toluene, ethylbenzene, total xylenes, and fuel oxygenates.
o = Discrete peak @ C6-C7.
q = Discrete peak @ C5-C6.
r = Well was dry.
s = Sheen in well.
t = DTW and resulting GWE were anomalous and not used in groundwater contouring.
u = Anomalously low concentrations reported from Cambria. Do not appear to support historic trends.
v = Unable to locate well.
w = The hydrocarbon result for GRO was partly due to individual peaks in the quantitation range.
x = Initial analysis for MTBE within holding time but required dilution.

NOTES:
Casing elevations surveyed to the nearest 0.01 ft MSL.

GWE adjusted assuming a specific gravity of 0.75 for FP.

During the third quarter of 2002, URS Corporation assumed groundwater monitoring activities for BP.

Beginning in the fourth quarter 2003, the laboratory modified the reported analyte list. TPH-g was changed to GRO. The resulting data may be impacted by the potential of non-TPH-g analytes within the requested fuel range resulting in a higher concentration being reported.

Beginning in second quarter 2004, the carbon range for GRO was changed from C6-C10 to C4-C12.

Values for pH and DO are field measurements.

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

## Table 2. Summary of Fuel Additives Analytical Data

### Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | Concentrations in (µg/L) | | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | Ethanol | TBA | MTBE | DIPE | ETBE | TAME | 1,2-DCA | EDB | |
| **EX-1** | | | | | | | | | |
| 05/04/2004 | <5,000 | <1,000 | 2,500 | <25 | <25 | 38 | <25 | <25 | |
| 08/31/2004 | <10,000 | <2,000 | 2,100 | <50 | <50 | <50 | <50 | <50 | |
| 11/23/2004 | <5,000 | <1,000 | 3,000 | <25 | <25 | 74 | <25 | <25 | |
| 01/18/2005 | <5,000 | <1,000 | 2,200 | <25 | <25 | 54 | <25 | <25 | a |
| 06/29/2005 | <5,000 | <1,000 | 1,400 | <25 | <25 | 30 | <25 | <25 | |
| 09/01/2005 | <5,000 | <1,000 | 2,000 | <25 | <25 | 46 | <25 | <25 | |
| 11/03/2005 | <5,000 | <1,000 | 3,000 | <25 | <25 | 87 | <25 | <25 | |
| 02/14/2006 | <15,000 | <1,000 | 1,100 | <25 | <25 | <25 | <25 | <25 | a |
| 5/30/2006 | <15,000 | <1,000 | 1,400 | <25 | <25 | 37 | <25 | <25 | a |
| **8/29/2006** | **<15,000** | **<1,000** | **2,500** | **<25** | **<25** | **56** | **<25** | **<25** | |
| **EX-2** | | | | | | | | | |
| 05/04/2004 | <100 | <20 | 46 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| 08/31/2004 | <500 | <100 | 130 | <2.5 | <2.5 | 3.4 | <2.5 | <2.5 | |
| 11/23/2004 | <100 | <20 | 5.8 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| 01/18/2005 | <100 | <20 | 6.5 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | a |
| 06/29/2005 | <100 | <20 | 24 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| 09/01/2005 | <100 | <20 | 55 | <0.50 | <0.50 | 0.56 | <0.50 | <0.50 | |
| 11/03/2005 | <100 | <20 | 39 | <0.50 | <0.50 | 0.80 | <0.50 | <0.50 | |
| 02/14/2006 | <300 | <20 | 0.72 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | a |
| 5/30/2006 | <300 | <20 | 7.8 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| **8/29/2006** | **<300** | **<20** | **94** | **<0.50** | **<0.50** | **0.98** | **<0.50** | **<0.50** | |
| **MW-1** | | | | | | | | | |
| 8/27/2003 | <100 | <20 | 4.2 | <0.50 | <0.50 | <0.50 | -- | -- | |
| 11/10/2003 | <100 | <20 | 0.51 | <0.50 | <0.50 | <0.50 | -- | -- | |
| 02/03/2004 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| 05/04/2004 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| 08/31/2004 | <100 | <20 | 0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| 01/18/2005 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | a |
| 02/14/2006 | <300 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | a |
| **MW-2** | | | | | | | | | |

## Table 2. Summary of Fuel Additives Analytical Data

### Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | Concentrations in (µg/L) | | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | Ethanol | TBA | MTBE | DIPE | ETBE | TAME | 1,2-DCA | EDB | |
| **MW-2 Cont.** | | | | | | | | | |
| 8/27/2003 | <25,000 | <5,000 | 5,100 | <120 | <120 | 140 | -- | -- | |
| 11/10/2003 | <50,000 | <10,000 | 4,200 | <250 | <250 | <250 | -- | -- | |
| 02/03/2004 | <100,000 | <20,000 | 1,900 | <500 | <500 | <500 | <500 | <500 | |
| 05/04/2004 | <50,000 | <10,000 | 2,500 | <250 | <250 | <250 | <250 | <250 | |
| 08/31/2004 | <50,000 | <10,000 | 3,400 | <250 | <250 | <250 | <250 | <250 | |
| 11/23/2004 | <50,000 | <10,000 | 2,400 | <250 | <250 | <250 | <250 | <250 | |
| 01/18/2005 | <20,000 | <4,000 | 3,700 | <100 | <100 | <100 | <100 | <100 | a |
| 06/29/2005 | <10,000 | <2,000 | 3,600 | <50 | <50 | 72 | <50 | <50 | |
| 09/01/2005 | <20,000 | <4,000 | 5,100 | <100 | <100 | 100 | <100 | <100 | |
| 11/03/2005 | <20,000 | <4,000 | 3,700 | <100 | <100 | 100 | <100 | <100 | |
| 02/14/2006 | <60,000 | <4,000 | 3,400 | <100 | <100 | <100 | <100 | <100 | a |
| 5/30/2006 | <60,000 | <4,000 | 2,300 | <100 | <100 | <100 | <100 | <100 | |
| **8/29/2006** | **<60,000** | **<4,000** | **13,000** | **<100** | **<100** | **100** | **<100** | **<100** | |
| **MW-3** | | | | | | | | | |
| 8/27/2003 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | |
| 02/03/2004 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| 08/31/2004 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| 01/18/2005 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | a |
| 02/14/2006 | <300 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | a |
| **MW-4** | | | | | | | | | |
| 8/27/2003 | <50,000 | <10,000 | 32,000 | <250 | <250 | 250 | -- | -- | |
| 11/10/2003 | <100,000 | <20,000 | 25,000 | <500 | <500 | <500 | -- | -- | |
| 02/03/2004 | <100,000 | <20,000 | 26,000 | <500 | <500 | <500 | <500 | <500 | |
| 05/04/2004 | <50,000 | <10,000 | <250 | <250 | <250 | <250 | <250 | <250 | |
| 08/31/2004 | <50,000 | <10,000 | 14,000 | <250 | <250 | <250 | <250 | <250 | |
| 11/23/2004 | <500,000 | <100,000 | 23,000 | <2,500 | <2,500 | <2,500 | <2,500 | <2,500 | |
| 01/18/2005 | <50,000 | <10,000 | 8,800 | <250 | <250 | <250 | <250 | <250 | a |
| 06/29/2005 | <50,000 | <10,000 | 1,700 | <250 | <250 | <250 | <250 | <250 | |
| 09/01/2005 | <100,000 | <20,000 | 1,100 | <500 | <500 | <500 | <500 | <500 | |
| 11/03/2005 | <100,000 | <20,000 | 1,500 | <500 | <500 | <500 | <500 | <500 | |

## Table 2. Summary of Fuel Additives Analytical Data

## Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | Concentrations in (μg/L) | | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | Ethanol | TBA | MTBE | DIPE | ETBE | TAME | 1,2-DCA | EDB | |
| **MW-4 Cont.** | | | | | | | | | |
| 02/14/2006 | <300,000 | <20,000 | 38,000 | <500 | <500 | 1,000 | <500 | <500 | a |
| 5/30/2006 | <300,000 | <20,000 | 560 | <500 | <500 | <500 | <500 | <500 | |
| **8/29/2006** | **<300,000** | **<20,000** | **1,800** | **<500** | **<500** | **<500** | **<500** | **<500** | |
| **MW-6** | | | | | | | | | |
| 8/27/2003 | <100 | <20 | 8.9 | <0.50 | <0.50 | <0.50 | -- | -- | |
| 11/10/2003 | <100 | <20 | 4.5 | <0.50 | <0.50 | <0.50 | -- | -- | |
| 02/03/2004 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | a |
| 05/04/2004 | <100 | <20 | 24 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| 08/31/2004 | <100 | <20 | 27 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| 01/18/2005 | <100 | <20 | 1.3 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | a |
| **MW-7** | | | | | | | | | |
| 8/27/2003 | <100 | <20 | 84 | <0.50 | <0.50 | <0.50 | -- | -- | |
| 11/10/2003 | <200 | <40 | 92 | <1.0 | <1.0 | <1.0 | -- | -- | |
| 02/03/2004 | <500 | <100 | 91 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | |
| 05/04/2004 | <500 | <100 | 190 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | |
| 08/31/2004 | <1,000 | <200 | 220 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | |
| 11/23/2004 | <500 | <100 | 290 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | |
| 01/18/2005 | <500 | <100 | 92 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | a |
| 06/29/2005 | <500 | <100 | 250 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | |
| 09/01/2005 | <1,000 | <200 | 60 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | |
| 11/03/2005 | <200 | <40 | 130 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | |
| 02/14/2006 | <300 | <20 | 62 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | a |
| 5/30/2006 | <300 | <20 | 9.1 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| **8/29/2006** | **<1,500** | **<100** | **140** | **<2.5** | **<2.5** | **<2.5** | **<2.5** | **<2.5** | |
| **MW-8** | | | | | | | | | |
| 02/03/2004 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| 01/18/2005 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | a |
| 02/14/2006 | <300 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | a |
| **MW-9** | | | | | | | | | |

## Table 2. Summary of Fuel Additives Analytical Data

### Station #11117, 7210 Bancroft Ave., Oakland, CA

| Well and Sample Date | Concentrations in (µg/L) | | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | Ethanol | TBA | MTBE | DIPE | ETBE | TAME | 1,2-DCA | EDB | |
| **MW-9 Cont.** | | | | | | | | | |
| 8/27/2003 | <10,000 | <2,000 | 6,300 | <50 | <50 | <50 | -- | -- | |
| 02/03/2004 | <10,000 | <2,000 | 2,100 | <50 | <50 | <50 | <50 | <50 | a |
| 08/31/2004 | <5,000 | <1,000 | 1,500 | <25 | <25 | <25 | <25 | <25 | |
| 01/18/2005 | <500 | 150 | 130 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | a |
| 09/01/2005 | <5,000 | 2,700 | 240 | <25 | <25 | <25 | <25 | <25 | |
| 02/14/2006 | <15,000 | <1,000 | 2,200 | <25 | <25 | <25 | <25 | <25 | a |
| **8/29/2006** | **<15,000** | **2,100** | **<25** | **<25** | **<25** | **<25** | **<25** | **<25** | |
| **MW-10** | | | | | | | | | |
| 8/27/2003 | <5,000 | <1,000 | 2,800 | <25 | <25 | <25 | -- | -- | |
| 11/10/2003 | <10,000 | <2,000 | 3,300 | <50 | <50 | <50 | -- | -- | |
| 02/03/2004 | <10,000 | <2,000 | 2,300 | <50 | <50 | <50 | <50 | <50 | a |
| 05/04/2004 | <5,000 | <1,000 | 1,600 | <25 | <25 | <25 | <25 | <25 | |
| 08/31/2004 | <10,000 | <2,000 | 1,900 | <50 | <50 | <50 | <50 | <50 | |
| 11/23/2004 | <5,000 | <1,000 | 2,300 | <25 | <25 | <25 | <25 | <25 | |
| 01/18/2005 | <1,000 | <200 | 530 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | a |
| 06/29/2005 | <100 | <20 | 71 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| 09/01/2005 | <500 | <100 | 280 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | |
| 11/03/2005 | <1,000 | <200 | 770 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | |
| 02/14/2006 | <300 | 34 | 400 | <0.50 | <0.50 | 1.2 | <0.50 | <0.50 | a, b |
| 5/30/2006 | <300 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| **8/29/2006** | **<3,000** | **<200** | **490** | **<5.0** | **<5.0** | **<5.0** | **<5.0** | **<5.0** | |

ABBREVIATIONS AND SYMBOLS:
-- = Not analyzed/applicable/measurable
< = Not detected above reported detection limit
1,2-DCA = 1,2-Dichloroethane
μg/L = Micrograms per Liter
DIPE = Di-isopropyl ether
EDB = 1, 2-Dibromoethane
ETBE = Ethyl tert-butyl ether
MTBE = Methyl tert-butyl ether
TAME = tert-Amyl methyl ether
TBA = tert-Butyl alcohol

FOOTNOTES:
a = The continuing calibration verficiation for ethanol was outside of client contractual acceptance limits. However, it was within method acceptance limits. The data should still be useful for its intended purpose.
b = Initial analysis for MTBE within holding time but required dilution.

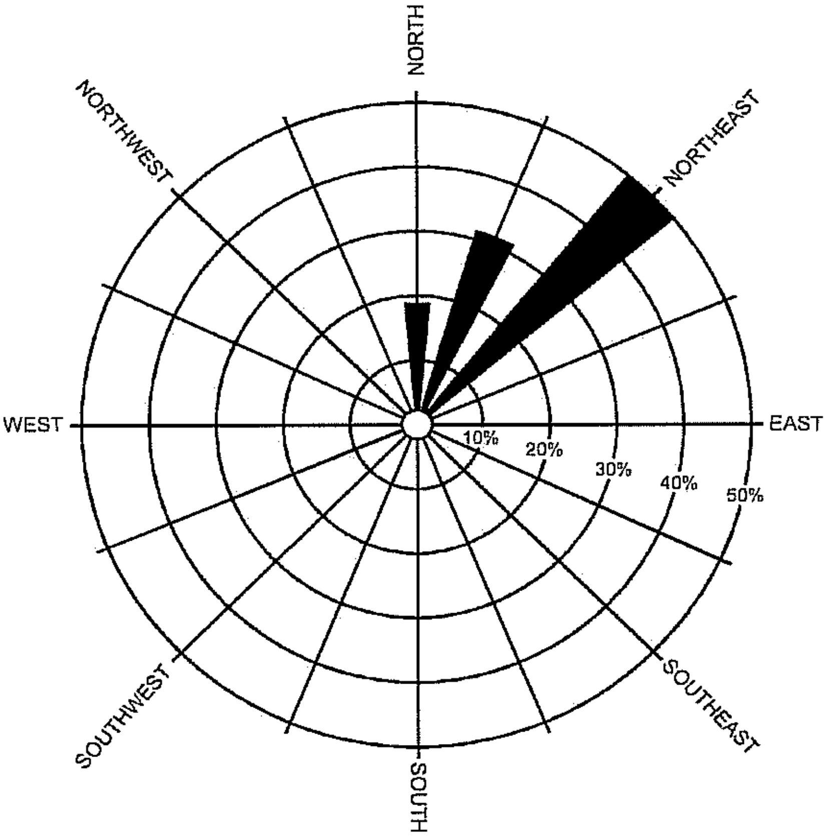
NOTES:
All volatile organic compounds analyzed using EPA Method 8260B.

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

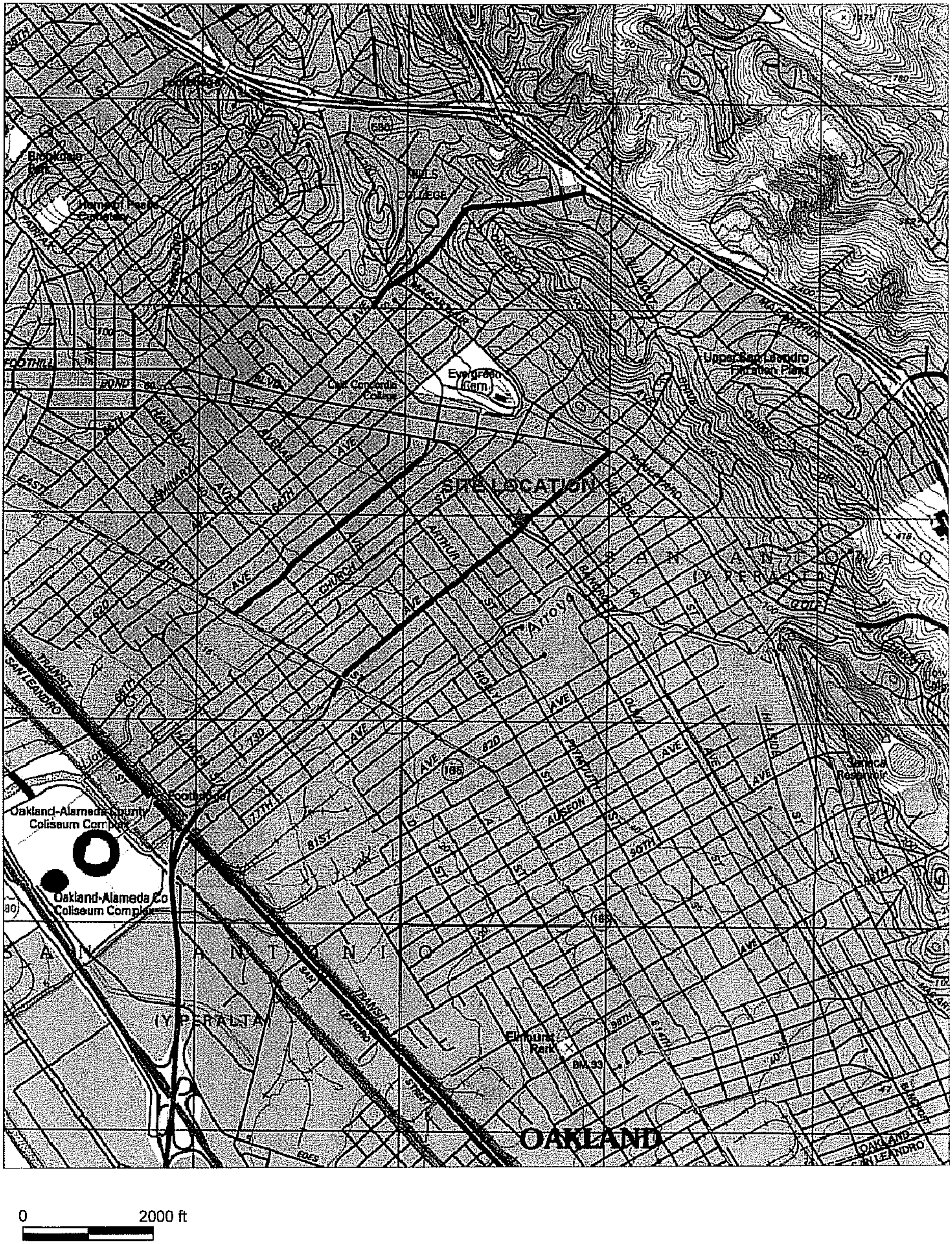
## Table 3. Historical Ground-Water Flow Direction and Gradient
## Station #11117, 7210 Bancroft Ave., Oakland, CA

| Date Sampled | Approximate Flow Direction | Approximate Hydraulic Gradient |
|---|---|---|
| 9/12/2002 | Northeast | 0.03 |
| 12/12/2002 | Northeast | 0.02 |
| 3/10/2003 | Northeast | 0.03 |
| 5/12/2003 | North-Northeast | 0.055 |
| 8/27/2003 | North-Northeast | 0.036 |
| 11/10/2003 | North-Northeast | 0.012 |
| 2/3/2004 | Northeast | 0.013 |
| 5/4/2004 | Northeast | 0.015 |
| 8/31/2004 | Northeast | 0.010 |
| 11/23/2004 | North-Northeast | 0.04 |
| 1/18/2005 | Northeast | 0.02 |
| 6/29/2005 | Variable | 0.003, 0.006 |
| 9/1/2005 | North | 0.03 |
| 11/3/2005 | North | 0.008 |
| 2/14/2006 | North-Northeast | 0.02 |
| 5/30/2006 | North | 0.03 |
| **8/29/2006** | **Northeast** | **0.006** |

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.



## LIST OF FIGURES

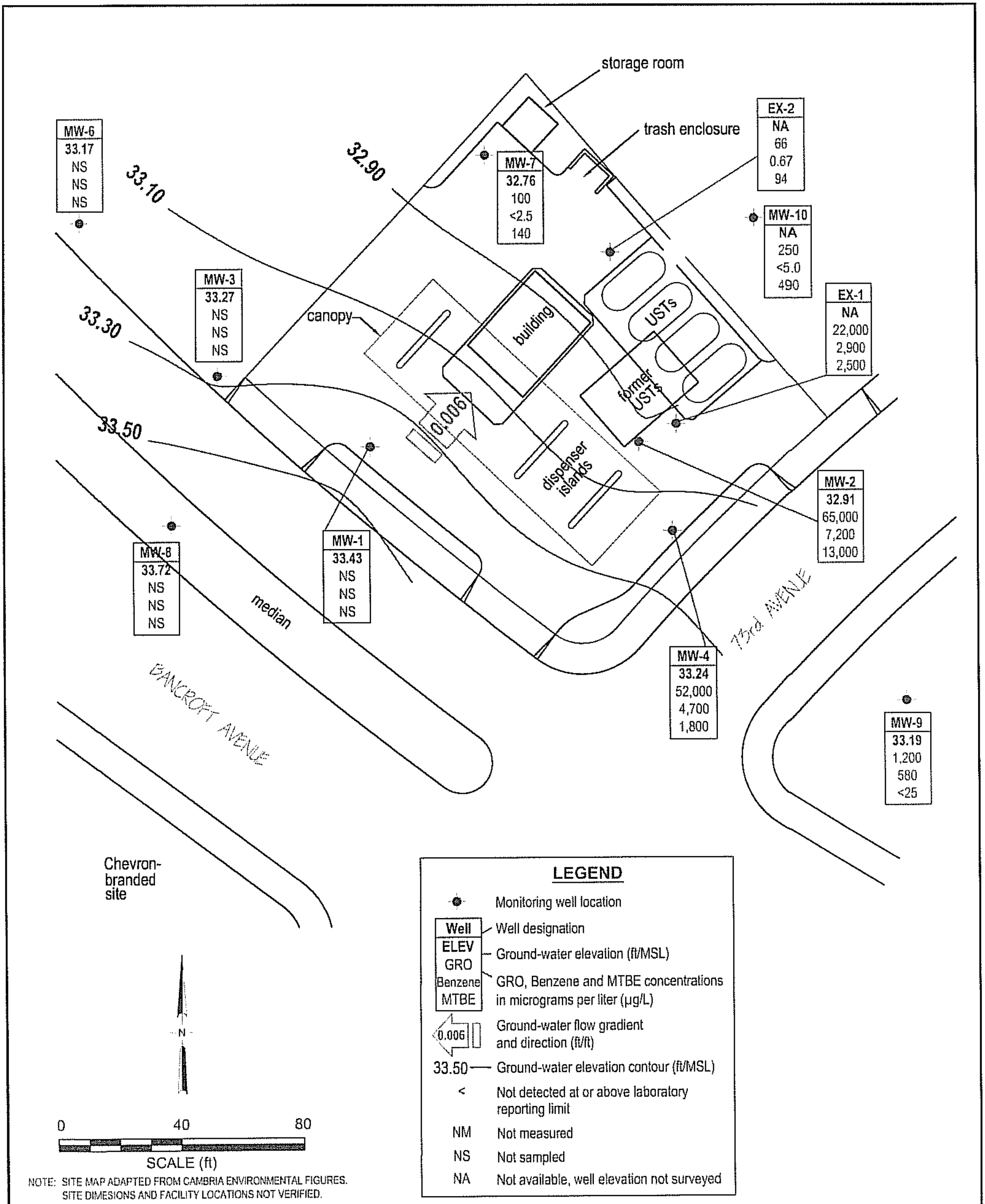


**BROADBENT & ASSOCIATES, INC.**
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California 95926
Project No.: 06-08-649 Date: 12/28/06

Station #11117
7210 Bancroft Avenue
Oakland, California

Site Location Map

Figure
1



NOTE: SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES.
SITE DIMESIONS AND FACILITY LOCATIONS NOT VERIFIED.

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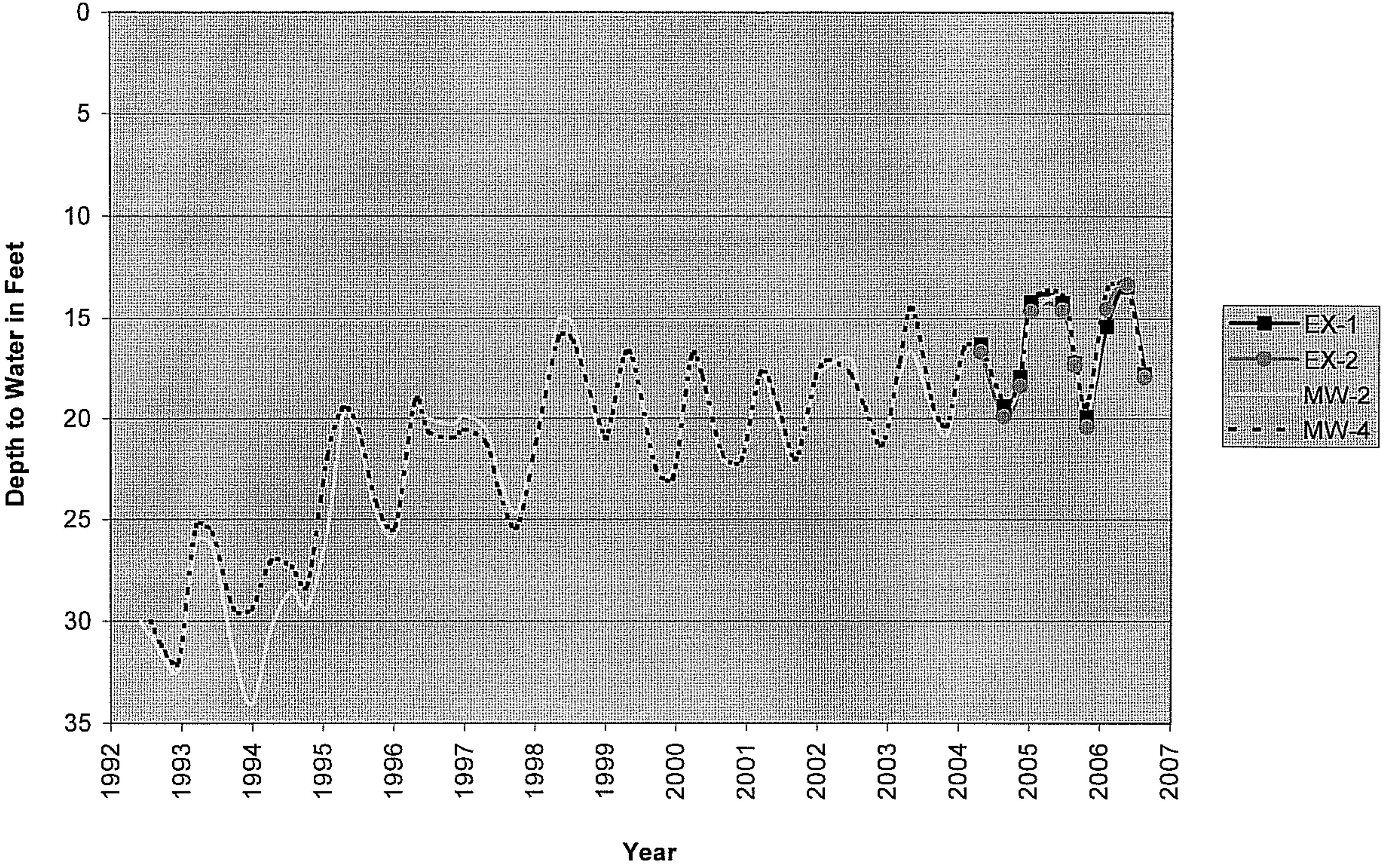
Project No.: 06-08-649 Date: 12/28/06

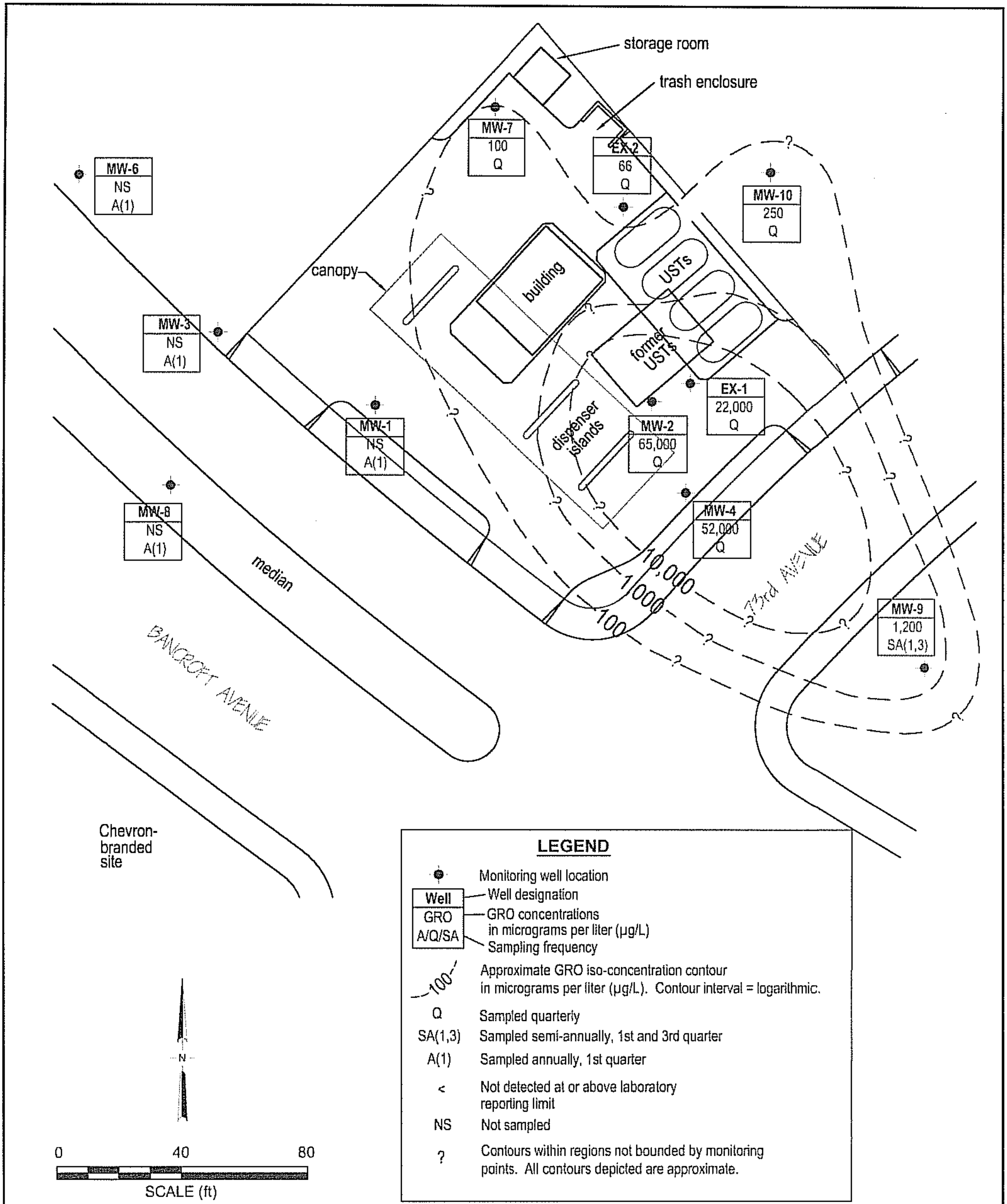
Station #11117
7210 Bancroft Avenue
Oakland, California

Ground-Water Elevation Contours
and Analytical Summary Map
26 August 2006

Figure
2

# Figure 3. Historical Depth to Water Measurements
## Station #11117, 7210 Bancroft Ave., Oakland, California





NOTE: SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES.
SITE DIMESIONS AND FACILITY LOCATIONS NOT VERIFIED.

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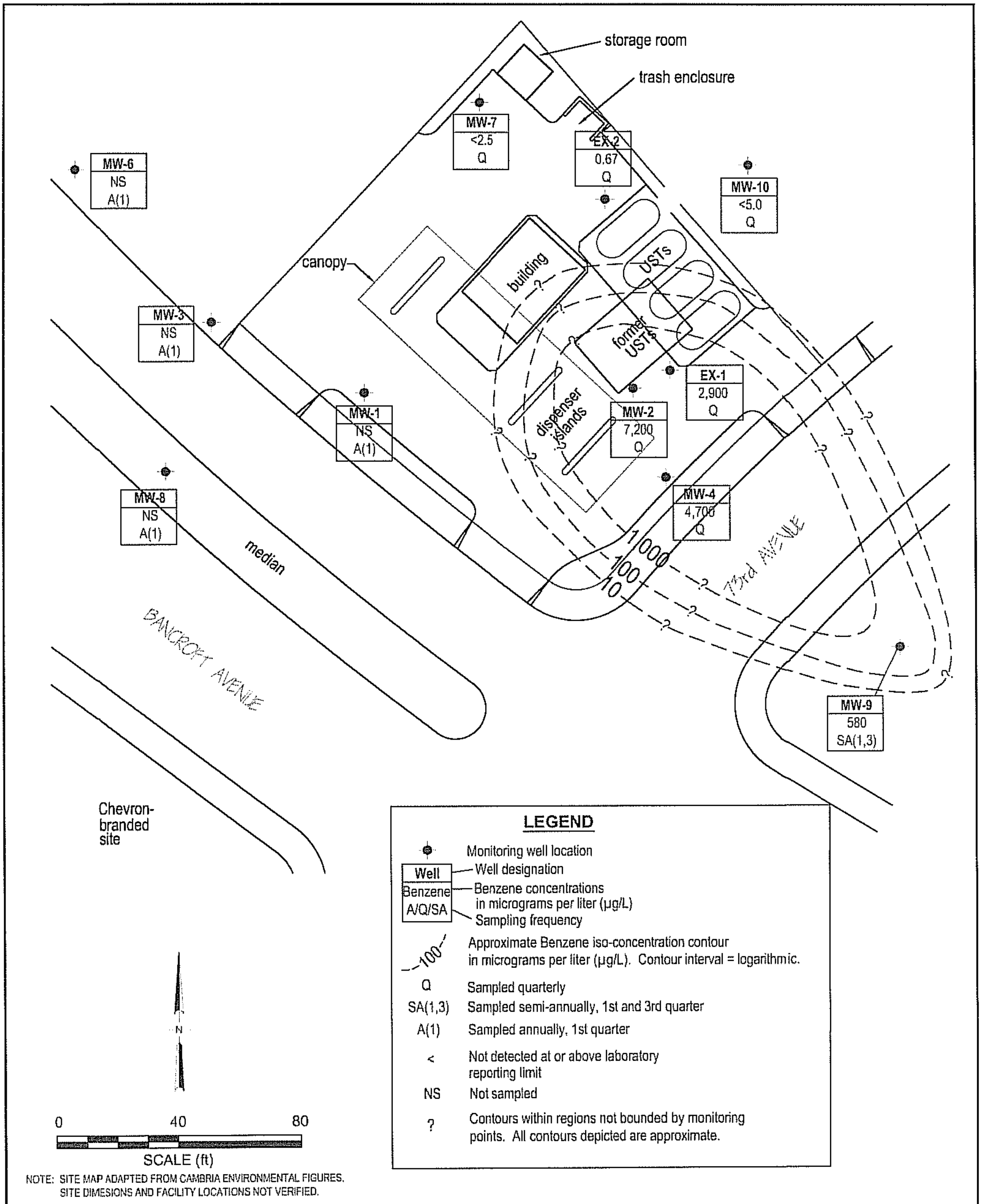
Project No.: 06-08-649 Date: 12/28/06

Station #11117
7210 Bancroft Avenue
Oakland, California

Gasoline Range Organics in Ground Water
Iso-Concentration Contours Map
26 August 2006

Figure
4



## LEGEND

| | |
|---|---|
| ● | Monitoring well location |
| Well | Well designation |
| Benzene | Benzene concentrations in micrograms per liter (µg/L) |
| A/Q/SA | Sampling frequency |
| --100-- | Approximate Benzene iso-concentration contour in micrograms per liter (µg/L). Contour interval = logarithmic. |
| Q | Sampled quarterly |
| SA(1,3) | Sampled semi-annually, 1st and 3rd quarter |
| A(1) | Sampled annually, 1st quarter |
| < | Not detected at or above laboratory reporting limit |
| NS | Not sampled |
| ? | Contours within regions not bounded by monitoring points. All contours depicted are approximate. |

NOTE: SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES. SITE DIMESIONS AND FACILITY LOCATIONS NOT VERIFIED.

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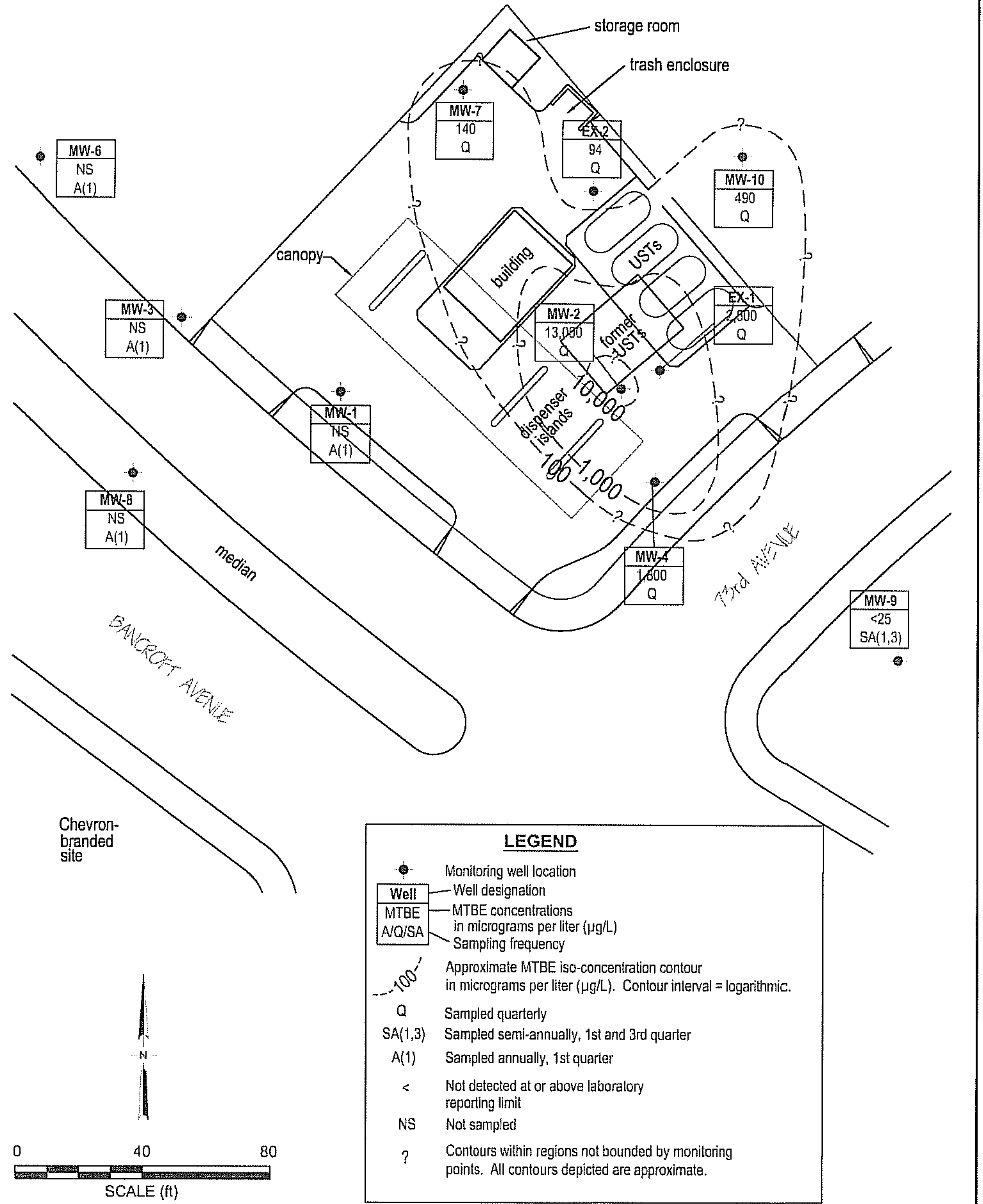
Project No.: 06-08-649 Date: 12/28/06

Station #11117
7210 Bancroft Avenue
Oakland, California

Benzene in Ground Water
Iso-Concentration Contours Map
26 August 2006

Figure
5



NOTE: SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES.
SITE DIMESIONS AND FACILITY LOCATIONS NOT VERIFIED.

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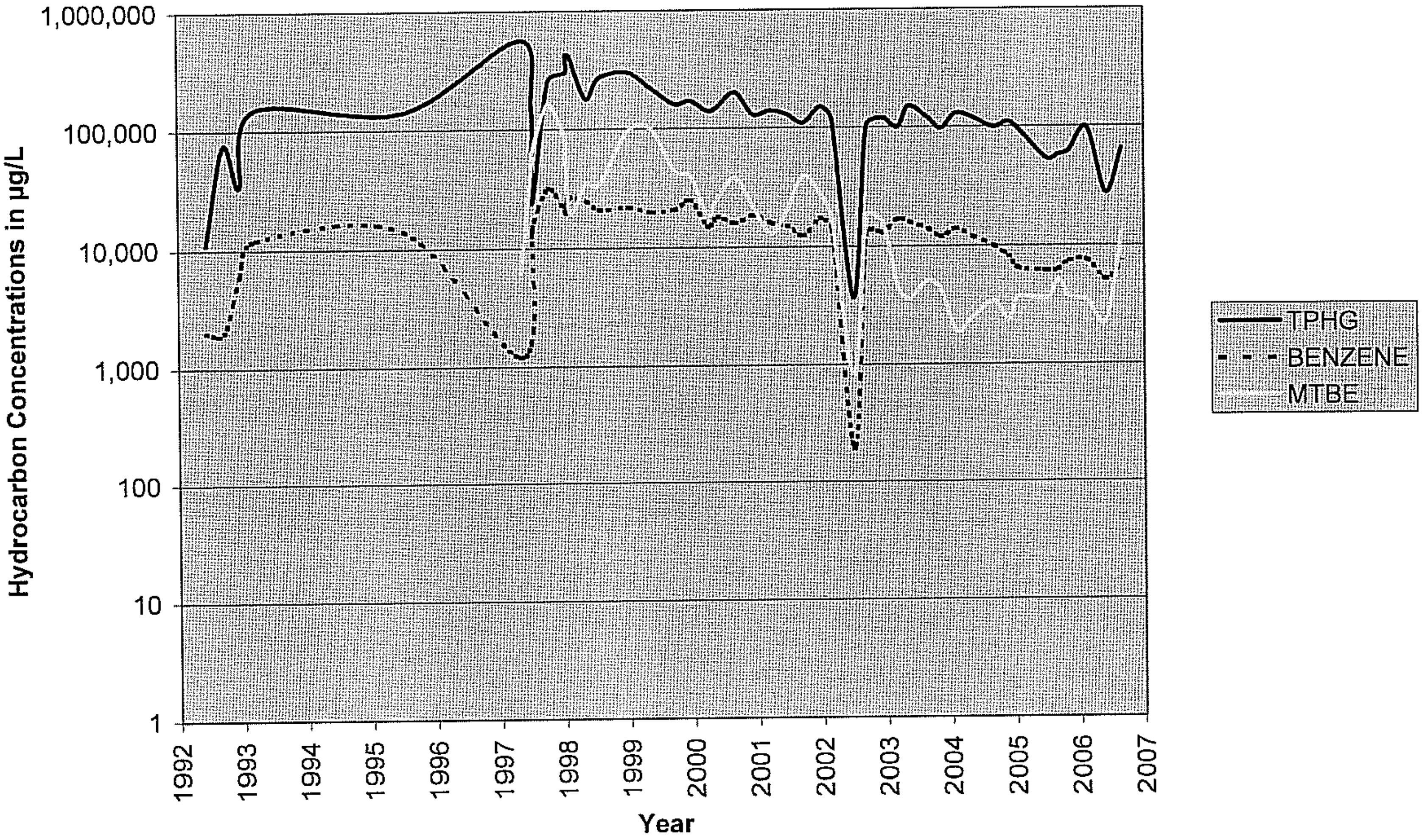
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California 95926
Project No.: 06-08-649 Date: 12/28/06

Station #11117
7210 Bancroft Avenue
Oakland, California

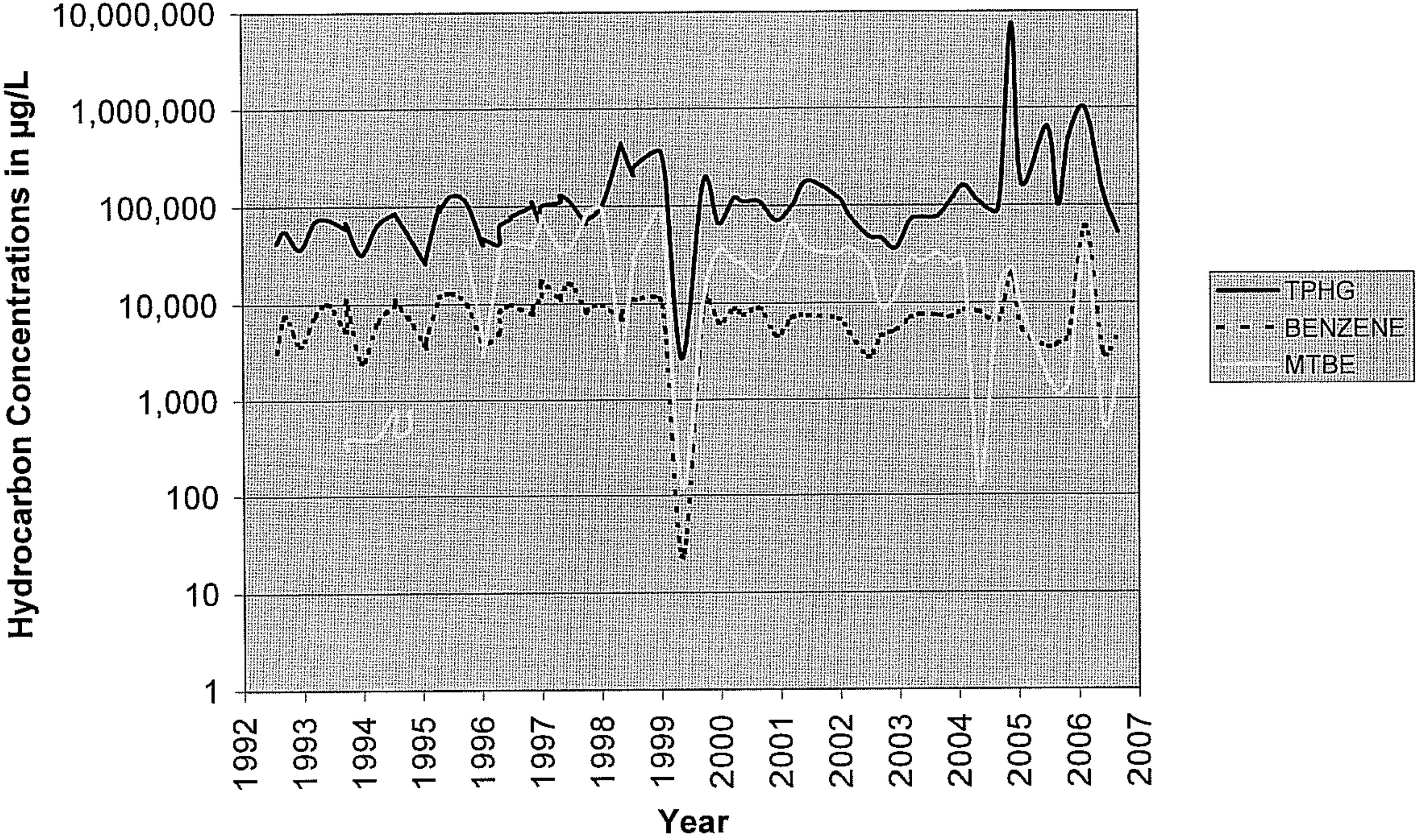
MTBE in Ground Water
Iso-Concentration Contours Map
26 August 2006

Figure
6

## Figure 7. Historic Hydrocarbon Concentrations in MW-2
## Station #11117, 7210 Bancroft Ave., Oakland, California



## Figure 8. Historic Hydrocarbon Concentrations in MW-4
## Station #11117, 7210 Bancroft Ave., Oakland, California



# APPENDIX A.

# SOIL BORING/MONITORING WELL CONSTRUCTION LOGS

SITE/LOCATION
7210 Bancroft Avenue, Oakland, CA

DRILLING CONTRACTOR
Bayland Drilling

OPERATOR
Tom Schmidt

DRILL MAKE & MODEL
CME 75

WELL MATERIAL
2" SCH 40 PVC

SLOT SIZE
0.020"

FILTER PACK
#2/16

BEGUN
12/27/91

COMPLETED
12/27/91

LOGGED BY
T. Lane

SAMPLING METHOD
California modified split spoon

WELL SEAL
Neat cement over bentonite

BORING DIAMETER
8 Inches

GLE/BEARING
90 Degrees

BORING NO
MW-1

FIRST ENCOUNTERED WATER DEPTH
28 Feet

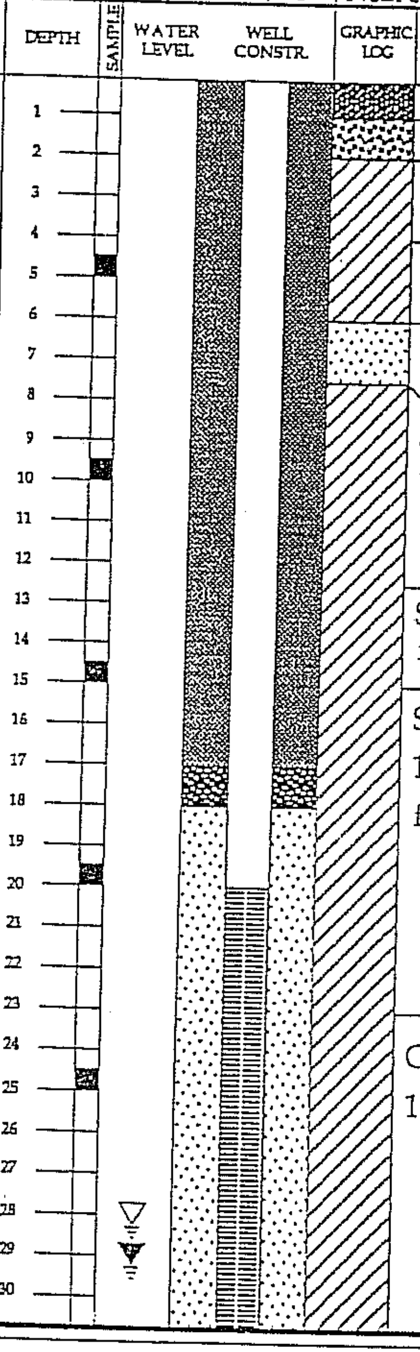
STATIC WATER DEPTH/DATE
29 Feet

BOTTOM OF BORING
40 Feet

WELL NO.
MW-1

| FIELD HEADSPACE* | DEPTH |
|---|---|
| 0.0 | 5 |
| 0.0 | 10 |
| 0.0 | 15 |
| 0.0 | 20 |
| 0.0 | 25 |

*PID (ppm)



MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION

ASPHALT

BASEROCK

Silty CLAY (CL) dark brown, low plasticity, 20-25% silt, trace fine to coarse sand, trace pebble gravel, dry.

Sandy CLAY (CL) yellow-brown, low plasticity, 30-35% fine sand, trace pebble gravel, trace rootlets, moist.

Gravelly SAND (SW) med. brown, well graded, medium to coarse grained, 15% sub-rounded pebble gravel, moist.

Silty CLAY (CL) medium brown, low plasticity, 15-20% silt, trace medium sand, damp.

Sandy CLAY (CL) medium brown, low plasticity, 35-40% fine sand, trace rounded pebble gravel, wet.

Silty CLAY (CL) medium yellow-brown, low plasticity, 15-20% silt, trace angular pebble gravel, trace charcoal fragments, wet.

Gravelly CLAY (CL) medium brown, low plasticity, 10-15% pebble gravel, damp.

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

DATE:

APPROVED BY: Frederick G. Moss, PE No. 35162

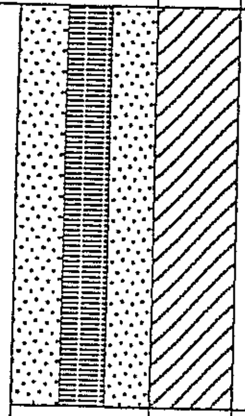
SOIL BORING LOG MW-1
AND
WELL CONSTRUCTION MW-1

BP Oil Station No. 11117
7210 Bancroft Avenue
Oakland, CA

PLATE
A-2

JOB NO.
9-029

| | | | | |
|---|---|---|---|---|
| SITE/LOCATION<br>7210 Bancroft Avenue, Oakland, CA | BEGUN<br>12/27/91 | BORING DIAMETER<br>8 Inches | GLE/BEARING<br>90 Degrees | BORING NO<br>MW-1 |
| DRILLING CONTRACTOR<br>Bayland Drilling | COMPLETED<br>12/27/91 | FIRST ENCOUNTERED WATER DEPTH<br>28 Feet | | |
| OPERATOR<br>Tom Schmidt | LOGGED BY<br>T. Lane | STATIC WATER DEPTH/DATE<br>29 Feet | | |
| DRILL MAKE & MODEL<br>CME 75 | SAMPLING METHOD<br>California modified split spoon | | | BOTTOM OF BORING<br>40 Feet |
| WELL MATERIAL<br>2" SCH 40 PVC | SLOT SIZE<br>0.020" | FILTER PACK<br>#2/16 | WELL SEAL<br>Neat cement over bentonite | WELL NO.<br>MW-1 |



| FIELD HEADSPACE * | DEPTH | SAMPLE | WATER LEVEL | WELL CONSTR. | GRAPHIC LOG | MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION |
|---|---|---|---|---|---|---|
| | 31 | | | | | Gravelly CLAY (CL) medium brown, low plasticity, 20-30% sub-rounded coarse gravel, wet. |
| | 32 | | | | | |
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| | 56 | | | | | |
| | 57 | | | | | |
| | 58 | | | | | |
| *PID | 59 | | | | | |
| (ppm) | 60 | | | | | |

HYDRO-
ENVIRONMENTAL
TECHNOLOGIES, INC.

DATE:

APPROVED BY: Frederick G. Moss, PE No. 35162

SOIL BORING LOG MW-1
AND
WELL CONSTRUCTION MW-1

BP Oil Station No. 11117
7210 Bancroft Avenue
Oakland, CA

PLATE
A-3

JOB NO. -
9-029

# CONFIDENTIAL

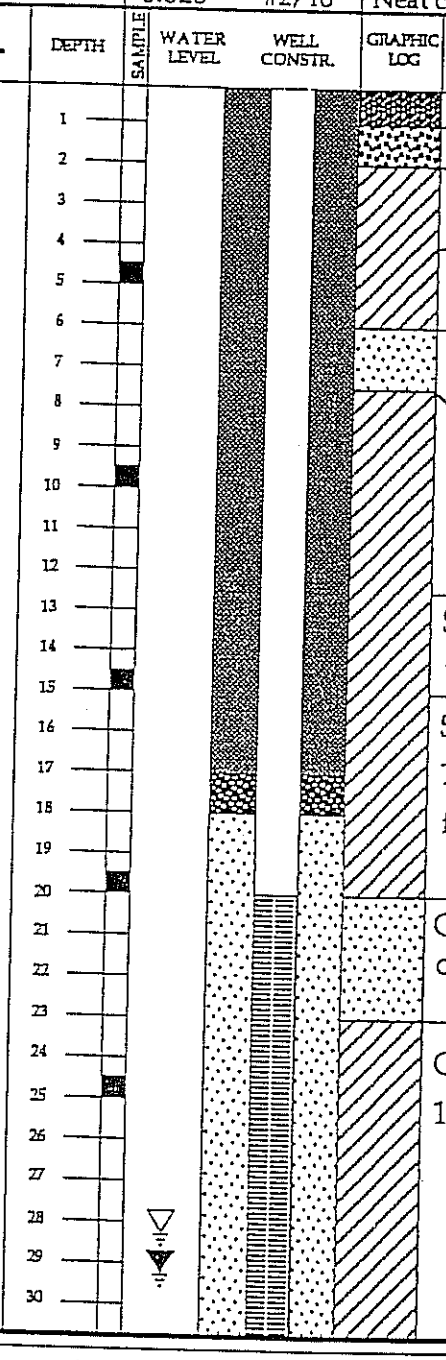
STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

# REMOVED

SITE/LOCATION: 7210 Bancroft Avenue, Oakland, CA
BEGUN: 12/27/91
BORING DIAMETER: 8 Inches
ANGLE/BEARING: 90 Degrees
BORING NO: MW-2
DRILLING CONTRACTOR: Bayland Drilling
COMPLETED: 12/27/91
FIRST ENCOUNTERED WATER DEPTH: 30 Feet
OPERATOR: Tom Schmidt
LOGGED BY: T. Lane
STATIC WATER DEPTH/DATE: 30 Feet
DRILL MAKE & MODEL: CME 75
SAMPLING METHOD: California modified split spoon
BOTTOM OF BORING: 40 Feet
WELL MATERIAL: 2" SCH 40 PVC
SLOT SIZE: 0.020"
FILTER PACK: #2/16
WELL SEAL: Neat cement over bentonite
WELL NO.: MW-2

| FIELD HEADSPACE* | DEPTH |
|---|---|
| 0.0 | 5 |
| 0.0 | 10 |
| 0.0 | 15 |
| 0.0 | 20 |
| 0.0 | 25 |

*PID (ppm)



MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION

ASPHALT

BASEROCK

Silty CLAY (CL) dark brown, low plasticity, 20-25% silt, trace fine to coarse sand, trace pebble gravel, dry.

Sandy CLAY (CL) yellow-brown, low plasticity, 30-35% fine sand, trace pebble gravel, trace rootlets, moist.

Gravelly SAND (SW) med. brown, well graded, medium to coarse grained, 15% sub-rounded pebble gravel, moist.

Silty CLAY (CL) medium brown, low plasticity, 15-20% silt, trace medium sand, damp.

Sandy CLAY (CL) medium brown, low plasticity, 35-40% fine sand, trace rounded pebble gravel, wet.

Silty CLAY (CL) medium yellow-brown, low plasticity, 15-20% silt, trace angular pebble gravel, trace charcoal fragments, wet.

Gravelly SAND (SW) medium brown, well graded coarse sand, 10-15% well rounded pebble gravel, wet.

Gravelly CLAY (CL) medium brown, low plasticity, 10-15% pebble gravel, damp.

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

DATE:

APPROVED BY: Frederick G. Moss, PE No. 35162

SOIL BORING LOG MW-2
AND
WELL CONSTRUCTION MW-2

BP Oil Station No. 11117
7210 Bancroft Avenue
Oakland, CA

PLATE
A-4

JOB NO.
9-029

SITE/LOCATION
7210 Bancroft Avenue, Oakland, CA

BEGUN
12/27/91

BORING DIAMETER
8 Inches

ANGLE/BEARING
90 Degrees

BORING NO
MW-2

DRILLING CONTRACTOR
Bayland Drilling

COMPLETED
12/27/91

FIRST ENCOUNTERED WATER DEPTH
30 Feet

OPERATOR
Tom Schmidt

LOGGED BY
T. Lane

STATIC WATER DEPTH/DATE
30 Feet

DRILL MAKE & MODEL
CME 75

SAMPLING METHOD
California modified split spoon

BOTTOM OF BORING
40 Feet

WELL MATERIAL
2" SCH 40 PVC

SLOT SIZE
0.020"

FILTER PACK
#2/16

WELL SEAL
Neat cement over bentonite

WELL NO.
MW-2

| FIELD HEADSPACE* | DEPTH | SAMPLE | WATER LEVEL | WELL CONSTR. | GRAPHIC LOG | MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION |
|---|---|---|---|---|---|---|
| | 31 | | | | | Gravelly CLAY (CL) medium brown, low plasticity, 20-30% sub-rounded coarse gravel, wet. |
| | 32 | | | | | |
| | 33 | | | | | |
| | 34 | | | | | |
| | 35 | | | | | |
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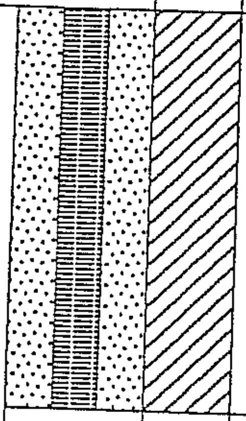
| | 60 | | | | | |



*PID (ppm)

HYDRO-
ENVIRONMENTAL
TECHNOLOGIES, INC.

DATE:

APPROVED BY: Frederick G. Moss, PE No. 35162

SOIL BORING LOG MW-2
AND
WELL CONSTRUCTION MW-2

BP Oil Station No. 11117
7210 Bancroft Avenue
Oakland, CA

PLATE
A-5

JOB NO.
9-029

# CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

# REMOVED

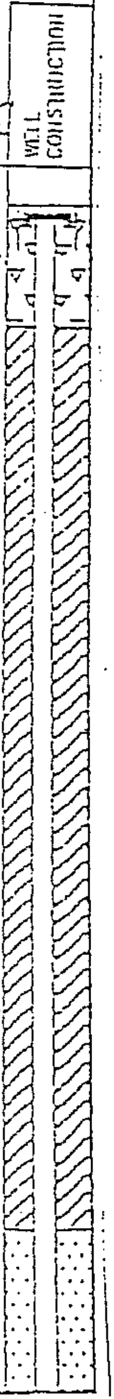
**HUNTER ENVIRONMENTAL SERVICES, INC.**

537 Center Avenue, Suite 350
Martinez, California 94553
415-372-3637

LOG OF BORING NO. MW-3
PROJECT NO: 02-401-002
CLIENT: TOPA
SITE LOCATION: EASTMONT MALL
OAKLAND, CA.
BORING LOCATION: SEE FIG 1
DRILLER: GREGG DRILLING & TESTING
LOGGED BY: J. BRYSON
SUPERVISOR: S. WICKHAM Susan Wickham RG 357

PAGE 1 of 2
DATE: 12/6/89
REF. ELEV. —
METHOD: HOLLOW STEM AUGER
HOLE DIA: 8"

| DEPTH (FT) | BLOW/FT | VAPOR (PPM) | SAMPLE TYPE AND DEPTH | UNIFIED SOIL CLASSIFICATION | DESCRIPTION |
|---|---|---|---|---|---|
| 0 | | | | | 3" Asphalt @ Surface |
| 2 | | | | CL | CLAY, black-grey, stiff, slightly moist, some silt, no odor. |
| 4 | | ND | RING @ 5' | CL | SILTY CLAY, brown, stiff, slightly moist, trace of gravel, no odor. |
| 6 | | | | | |
| 8 | | | | | |
| 10 | | ND | RING @ 10' | CL | As above, some medium sand to coarse gravel. |
| 12 | | | | | |
| 14 | | ND | RING @ 15' | SM | SILTY SAND, brown, some clay & gravel, medium to coarse grained, medium dense, slightly moist, no odor. |
| 16 | | | | | |
| 18 | | | | | |
| 20 | | ND | RING @ 20' | SM | As above. |
| 22 | | | | | |
| 24 | | ND | RING @ 25' | SW | SAND, brown with silt and small gravel, moist, medium dense, no odor. |
| 26 | | | | | |
| 28 | | | | | |



Completed By:

HUNTER ENVIRONMENTAL SERVICES, INC.

December 6, 1989

SOIL BORING LOG MW-3
AND
WELL CONSTRUCTION MW-3

BP Oil Station No. 11117
7210 Bancroft Avenue
Oakland, CA

PLATE
A-6

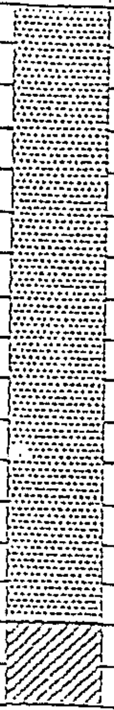
JOB NO.
9-029

**HUNTER**
ENVIRONMENTAL SERVICES, INC.

597 Center Avenue, Suite 350
Martinez, California 94553
415-372-3637

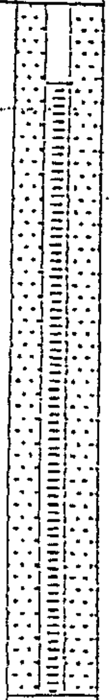
LOG OF BORING NO. MW-3
PROJECT NO: 02-401-002
CLIENT: TOPA
SITE LOCATION: EASTMONT MALL
OAKLAND, CA.
BORING LOCATION: SEE FIG 1
DRILLER: GREGG DRILLING & TESTING
LOGGED BY: J. BRYSON
SUPERVISOR: ~~S. WICKHAM~~ Steven Wickham RG3951

PAGE 2 of 2
DATE: 12/6/89
REF. ELEV. —
METHOD: HOLLOW STEM AUGER
HOLE DIA: 8"



| DEPTH (FT) | BLOW/FT | VAPOR (PPM) | SAMPLE TYPE AND DEPTH | UNIFIED SOIL CLASSIFICATION | DESCRIPTION |
|---|---|---|---|---|---|
| 29 | | | | | |
| | | ND | RING @ 30' | SW | As above. |
| 31 | | | | | |
| 33 | | | | | |
| | | ND | RING @ 35' | SW | As above, moist. |
| 35 | | | | | |
| 37 | | | | | ∇ |
| 39 | | | | | As above, saturated. |
| 41 | | | | | |
| 43 | | | | | CLAY, silty, light brown, firm, slightly moist, no odor. |
| 45 | | | | | TOTAL DEPTH – 45'<br>Well Construction: 2"(0.02") slotted PVC 45'–30'; blank 2" PVC 30'–0; #3 lonestar sand 45'–25'; bentonite 25'–3'; cement 3'–0. |
| 47 | | | | | |
| 49 | | | | | |
| 51 | | | | | |
| 53 | | | | | |
| 55 | | | | | |
| 57 | | | | | |

WELL CONSTRUCTION



Completed By:

HUNTER
ENVIRONMENTAL SERVICES, INC.

December 6, 1989

SOIL BORING LOG MW-3
AND
WELL CONSTRUCTION MW-3

BP Oil Station No. 11117
7210 Bancroft Avenue
Oakland, CA

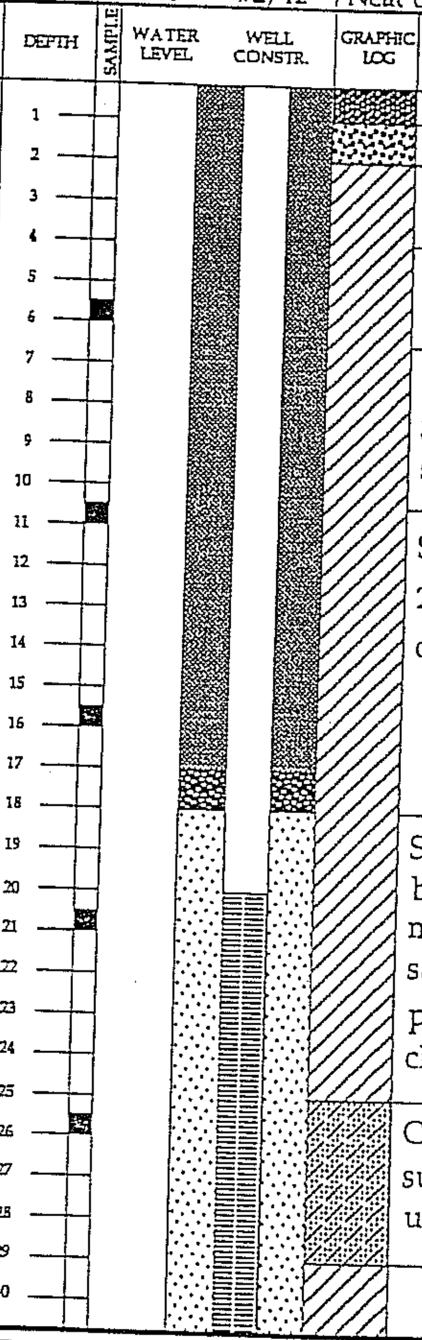
PLATE
A-7

JOB NO.
9-029

SITE/LOCATION: 7210 Bancroft Avenue, Oakland, CA
BEGUN: 7/22/92
BORING DIAMETER: 8 Inches
GLE/BEARING: 90 Degrees
BORING NO: MW-4
DRILLING CONTRACTOR: Bayland Drilling
COMPLETED: 7/22/92
FIRST ENCOUNTERED WATER DEPTH: 31 Feet
OPERATOR: Frank Bartolovich
LOGGED BY: T. Ramirez
STATIC WATER DEPTH/DATE: 32.5 Feet
DRILL MAKE & MODEL: CME 55
SAMPLING METHOD: California modified split spoon
BOTTOM OF BORING: 40 Feet
WELL MATERIAL: 2" SCH 40 PVC
SLOT SIZE: 0.020"
FILTER PACK: #2/12
WELL SEAL: Neat cement with 5% bentonite over hydrated pellets
WELL NO.: MW-4

| BLOWS/FOOT | FIELD HEAD-SPACE* |
|---|---|
| 7<br>24<br>24 | 462 |
| 4<br>12<br>23 | 106 |
| 13<br>14<br>22 | 464 |
| 6<br>10<br>13 | 442 |
| 3<br>13<br>21 | 673 |

*PID (ppm)



MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION

ASPHALT

BASEROCK

CLAY (CL) medium brown, moderate plasticity, 5-10% medium to coarse sand, dry.

Sandy CLAY (CL) light brown, low plasticity, 40% fine to medium angular sand, dry.

Sandy CLAY (CL) greenish-brown, moderate plasticity, 30% fine sub-angular to sub-rounded sand, 5-10% silt content, dry.

Sandy CLAY (CL) medium brown, low plasticity, 25-30% fine to coarse angular to sub-rounded sand, occasional gravel clast up to 5cm, dry.

Sandy CLAY (CL) interbedded light brown and dark brown layers. Dark brown sandy clay is 30% fine to medium sand, with moderate plasticity. Light brown sandy clay is 20% fine sand, 10% silt content, with low plasticity. Both are damp, with increasing moisture, clay content and plasticity with depth.

Clayey SAND (SC) medium brown, fine to medium sub-rounded to rounded sand, 5% gravel with clasts up to 3cm, 15% clay content, moist.

HYDRO-
ENVIRONMENTAL
TECHNOLOGIES, INC.

DATE:

APPROVED BY: Frederick G. Moss, PE No. 35162

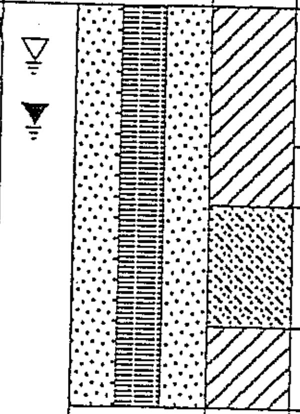
SOIL BORING LOG MW-4
AND
WELL CONSTRUCTION MW-4

BP Oil Station No. 11117
7210 Bancroft Avenue
Oakland, CA

PLATE
A-8

JOB NO.
9-029

SITE/LOCATION: 7210 Bancroft Avenue, Oakland, CA
BEGUN: 7/22/92
BORING DIAMETER: 8 Inches
ANGLE/BEARING: 90 Degrees
BORING NO: MW-4
DRILLING CONTRACTOR: Bayland Drilling
COMPLETED: 7/22/92
FIRST ENCOUNTERED WATER DEPTH: 31 Feet
OPERATOR: Frank Bartolovich
LOGGED BY: T. Ramirez
STATIC WATER DEPTH/DATE: 32.5 Feet
DRILL MAKE & MODEL: CME 55
SAMPLING METHOD: California modified split spoon
BOTTOM OF BORING: 40 Feet
WELL MATERIAL: 2" SCH 40 PVC
SLOT SIZE: 0.020"
FILTER PACK: #2/12
WELL SEAL: Neat cement with 5% bentonite over hydrated pellets
WELL NO.: MW-4



| BLOWS/FOOT | FIELD HEAD-SPACE * | DEPTH | SAMPLE | WATER LEVEL | WELL CONSTR. | GRAPHIC LOG | MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 13<br>50/6 | 691 | 31 | ■ | | | | Sandy CLAY (CL) medium brown, low plasticity, 30% fine to coarse, sub-angular to rounded sand, occasional gravel clast up to 2cm, moist to wet. |
| | | 32 | | ▽ | | | |
| | | 33 | | ▼ | | | |
| 6 | | 34 | | | | | CLAY (CL) dark brown, high plasticity, wet. |
| 8 | | 35 | | | | | |
| 9 | | 36 | | | | | Silty SAND (SM) grey to light brown, fine to medium sand, 10% gravel up to 5cm, sub-rounded to rounded clasts, 20% silt content, saturated. |
| | | 37 | | | | | |
| | | 38 | | | | | |
| 3 | | 39 | | | | | CLAY (CL) med. brown, moderate plasticity, approx. 5% rounded medium sand, wet. |
| 6 | | 40 | | | | | |
| 8 | | 41 | | | | | |
| | | 42 | | | | | |
| | | 43 | | | | | |
| | | 44 | | | | | |
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| | | 59 | | | | | |
| | | 60 | | | | | |

*PID (ppm)

**HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.**

DATE:

APPROVED BY: Frederick G. Moss, PE No. 35162

SOIL BORING LOG MW-4
AND
WELL CONSTRUCTION MW-4

BP Oil Station No. 11117
7210 Bancroft Avenue
Oakland, CA

PLATE
A-9

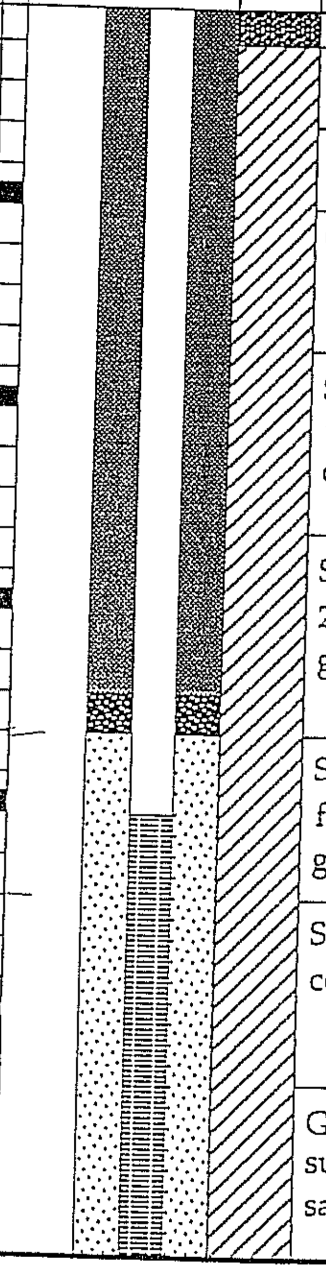
JOB NO.
9-029

# CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

# REMOVED

| | | | | |
|---|---|---|---|---|
| SITE/LOCATION<br>7210 Bancroft Avenue, Oakland, CA | BEGUN<br>7/23/92 | BORING DIAMETER<br>8 Inches | ANGLE/BEARING<br>90 Degrees | BORING NO<br>MW-6 |
| DRILLING CONTRACTOR<br>Bayland Drilling | COMPLETED<br>7/23/92 | FIRST ENCOUNTERED WATER DEPTH<br>31.5 Feet | | |
| OPERATOR<br>Kurt Voss | LOGGED BY<br>T. Ramirez | STATIC WATER DEPTH/DATE<br>31.5 Feet | | |
| DRILL MAKE & MODEL<br>CME 75 | SAMPLING METHOD<br>California modified split spoon | | | BOTTOM OF BORING<br>40 Feet |
| WELL MATERIAL<br>2" SCH 40 PVC | SLOT SIZE<br>0.020" | FILTER PACK<br>#2/12 | WELL SEAL<br>Neat cement with 5% bentonite over hydrated pellets | WELL NO.<br>MW-6 |



| BLOWS/FOOT | FIELD HEAD-SPACE* | DEPTH | MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION |
|---|---|---|---|
| | *PID (ppm) | 1 | ASPHALT |
| | | 2<br>3 | CLAY (CL) dark brown, high plasticity, 10% sub-angular to sub-rounded fine to medium sand, moist. |
| 4<br>6<br>9 | 0.0 | 4<br>5 | Sandy CLAY (CL) dark brown, high plasticity, 25% fine to coarse sand with occasional gravel clasts up to 3cm, dry. |
| | | 6<br>7<br>8 | CLAY (CL) light brown, moderate plasticity, 5-10% fine sand, dry. |
| 6<br>9<br>15 | 0.0 | 9<br>10<br>11<br>12<br>13 | Sandy CLAY (SC) dark brown, high plasticity, 20% fine to coarse angular to sub-rounded sand, occasional gravel clasts up to 4cm, dry. |
| 5<br>12<br>16 | 0.0 | 14<br>15<br>16<br>17<br>18 | Sandy CLAY (CL) yellow brown, moderate plasticity, 20% fine to medium sand, 10% silt content, occasional gravel clasts up to 8cm, dry. |
| 8<br>12<br>15 | 0.0 | 19<br>20<br>21<br>22 | Sandy CLAY (CL) light brown, moderate plasticity, 40% fine to coarse sand, occasional angular to sub-rounded gravel clasts up to 10 cm, moist. |
| 10<br>13<br>16 | 0.0 | 23<br>24<br>25<br>26<br>27 | Sandy CLAY (CL) same as above except only 25% sand content. |
| 9<br>16<br>20 | 0.0 | 28<br>29<br>30 | Gravelly CLAY (CL) medium brown, 25% angular to sub-rounded gravel clasts up to 5cm, 20% fine to coarse sand, decrease gravel and sand content with depth, moist. |

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

DATE:

APPROVED BY: Frederick G. Moss, PE No. 35162

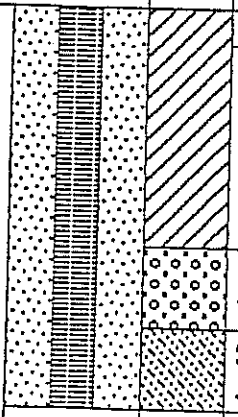
SOIL BORING LOG MW-6
AND
WELL CONSTRUCTION MW-6

BP Oil Station No. 11117
7210 Bancroft Avenue
Oakland, CA

PLATE
A-12

JOB NO.
9-029

SITE/LOCATION: 7210 Bancroft Avenue, Oakland, CA
BEGUN: 7/23/92
BORING DIAMETER: 8 Inches
ANGLE/BEARING: 90 Degrees
BORING NO: MW-6
DRILLING CONTRACTOR: Bayland Drilling
COMPLETED: 7/23/92
FIRST ENCOUNTERED WATER DEPTH: 31.5 Feet
OPERATOR: Kurt Voss
LOGGED BY: T. Ramirez
STATIC WATER DEPTH/DATE: 31.5 Feet
DRILL MAKE & MODEL: CME 75
SAMPLING METHOD: California modified split spoon
BOTTOM OF BORING: 40 Feet
WELL MATERIAL: 2" SCH 40 PVC
SLOT SIZE: 0.020"
FILTER PACK: #2/12
WELL SEAL: Neat cement with 5% bentonite over hydrated pellets
WELL NO. MW-6



| BLOWS/ FOOT | FIELD HEAD-SPACE* | DEPTH | SAMPLE | WATER LEVEL | MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION |
|---|---|---|---|---|---|
| | | 31 | | | |
| | | 32 | | ▽ | Silty CLAY (CL) yellow-brown, 30% silt content, 10% sub-angular to sub-rounded gravel clasts up to 10cm, approx. 5% medium to coarse sand, increase sand content with depth, wet. |
| 4 | | 33 | | | |
| 12 | | 34 | | | |
| 20 | | 35 | | | |
| | | 36 | | | |
| | | 37 | | | Sandy GRAVEL (GP) light brown, gravel clasts up to 7cm, 30% fine to coarse sand, 10% silt content, saturated. |
| 5 | | 38 | | | |
| 9 | | 39 | | | Silty SAND (SM) light grey, fine to medium sand with <5% coarse sand, 35% silt content, saturated. |
| 15 | | 40 | | | |
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| | | 54 | | | |
| | | 55 | | | |
| | | 56 | | | |
| | | 57 | | | |
| | | 58 | | | |
| | *PID | 59 | | | |
| | (ppm) | 60 | | | |

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

DATE:

APPROVED BY: Frederick G. Moss, PE No. 35162

SOIL BORING LOG MW-6
AND
WELL CONSTRUCTION MW-6

BP Oil Station No. 11117
7210 Bancroft Avenue
Oakland, CA

PLATE
A-13

JOB NO.
9-029

# CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

# REMOVED

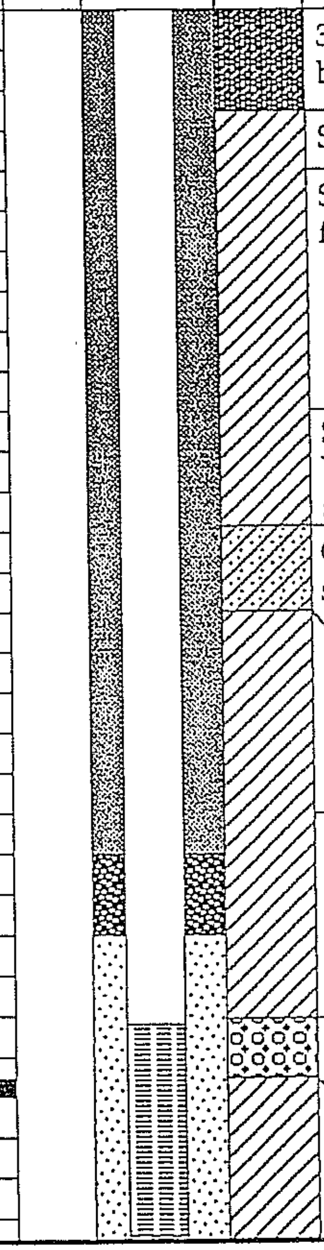
SITE/LOCATION: BP/7210 Bancroft Ave, Oakland
GUN: 10/6/94
BORING DIAMETER: 8"
ANGLE: 90
RING:
BORING NO: MW-7

DRILLING CONTRACTOR: West Hazmat Drilling Corp.
COMPLETED: 10/6/94
FIRST ENCOUNTERED WATER DEPTH: 31.0' damp
BOTTOM OF BORING: 45.0'

MAKE & MODEL: Mobile B-57
OPERATOR: Eugene Nunes
LOGGED BY: F. Maroni
STATIC WATER DEPTH/DATE: 43.67' 10/10/94
WELL NO.: MW-7

WELL MATERIAL: PVC Sch 40
SLOT SIZE: 0.020"
SAMPLING METHOD: CA Modified Split Spoon
BOTTOM OF WELL: 45.0'

FILTER PACK: #3 Monterey Sand
WELL SEAL: Bentonite
PLANNED USE: Monitoring



| BLOWS/ FOOT | PID FIELD HEADSPACE (ppm) | DEPTH | SAMPLE | MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION |
|---|---|---|---|---|
| | | 1<br>2 | | 3" Asphalt over baserock; Gravel (GP) with some reddish brown clay. |
| | | 3 | | Silty CLAY (CL); very dark brown, stiff, dry. |
| 88 | 0.0 | 4<br>5<br>6<br>7<br>8<br>9 | | Sandy CLAY (CL); yellow brown, very stiff; trace very fine grained sand, dry. |
| 65 | 0.0 | 10<br>11<br>12 | | Sandy CLAY (CL); reddish brown, iron oxide deposits, black streaks like coal, well graded coarse grained, subangular to angular sand; few gravel, dry. |
| 90 | 0.0 | 13<br>14<br>15 | | Clayey SAND (SC); brown, well graded coarse sand, some subangular to angular gravel, some fine-grained sand, moist. |
| | | 16<br>17<br>18<br>19 | | Gravelly CLAY (CL); brown, iron oxide deposits, some coarse gravel, few coarse sand. |
| 57 | 0.0 | 20<br>21<br>22<br>23<br>24 | | Sandy CLAY (CL); brown, medium stiff, well graded coarse sand, some angular to subangular gravel, dry. |
| 50 w/ 5" rec. | 0.0 | 25<br>26 | MW-7-25' | Encountered rock/gravel (GP) at 25.5 feet. Drilled out to 26.5 ft. |
| 50 w/ 10" rec. | | 27<br>28<br>29<br>30 | | Sandy CLAY (CL); brown, stiff, well graded, subangular to angular, coarse grained sand; some fine grained angular gravel; few fine grained sand. |

**HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.**

DATE: 11/2/94
APPROVED BY: GP

SOIL BORING LOG
AND
WELL CONSTRUCTION DIAGRAM

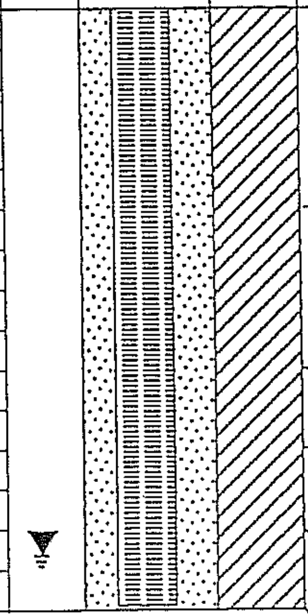
MW-7

PLATE
C-1

SHEET 1 OF 2

JOB NO.
9-029

|  |  |  |  |  |
|---|---|---|---|---|
| ITE/LOCATION<br>BP/7210 Bancroft Ave, Oakland | UN<br>10/6/94 | BORING DIAMETER<br>8" | ANGLE/B NG<br>90° | BORING NO<br>MW-7 |
| RILLING CONTRACTOR<br>Hazmat Drilling Corp. | COMPLETED<br>10/6/94 | FIRST ENCOUNTERED WATER DEPTH<br>31.0' damp |  | BOTTOM OF BORING<br>45.0' |
| AKE & MODEL<br>Mobile B-57 | OPERATOR<br>Eugene Nunes | LOGGED BY<br>F. Maroni | STATIC WATER DEPTH/DATE<br>43.67' 10/10/94 | WELL NO.<br>MW-7 |
| ELL MATERIAL<br>PVC Sch 40 | SLOT SIZE<br>0.020" | SAMPLING METHOD<br>CA Modified Split Spoon |  | BOTTOM OF WELL<br>45.0' |
| ILTER PACK<br>#3 Monterey Sand | WELL SEAL<br>Bentonite |  |  | PLANNED USE<br>Monitoring |



| BLOWS/ FOOT | PID FIELD HEADSPACE (ppm) | DEPTH | SAMPLE | WATER LEVEL | WELL CONSTR. | GRAPHIC LOG | MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION |
|---|---|---|---|---|---|---|---|
|  |  | 31 |  |  |  |  | Sandy CLAY (CL); brown, stiff, medium to coarse grained, subangular to subrounded sand; some fine grained to coarse grained, angular to subangular gravel, damp. |
|  |  | 32 |  |  |  |  |  |
|  |  | 33 |  |  |  |  |  |
|  |  | 34 |  |  |  |  |  |
| 50 w/ 6" rec. | 0.0 | 35 |  |  |  |  | CLAY (CL); yellowish brown, very stiff, damp. |
|  |  | 36 |  |  |  |  |  |
|  |  | 37 |  |  |  |  |  |
|  |  | 38 |  |  |  |  |  |
|  |  | 39 |  |  |  |  | Silty CLAY (CL); yellowish orange, very stiff, moist. |
| 85 w/ 8" rec. | 0.0 | 40 |  |  |  |  |  |
|  |  | 41 |  |  |  |  | Gravelly CLAY (CL); yellowish brown, fine to coarse grained angular gravel; some medium to coarse grained sand, moist. |
|  |  | 42 |  |  |  |  |  |
|  |  | 43 |  | ▼ |  |  |  |
|  |  | 44 |  |  |  |  | CLAY (CL); yellowish brown, trace fine grained sand. |
| 82 |  | 45 |  |  |  |  |  |

T.D. = 45.0"

HYDRO-
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TECHNOLOGIES, INC.

DATE: 11/3/94

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SOIL BORING LOG
AND
WELL CONSTRUCTION DIAGRAM

MW-7

PLATE
C-1

SHEET 2 OF 2

JOB NO.
9-029

# CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

# REMOVED

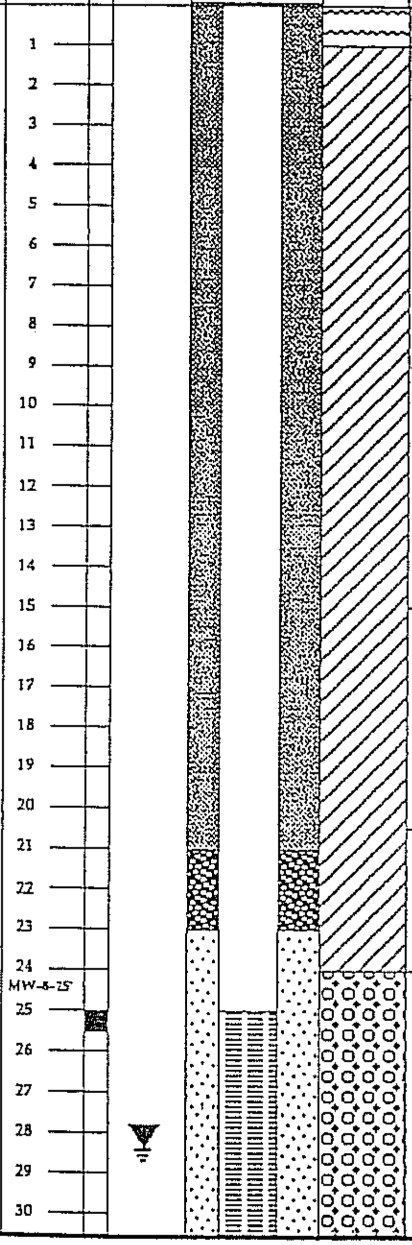
# CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

# REMOVED

| | | | | |
|---|---|---|---|---|
| ITE/LOCATION<br>BP/7210 Bancroft Ave, Oakland | | EGUN<br>10/6/94 | BORING DIAMETER<br>8" | ANGL ARING<br>90° | BORING NO<br>MW-8 |
| RILLING CONTRACTOR<br>West Hazmat Drilling Corp. | | COMPLETED<br>10/6/94 | FIRST ENCOUNTERED WATER DEPTH<br>32.0' | | BOTTOM OF BORING<br>40.0' |
| L MAKE & MODEL<br>Mobile B-57 | OPERATOR<br>Eugene Nunes | LOGGED BY<br>F. Maroni | STATIC WATER DEPTH/DATE<br>28.51' 10/10/94 | | WELL NO.<br>MW-8 |
| ELL MATERIAL<br>PVC Sch 40 | SLOT SIZE<br>0.020" | SAMPLING METHOD<br>CA Modified Split Spoon | | | BOTTOM OF WELL<br>40.0' |
| FILTER PACK<br>#3 Monterey Sand | WELL SEAL<br>Bentonite | | | | PLANNED USE<br>Monitoring |

| BLOWS/FOOT | PID FIELD HEADSPACE (ppm) | DEPTH | SAMPLE |
|---|---|---|---|
| 90 | 0.0 | 10 | |
| 50 w/ 6" rec. | 0.0 | 15 | |
| 80 | 0.0 | 20 | |
| 50 w/ 6" rec. | 0.0 | 25 | MW-8-25' |



MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION

Sandy topsoil (OL/OH); brown.

Silty CLAY (CL); dark gray, very stiff, dry.

Silty CLAY (CL); light brown, stiff; trace fine grained sand, dry.

Sandy CLAY (CL); light brown; some fine to coarse grained sand, some fine-grained, angular to subangular gravel, trace coarse grained gravel; trace silt, dry.

Gravely CLAY (CL); light brown; some fine to coarse grained, well graded, subangular to subrounded gravel, some well graded, medium grained sand, moist.

Sandy CLAY (CL); light brown, some fine-grained sand, moist.

Sandy GRAVEL (GW); fine to coarse grained, well graded gravel; some fine to coarse grained, well-graded sand; trace clay, moist to wet.

HYDRO-
ENVIRONMENTAL
ECHNOLOGIES, INC.

DATE: 11/3/94

APPROVED BY: GP

SOIL BORING LOG
AND
WELL CONSTRUCTION DIAGRAM

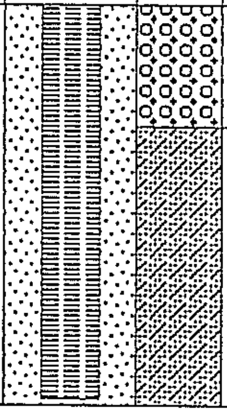
MW-8

PLATE
C-1

SHEET 1 OF 2

JOB NO.
9-029

| | | | | |
|---|---|---|---|---|
| SITE/LOCATION<br>BP/7210 Bancroft Ave | BEGUN<br>10/6/94 | BORING DIAMETER<br>8" | ANC EARING<br>90° | BORING NO<br>MW-8 |
| DRILLING CONTRACTOR<br>West Hazmat Drilling Corp. | COMPLETED<br>10/6/94 | FIRST ENCOUNTERED WATER DEPTH<br>32.0' | | BOTTOM OF BORING<br>40.0' |
| RILL MAKE & MODEL<br>Mobile B-57 / OPERATOR<br>Eugene Nunes | LOGGED BY<br>F. Maroni | STATIC WATER DEPTH/DATE<br>28.51' 10/10/94 | | WELL NO.<br>MW-8 |
| WELL MATERIAL<br>PVC Sch 40 / SLOT SIZE<br>0.020" | SAMPLING METHOD<br>CA Modified Split Spoon | | | BOTTOM OF WELL<br>40.0' |
| FILTER PACK<br>#3 Monterey Sand / WELL SEAL<br>Bentonite | | | | PLANNED USE<br>Monitoring |



| BLOWS/ FOOT | PID FIELD HEADSPACE (ppm) | DEPTH | SAMPLE | WATER LEVEL | WELL CONSTR. | GRAPHIC LOG | MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | | 31 | | | | | As above. |
| | | 32 | | ▽ | | | |
| | | 33 | | | | | |
| 35<br>w/<br>6"<br>rec. | | 34 | | | | | Clayey SAND (SC); brown, medium grained, well-graded sand; some clay; few fine grained, subrounded gravel, wet. |
| | | 35 | | | | | |
| | | 36 | | | | | |
| | | 37 | | | | | |
| | | 38 | | | | | |
| 40<br>w/<br>6"<br>rec. | | 39 | | | | | |
| | | 40 | | | | | As above. |

T.D. = 40.0'

**HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.**

DATE: 11/3/94

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SOIL BORING LOG
AND
WELL CONSTRUCTION DIAGRAM

MW-8

PLATE
C-1

SHEET 2 OF 2

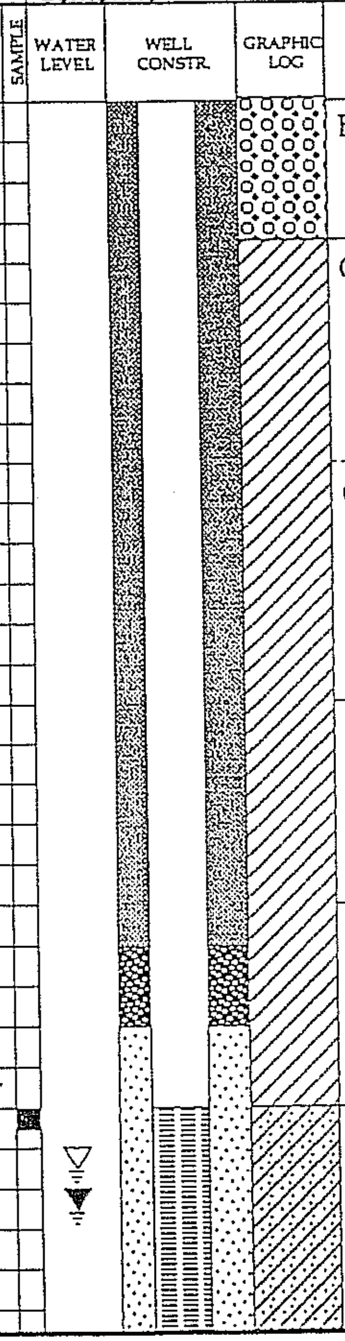
JOB NO.
9-029

# CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

# REMOVED

| | | | | |
|---|---|---|---|---|
| ITE/LOCATION<br>BP/7210 Bancroft Ave, Oakland | UN<br>10/6/94 | BORING DIAMETER<br>8" | ANGLE/B NG<br>90° | BORING NO<br>MW-9 |
| DRILLING CONTRACTOR<br>W Hazmat Drilling Corp. | COMPLETED<br>10/6/94 | FIRST ENCOUNTERED WATER DEPTH<br>27.5' | | BOTTOM OF BORING<br>40.0' |
| DR AKE & MODEL<br>Mobile B-57 · OPERATOR<br>Eugene Nunes | LOGGED BY<br>F. Maroni | STATIC WATER DEPTH/DATE<br>28.45' 10/10/94 | | WELL NO.<br>MW-9 |
| VELL MATERIAL<br>PVC Sch 40 · SLOT SIZE<br>0.020" | SAMPLING METHOD<br>CA Modified Split Spoon | | | BOTTOM OF WELL<br>40.0' |
| FILTER PACK<br>#3 Monterey Sand · WELL SEAL<br>Bentonite | | | | PLANNED USE<br>Monitoring |



| BLOWS/FOOT | PID FIELD HEADSPACE (ppm) | DEPTH | MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION |
|---|---|---|---|
| | | 1 | Backfill; GRAVEL (GP); cobble-sized. |
| | | 2 | |
| | | 3 | |
| | | 4 | CLAY (CL); reddish brown, stiff, dry. |
| | | 5 | |
| | | 6 | |
| | | 7 | |
| | | 8 | |
| | | 9 | |
| 80 | 0.0 | 10 | CLAY (CL); light brown, hard, trace fine grained sand, dry. |
| | | 11 | |
| | | 12 | |
| | | 13 | |
| | | 14 | |
| 90 | 0.0 | 15 | Silty CLAY (CL); light brown, hard, dry. |
| | | 16 | |
| | | 17 | |
| | | 18 | |
| | | 19 | |
| 80 | 0.0 | 20 | As above, moist. |
| | | 21 | |
| | | 22 | |
| | | 23 | |
| | | 24 | |
| 70 | 0.0 | 25 | Clayey SAND (SC); brown; fine to medium grained, well graded, rounded to subrounded, moist. |
| | | 26 | |
| | | 27 | |
| | | 28 | |
| | | 29 | |
| | | 30 | |

**HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.**

DATE: 11/2/94

APPROVED BY: GP

SOIL BORING LOG
AND
WELL CONSTRUCTION DIAGRAM

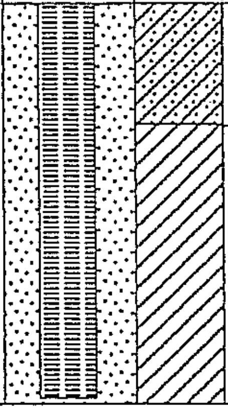
MW-9

PLATE
C-1

SHEET 1 OF 2

JOB NO.
9-029

| | | | | |
|---|---|---|---|---|
| SITE/LOCATION<br>BP/7210 Bancroft Ave, Oakland | EGUN<br>10/6/94 | BORING DIAMETER<br>8" | ANGL' ARING<br>9 | BORING NO<br>MW-9 |
| DRILLING CONTRACTOR<br>West Hazmat Drilling Corp. | COMPLETED<br>10/6/94 | FIRST ENCOUNTERED WATER DEPTH<br>27.5' | | BOTTOM OF BORING<br>40.0' |
| L-MAKE & MODEL<br>obile B-57 | OPERATOR<br>Eugene Nunes | LOGGED BY<br>F. Maroni | STATIC WATER DEPTH/DATE<br>28.45' 10/10/94 | WELL NO.<br>MW-9 |
| WELL MATERIAL<br>PVC Sch 40 | SLOT SIZE<br>0.020" | SAMPLING METHOD<br>CA Modified Split Spoon | | BOTTOM OF WELL<br>40.0' |
| FILTER PACK<br>#3 Monterey Sand | WELL SEAL<br>Bentonite | | | PLANNED USE<br>Monitoring |



| BLOWS/ FOOT | PID FIELD HEADSPACE (ppm) | DEPTH | SAMPLE | WATER LEVEL | WELL CONSTR. | GRAPHIC LOG | MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | | 31 | | | | | Clayey SAND (SC); brown, fine-grained, well-graded, subrounded to rounded sand; few fine to coarse grained, angular to subrounded gravel, wet. |
| | | 32 | | | | | |
| | | 33 | | | | | |
| | | 34 | | | | | Gravelly CLAY (CL); brown, fine grained, well graded, subangular to subrounded gravel; some fine grained sand, wet. |
| 70 | | 35 | | | | | |
| | | 36 | | | | | |
| | | 37 | | | | | |
| | | 38 | | | | | |
| | | 39 | | | | | As above. |
| | | 40 | | | | | |
| | | | | | | | T.D. = 40.0' |

HYDRO-
ENVIRONMENTAL
TECHNOLOGIES, INC.

DATE: 11/2/94

APPROVED BY: GP

SOIL BORING LOG
AND
WELL CONSTRUCTION DIAGRAM

MW-9

PLATE
C-1

SHEET 2 OF 2

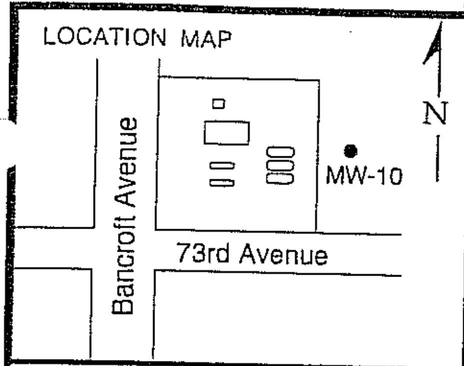
JOB NO.
9-029

# CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

# REMOVED

LOCATION MAP

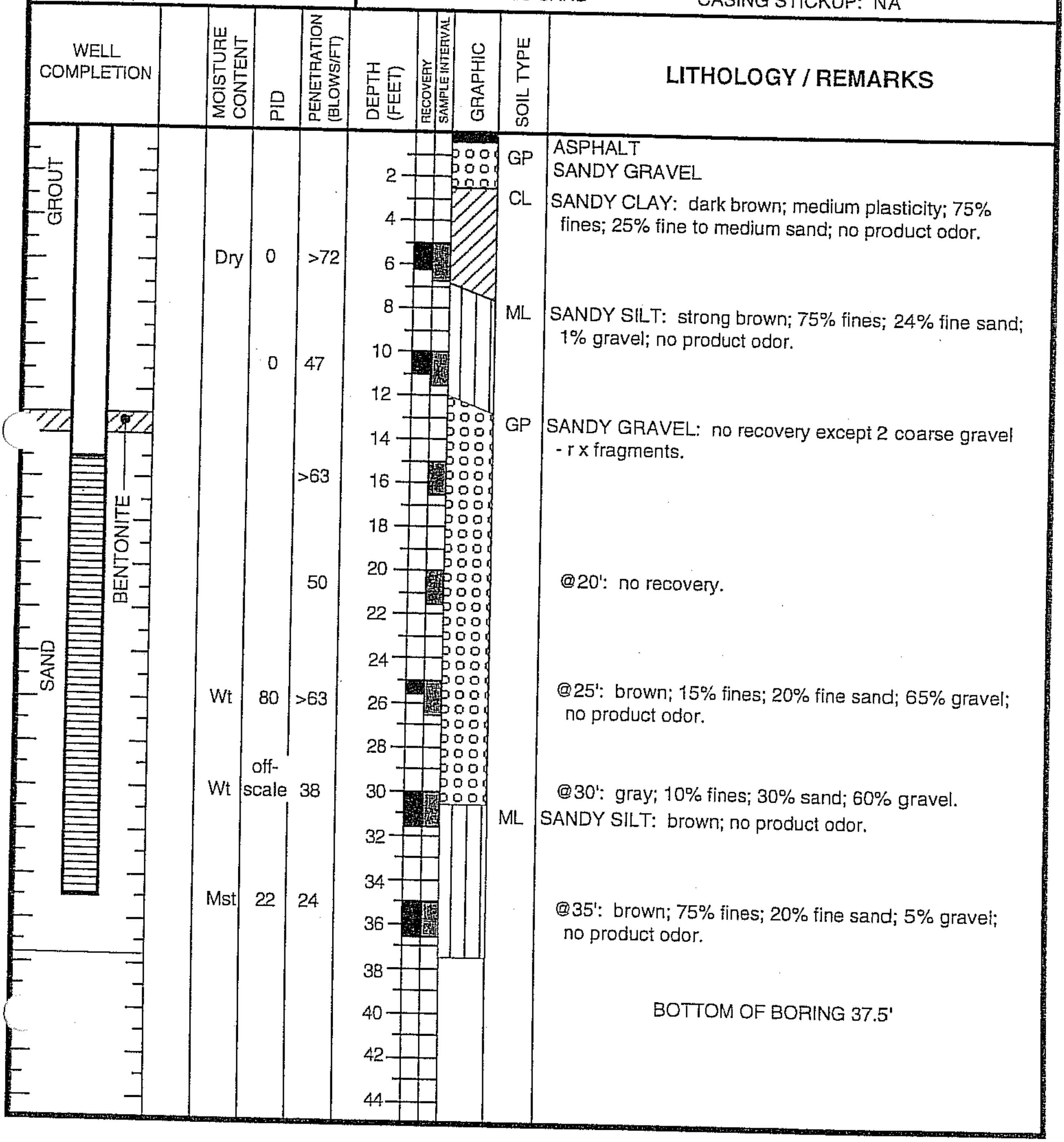


**PACIFIC ENVIRONMENTAL GROUP, INC.**

WELL NO. MW-10
PAGE 1 OF 1

PROJECT NO. 360-016.1A
LOGGED BY: T.B.
DRILLER: MITCHELL
DRILLING METHOD: HSA
SAMPLING METHOD: CAL MOD
CASING TYPE: SCH 40 PVC
SLOT SIZE: 0.020
GRAVEL PACK: #8 SAND

CLIENT: BP OIL COMPANY
DATE DRILLED: 7-7-97
LOCATION: 7210 Bancroft Ave., Oakland
HOLE DIAMETER: 8"
HOLE DEPTH: 37.5'
WELL DIAMETER: 2"
WELL DEPTH: 35'
CASING STICKUP: NA



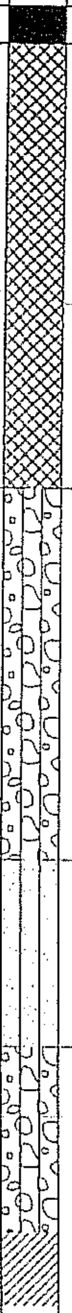
| MOISTURE CONTENT | PID | PENETRATION (BLOWS/FT) | DEPTH (FEET) | SOIL TYPE | LITHOLOGY / REMARKS |
|---|---|---|---|---|---|
| | | | | | ASPHALT |
| | | | 2 | GP | SANDY GRAVEL |
| | | | 4 | CL | SANDY CLAY: dark brown; medium plasticity; 75% fines; 25% fine to medium sand; no product odor. |
| Dry | 0 | >72 | 6 | | |
| | | | 8 | ML | SANDY SILT: strong brown; 75% fines; 24% fine sand; 1% gravel; no product odor. |
| | 0 | 47 | 10 | | |
| | | | 14 | GP | SANDY GRAVEL: no recovery except 2 coarse gravel - r x fragments. |
| | | >63 | 16 | | |
| | | 50 | 20 | | @20': no recovery. |
| Wt | 80 | >63 | 26 | | @25': brown; 15% fines; 20% fine sand; 65% gravel; no product odor. |
| Wt | off-scale | 38 | 30 | | @30': gray; 10% fines; 30% sand; 60% gravel. |
| | | | | ML | SANDY SILT: brown; no product odor. |
| Mst | 22 | 24 | 36 | | @35': brown; 75% fines; 20% fine sand; 5% gravel; no product odor. |
| | | | 40 | | BOTTOM OF BORING 37.5' |

Cambria Environmental Technology, Inc.
1144 - 65th St.
Oakland, CA 94608
Telephone: (510) 420-0700
Fax: (510) 420-9170

# BORING/WELL LOG

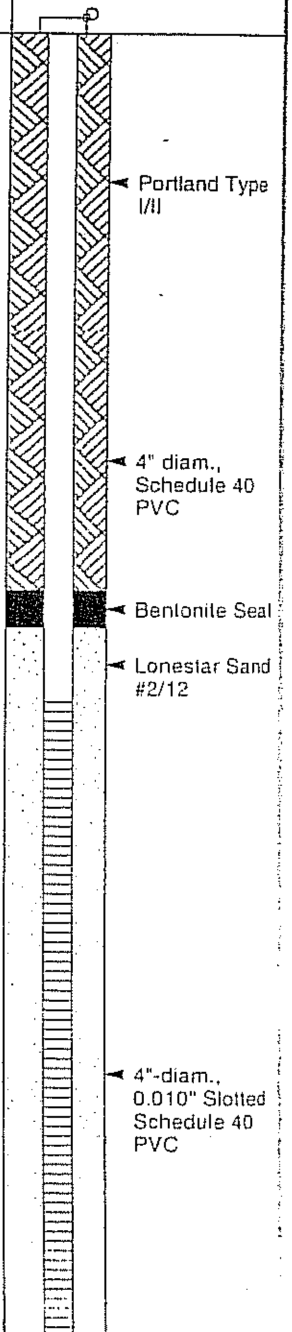
CLIENT NAME BP Oil Company
JOB/SITE NAME BP-11117
LOCATION 7210 Bancroft Avenue, Oakland, California
PROJECT NUMBER 852-1546
DRILLER V&W Drilling
DRILLING METHOD Hollow-stem auger
BORING DIAMETER 10"
LOGGED BY J. Jones
REVIEWED BY K. Rahman, RG
REMARKS Hand augered to 5' bgs; located 5' from well MW-2.

BORING/WELL NAME EX-1
DRILLING STARTED 30-Nov-99
DRILLING COMPLETED 30-Nov-99
WELL DEVELOPMENT DATE (YIELD) 30-Nov-99
GROUND SURFACE ELEVATION Not Surveyed
TOP OF CASING ELEVATION NA
SCREENED INTERVAL 18 to 38 ft bgs
DEPTH TO WATER (First Encountered) 26.0 ft (30-Nov-99) ∇
DEPTH TO WATER (Static) 20.55 ft (30-Nov-99) ▼



| TPHg (mg/kg) | BLOW COUNTS | SAMPLE ID | DEPTH (ft bgs) | U.S.C.S. | LITHOLOGIC DESCRIPTION | CONTACT DEPTH (ft bgs) |
|---|---|---|---|---|---|---|
| | | | | | ASPHALT. | 1.0 |
| | | | | | Silty GRAVEL; (FILL); light brown; dry; 5% clay, 35% silt, 20% sand, 40% gravel; low plasticity; moderate to high estimated permeability. | |
| | 4<br>7<br>7 | EX-1@6' | 5 | | @ 5' - medium dense. | |
| | 4<br>4<br>5 | EX-1@11' | 10 | | SAND; (SW); tan; loose; moist; 10% silt, 85% medium grained sand, 5% gravel; high estimated permeability. | 13.0 |
| <1.0 | 20<br>50 | EX-1@15.5' | 15 | GM | Sandy Silty GRAVEL; (GM); brown; dense; moist; 5% clay, 35% silt, 15% medium grained sand, 45% angular gravel up to 2"; high estimated permeability. | |
| <1.0 | 14<br>17<br>20 | EX-1@21' | 20 | | @ 20' - olive brown; damp; 10% medium grained sand, 50% angular gravel up to 0.5". ▼ | 23.0 |
| | 20<br>50 | EX-1@25.5' | 25 | SM | Gravelly Silty SAND; (SM); brown; dense; wet; 5% clay, 35% silt, 40% coarse grained sand, 20% gravel; high estimated permeability. ∇ | 28.0 |
| | 20<br>50 | EX-1@30.5' | 30 | GM | Sandy Silty GRAVEL; (GM); olive; dense; wet; 20% silt, 35% sand, 45% gravel; high estimated permeability. | 33.0 |
| | | | 35 | | Sandy Silty CLAY; (CL); see next page. | |

## WELL DIAGRAM

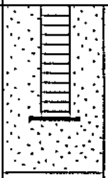


Cambria Environmental Technology, Inc.
1144 - 65th St.
Oakland, CA 94608
Telephone: (510) 420-0700
Fax: (510) 420-9170

# BORING/WELL LOG

**CLIENT NAME** BP Oil Company
**JOB/SITE NAME** BP-11117
**LOCATION** 7210 Bancroft Avenue, Oakland, California
**BORING/WELL NAME** EX-1
**DRILLING STARTED** 30-Nov-99
**DRILLING COMPLETED** 30-Nov-99

*Continued from Previous Page*

| TPHg (mg/kg) | BLOW COUNTS | SAMPLE ID | EXTENT | DEPTH (ft bgs) | U.S.C.S. | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | CONTACT DEPTH (ft bgs) | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | 17<br>23<br>33 | EX-1@36' | ☒<br>☒<br>■ | | CL | ▨ | **Sandy Silty CLAY**; (CL); brown mottled with black; hard; damp; 45% clay, 35% silt, 20% very fine grained sand; low plasticity; low estimated permeability. | |  |
| | 12<br>60/6 | EX-1@39' | ☒<br>■<br>○ | | | | | 39.5 | Bottom of Boring @ 39.5 ft |

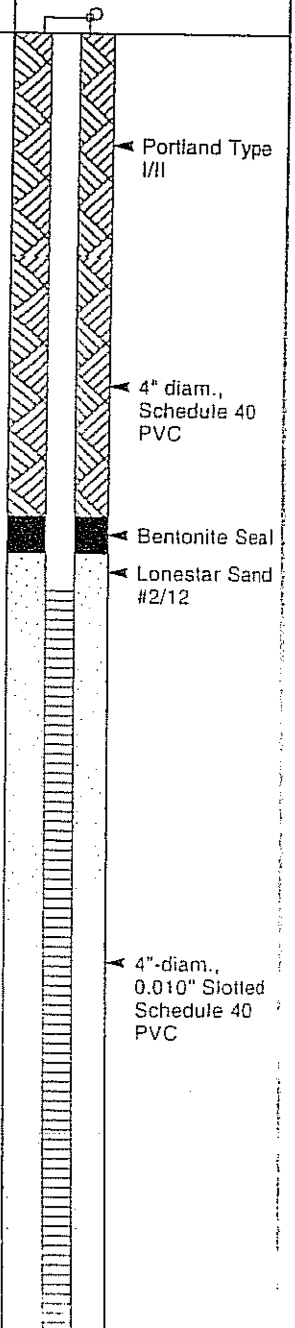
Cambria Environmental Technology, Inc.
1144 - 65th St.
Oakland, CA 94608
Telephone: (510) 420-0700
Fax: (510) 420-9170

# BORING/WELL LOG

**CLIENT NAME** BP Oil Company
**JOB/SITE NAME** BP-11117
**LOCATION** 7210 Bancroft Avenue, Oakland, California
**PROJECT NUMBER** 852-1546
**DRILLER** V&W Drilling
**DRILLING METHOD** Hollow-stem auger
**BORING DIAMETER** 10"
**LOGGED BY** J. Jones
**REVIEWED BY** K. Rahman, RG
**REMARKS** Hand augered to 5' bgs; located between trash enclosure and UST slab.

**BORING/WELL NAME** EX-2
**DRILLING STARTED** 30-Nov-99
**DRILLING COMPLETED** 30-Nov-99
**WELL DEVELOPMENT DATE (YIELD)** 30-Nov-99
**GROUND SURFACE ELEVATION** Not Surveyed
**TOP OF CASING ELEVATION** NA
**SCREENED INTERVAL** 15 to 35 ft bgs
**DEPTH TO WATER (First Encountered)** 26.0 ft (30-Nov-99) ∇
**DEPTH TO WATER (Static)** 22.64 ft (30-Nov-99) ▼

| TPHg (mg/kg) | BLOW COUNTS | SAMPLE ID | EXTENT | DEPTH (ft bgs) | U.S.C.S. | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | CONTACT DEPTH (ft bgs) | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  | ASPHALT. | 1.0 |  |
|  |  |  |  |  |  |  | Silty Sandy GRAVEL; (FILL); brown; dry; 5% clay, 15% silt, 20% sand, 50% gravel; high estimated permeability. | 4.0 |  |
|  | 10<br>12<br>14 | EX-2@6' |  | 5 | ML |  | Sandy SILT; (ML); orange brown; very stiff; dry; 5% clay, 55% silt, 30% sand, 10% gravel; low plasticity; moderate estimated permeability. | 8.0 |  |
| <1.0 | 13<br>15<br>19 | EX-2@11' |  | 10 | GM |  | Sandy Silty GRAVEL; (GM); brown; dense; dry; 5% clay, 20% silt, 25% sand, 50% gravel; high estimated permeability. |  |  |
|  | 20<br>50 | EX-2@15.5' |  | 15 |  |  |  | 18.0 |  |
| <1.0 | 26<br>55 | EX-2@20.5' |  | 20 | SM |  | Silty SAND; (SM); brown; dense; damp; 25% silt, 70% medium grained sand, 5% gravel; high estimated permeability. | 23.0 |  |
|  | 18<br>26<br>30 | EX-2@26' |  | 25 | GP |  | Silty Sandy GRAVEL; (GP); brown; dense; wet; 15% silt, 20% medium to coarse grained sand, 65% gravel; high estimated permeability. |  |  |
|  |  |  |  | 30 |  |  |  | 30.5 |  |
|  | 10<br>13<br>26 | EX-2@31' |  | 35 | CL |  | Sandy Silty CLAY; (CL); light brown; hard; damp; 45% clay, 35% silt, 20% very fine grained sand; low plasticity; low estimated permeability. |  |  |



Cambria Environmental Technology, Inc.
1144 - 65th St.
Oakland, CA 94608
Telephone: (510) 420-0700
Fax: (510) 420-9170

# BORING/WELL LOG

|  |  |  |  |
|---|---|---|---|
| **CLIENT NAME** | BP Oil Company | **BORING/WELL NAME** | EX-2 |
| **JOB/SITE NAME** | BP-11117 | **DRILLING STARTED** | 30-Nov-99 |
| **LOCATION** | 7210 Bancroft Avenue, Oakland, California | **DRILLING COMPLETED** | 30-Nov-99 |

*Continued from Previous Page*

| TPHg (mg/kg) | BLOW COUNTS | SAMPLE ID | EXTENT | DEPTH (ft bgs) | U.S.C.S. | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | CONTACT DEPTH (ft bgs) | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
|  | 10<br>13<br>32 | EX-2@36' | ☒<br>☒<br>■ |  |  | ▨ |  | 36.5 | Bottom of Boring @ 36.5 ft |

**URS**
1333 Broadway, Suite 800
Oakland, California 94612

# LOG OF BORING

**Borehole ID:** A-1
**Total Depth:** 46.5 feet bgs.

## PROJECT INFORMATION

**Project:** Former BP Site# 11117 Soil and Water Investigation
**Site Location:** 7210 Bancroft Ave, Oakland, CA
**Project Manager:** Lynelle Onishi
**PG:** Barbara Jakub
**Geologist:** Andrew Fowler
**Job Number:** 38487353.0A034

## DRILLING INFORMATION

**Drilling Company:** Gregg Drilling and Testing, Inc.
**Driller:** Paul Rogers
**Type of Drilling Rig:** Geoprobe
**Drilling Method:** 4.25" Simco Augers
**Sampling Method:** Split spoon, every 5'
**Date(s) Drilled:** 9/27/05

## BORING INFORMATION

**Groundwater Depth:** 22.6 feet bgs.
**Boring Location:** Adjacent to north west enrtance on Bancroft Ave.
**Air Knife or Hand Auger Depth:** 5.0 feet
**Boring Diameter:** 4.25"
**Coordinates:** X Y
**Boring Type:** Exploratory

| Depth (ft bgs) | Symbol | Lithologic Description | USCS | PID (ppm) | Sample ID | Recovery | Comments |
|---|---|---|---|---|---|---|---|
| 0 | | ASPHALT | | | | | |
| 2 | | CLAYEY SANDY GRAVEL: Very dark grayish brown (10YR 3/2), dense, dry, 40% angular gravel, 30% fine - coarse angular sand, 20% clay, 10% silt. | GP | | | | Boring grouted with neat Portland Cement. Top 3" finished to grade with cement. |
| | | SILTY CLAY: Very dark grayish brown (10YR 3/2), stiff, dry, 80% clay, 15% silt, 5% fine med sand, minor gravel, medium plasticity, no odor. | CL | | | | |
| 4<br>6<br>8 | | SILTY SANDY CLAY: Dark yellowish brown (10YR 4/4), stiff, dry, 50% clay, 30% fine - medium angular sand, 20% silt, minor angular gravel up to 1 cm diameter, no odor. | | 0 | 07:45<br>A-1 @ 6 - 6.5 | ▨ | Top 5' logged from hand auger / airknife cuttings. |
| 10<br>12 | | SILTY CLAY: Dark yellowish brown (10YR 4/4), stiff, dry, 70% clay, 25%silt, 5% medium sand, no odor. | | 1 | 07:50<br>A-1 @ 11 - 11.5 | ▨ | |
| 14<br>16<br>18<br>20 | | CLAYEY SAND: Grayish brown (10YR 5/2), medium dense, dry, 70% fine sand, 30% clay, no odor.<br>@15.5' silt content increases 65% fine - medium sand, 25% clay, 10% silt | SM | 0<br>0 | 07:52<br>A-1 @ 16 - 16.5<br>07:58<br>A-1 @ 21 - 21.5 | ▨<br>▨ | |
| 22 | | CLAYEY GRAVEL: Yellowish brown(10YR 5/4), dense, moist, 65% angular medium gravel up to 1 cm diameter, 20% clay, 15% angular medium sand, no odor. | GM | | 08:00<br>A-1 @ 22.6' | | ▼ |

| Depth (ft bgs) | Symbol | Lithologic Description | USCS | PID (ppm) | Sample I.D. | Recovery | Comments |
|---|---|---|---|---|---|---|---|
| 24<br>26<br>28 | | @25' becomes wet. | | 1 | grab water sample 08:05 A-1 @ 25.5 - 26 | ▨ | |
| 30<br>32<br>34<br>36<br>38 | | GRAVELLY SAND: Gray (5Y 5/1), loose, wet, 70% fine -coarse rounded sand, 30% subrounded gravel up to 1.5cm diameter, no odor. | SM | 2<br>2 | 08:15 A-1 @ 30.5 - 31<br>08:205 A-1 @ 35.5 - 36 | ▨<br>▨ | |
| 40<br>42<br>44 | | SANDY GRAVEL: Dark gray (5Y 4/1), loose, wet, 65% fine angular gravel up to 30 mm diameter, 20% fine - coarse sand, 15% silt, no odor. | GM | 116 | 08:25 A-1 @ 39 - 39.5 | ▨ | Hydropunch driven from 32' to 34 in separate hole, 3 feet from A-1. After 1 hour, no water was avalible for sampling. |
| 46 | | CLAYEY SILT: Light olive brown (2.5Y 5/4), soft, wet, 60% silt, 40% clay, medium plasticity, no odor. | ML | 22 | 08:43 A-1 @ 46 - 46.5 | ▨ | |

**URS** 1333 Broadway, Suite 800
Oakland, California 94612

# LOG OF BORING

**Borehole ID:** A-2
**Total Depth:** 42 feet bgs.

| PROJECT INFORMATION | DRILLING INFORMATION |
|---|---|
| **Project:** Former BP Site # 11117 Soil and Water Investigation | **Drilling Company:** Gregg Drilling and Testing, Inc. |
| **Site Location:** 7210 Bancroft Ave, Oakland, CA | **Driller:** Paul Rogers |
| **Project Manager:** Lynelle Onishi | **Type of Drilling Rig:** Geoprobe |
| **PG:** Barbara Jakub | **Drilling Method:** 2" Direct Push |
| **Geologist:** Andrew Fowler | **Sampling Method:** Continuous Core |
| **Job Number:** 38487353.0A034 | **Date(s) Drilled:** 9/27/05 |

## BORING INFORMATION

| | |
|---|---|
| **Groundwater Depth:** 21.3 feet bgs. | **Boring Location:** Adjacent to south west enrtance on Bancroft Ave. |
| **Air Knife or Hand Auger Depth:** 5.0 feet | **Boring Diameter:** 2" |
| **Coordinates:** X Y | **Boring Type:** Exploratory |

| Depth (ft bgs) | Symbol | Lithologic Description | USCS | PID (ppm) | Sample ID | Recovery | Comments |
|---|---|---|---|---|---|---|---|
| 0 | | ASPHALT | | | | | |
| | | CLAYEY SANDY GRAVEL: Very dark gray (10YR 3/1), dense, dry, 40% angular gravel, 30% fine - coarse angular sand, 20% clay, 10% silt. Hydrocarbon staining @1.5'<br>@2 -2.5' Angular cobbles up to 10cm. | GP | | | | Boring grouted with neat Portland Cement. Top 3" finished to grade with cement. |
| | | SILTY CLAY: Very dark gray (10YR 3/1), stiff, dry, 80% clay, 15% silt, 5% fine med sand, minor gravel, medium plasticity, slight hydrocarbon odor. | CL | | | | |
| | | SILTY SANDY CLAY: Dark yellowish brown (10YR 4/4), stiff, dry, 50% clay, 30% fine - medium angular sand, 20% silt, minor angular gravel up to 1cm diameter, no odor. | | 1.5 | 10:35 A-2 @ 5 - 5.5 | | Top 5' logged from hand auger / airknife cuttings. |
| 10 | | CLAYEY SILT: Brown (10YR 4/3), very stiff, dry, 70% silt, 30% clay, no odor. | ML | 2 | 10:40 A-2 @10 - 10.5 | | |
| 12 | | NO RECOVERY | | | | | |
| 14 | | CLAYEY GRAVEL: Olive brown (10YR 4/3), medium dense, dry, 60% subrounded gravel up to 30 mm diameter, 20% coarse angular sand, 20% clay, slight hydrocarbon odor. | GM | 2.5 | 10:45 A-2 @ 15 - 15.5 | | |
| | | CLAYEY SILT: Dark greenish gray (Gley1 4/10Y), soft, dry, 65% silt, 30% clay, 5% fine sand, medium plasticity, slight hydrocarbon odor. | ML | | 10:46 A-2 @ 19.5 - 20 | | |
| 20 | | CLAYEY GRAVEL: Very dark greenish gray (Gley2 3/10G), dense, dry, 70% rounded gravel, 30% clay, minor fine sand, strong hydrocarbon odor. | GM | 9 | 11:22 A-2 @ 21.3' grab water sample | | ▼ |

**URS**

# LOG OF BORING

**Borehole ID:** A-2

| Depth (ft bgs) | Symbol | Lithologic Description | USCS | PID (ppm) | Sample I.D. | Recovery | Comments |
|---|---|---|---|---|---|---|---|
| 24 | ▓ | | | 209 | 11:00<br>A-2 @ 25 - 25.5 | ▓ | |
| 26 | ▓ | @27' 1" layer of red, well indurated sandstone | | | | ▓ | |
| 28 | ▓ | | | | | ▓ | |
| 30 | ▓ | @30' gravel clasts become angular | | 40 | 11:15<br>A-2 @ 30 - 30.5 | ▓ | ▽ |
| 32 | ⁘ | SAND: Dark greenish gray (Gley 1 3/10Y), loose, wet, 100% medium - coarse well rounded sand, minor clay, strong hydrocarbon odor. | SP | | | ▓ | |
| 34 | ⁘ | | | 259 | 11:20<br>A-2 @33.5 - 34 | ▓ | Hydropunch driven from 40' to 42' in separate hole, 3 feet from A-2. Sample collected (A-2 @40-42'). Strong resistance encountered from 32' to 42' |
| 36 | | NO RECOVERY: Refusal @ 38.5' | | | | | |
| 38 | | | | | 12:35<br>A-2 @ 40 - 42 grab water sample | | |
| 40 | | | | | | | ▼ |
| 42 | | | | | | | |

**URS** 1333 Broadway, Suite 800
Oakland, California 94612

# LOG OF BORING

**Borehole ID:** A-3
**Total Depth:** 36 feet bgs.

## PROJECT INFORMATION

**Project:** Former BP Site # 11117 Soil and Water Investigation
**Site Location:** 7210 Bancroft Ave, Oakland, CA
**Project Manager:** Lynelle Onishi
**PG:** Barbara Jakub
**Geologist:** Andrew Fowler
**Job Number:** 38487353.0A034

## DRILLING INFORMATION

**Drilling Company:** Gregg Drilling and Testing, Inc.
**Driller:** Paul Rogers
**Type of Drilling Rig:** Geoprobe
**Drilling Method:** 2" Direct Push
**Sampling Method:** Continuous Core
**Date(s) Drilled:** 9/27/05

## BORING INFORMATION

**Groundwater Depth:** 19.24 feet bgs.
**Boring Location:** South corner of property
**Air Knife or Hand Auger Depth:** 5.0 feet
**Boring Diameter:** 2"
**Coordinates:** X Y
**Boring Type:** Exploratory

| Depth (ft bgs) | Symbol | Lithologic Description | USCS | PID (ppm) | Sample ID | Recovery | Comments |
|---|---|---|---|---|---|---|---|
| 0 | | ASPHALT | | | | | |
| 2 | | CLAYEY SANDY GRAVEL: Very dark gray (10YR 3/1), dense, dry, 40% angular gravel, 30% fine - coarse angular sand, 20% clay, 10% silt, no odor. | GP | | | | Boring grouted with neat Portland Cement. Top 3" finished to grade with cement. |
| | | SILTY CLAY: Very dark gray (10YR 3/1), stiff, dry, 80% clay, 15% silt, 5% fine med sand, minor gravel, medium plasticity, slight hydrocarbon odor. | CL | | | | |
| 4<br>6 | | SILTY SANDY CLAY: Dark yellowish brown (10YR 4/4), stiff, dry, 50% clay, 30% fine - medium angular sand, 20% silt, minor angular gravel up to 10 mm diameter, no odor. | | 2 | 13:05<br>A-3 @ 5 - 5.5 | | Top 5' logged from hand auger / airknife cuttings. |
| 8<br>10 | | NO RECOVERY | | | | | |
| 12<br>14 | | CLAYEY SILT: Olive gray (5Y 4/2)stiff, dry, 60% silt, 35% clay, no odor. | ML | 3 | 13:15<br>A-3 @ 14.5 - 15 | | |
| 16<br>18 | | CLAYEY GRAVEL: Dark greenish gray (Gley1 4/10GY), medium dense, dry, 60% angular medium gravel, 25% fine sand, 15% clay, slight hydrocarbon odor.<br>@17' color change (Gley1 3/10G) green staining. Strong hydrocarbon odor. | GM | | 13:35<br>A-3 @ 19.24 grab water sample | | |
| | | CLAYEY SILT: Dark greenish gray (Gley1 4/10GY), soft, moist, 60% silt, 30% clay, 10% fine sand, minor gravel, medium plasticity, strong hydrocarbon odor. | ML | | | | ▼ |
| 20<br>22 | | CLAYEY GRAVEL: Dark greenish gray (Gley1 4/10GY), medium dense, moist, 60% angular medium gravel, 30% clay, 10% fine sand, strong hydrocarbon odor. | GM | 3 | 13:20<br>A-3 @ 19.5 - 20 | | |

URS

# LOG OF BORING

**Borehole ID: A-3**

| Depth (ft bgs) | Symbol | Lithologic Description | USCS | PID (ppm) | Sample I.D. | Recovery | Comments |
|---|---|---|---|---|---|---|---|
| 24 | ▨ |  |  | 8 | 13:25<br>A-3 @<br>23.5 -<br>24 | ▨ | ∇ |
| 26 | ∴ | SAND: Olive brown (2.5Y 4/3), very loose, wet, 100% fine - medium sand, minor clay, strong hydrocarbon odor. | SP | 649 | 13:50<br>A-3 @<br>26 -<br>26.5 | ▨ |  |
|  | ▨ | CLAYEY GRAVEL: Dark greenish gray (Gley1 4/10GY), medium dense, dry, 60% angular medium gravel, 30% clay, 10% fine sand, strong hydrocarbon odor. | GM |  |  | ▨ |  |
| 28 |  | NO RECOVERY: Sluffing.<br>@27' 1" layer of red (5YR 5/6), well indurated sandstone. |  |  |  |  |  |
| 30 |  |  |  |  |  |  |  |
| 32 |  |  |  |  | 14:15<br>A-3 @<br>34 -<br>36<br>grab<br>water<br>sample |  | Hydropnuch driven from 34' to 36' in separate hole, 3 feet from A-3. Sample collected (A-3@ 34-36'). |
| 34 |  |  |  |  |  |  |  |
| 36 |  |  |  |  |  |  |  |

**URS**

1333 Broadway, Suite 800
Oakland, California 94612

# LOG OF BORING

**Borehole ID:** A-4

**Total Depth:** 36 feet bgs.

## PROJECT INFORMATION

**Project:** Former BP Site #11117 Soil and Water Investigation

**Site Location:** 7210 Bancroft Ave, Oakland, CA

**Project Manager:** Lynelle Onishi

**PG:** Barbara Jakub

**Geologist:** Andrew Fowler

**Job Number:** 38487353.0A034

## DRILLING INFORMATION

**Drilling Company:** Gregg Drilling and Testing, Inc.

**Driller:** Paul Rogers

**Type of Drilling Rig:** Geoprobe

**Drilling Method:** 2" Direct Push

**Sampling Method:** Continuous Core

**Date(s) Drilled:** 9/26/05

## BORING INFORMATION

**Groundwater Depth:** 21.6 feet bgs.

**Air Knife or Hand Auger Depth:** 5.0 feet

**Coordinates:** X Y

**Boring Location:** South west side of property.

**Boring Diameter:** 2"

**Boring Type:** Exploratory

| Depth (ft bgs) | Symbol | Lithologic Description | USCS | PID (ppm) | Sample ID | Recovery | Comments |
|---|---|---|---|---|---|---|---|
| 0 | | ASPHALT | | | | | |
| 2 | | CLAYEY SANDY GRAVEL: Very dark gray (10YR 3/1), dense, dry, 40% angular gravel, 30% fine - coarse angular sand, 20% clay, 10% silt, no odor. | GP | | | | Boring grouted with neat Portland Cement. Top 3" finished to grade with cement. |
| | | SILTY CLAY: Very dark gray (10YR 3/1), stiff, dry, 80% clay, 15% silt, 5% fine med sand, minor gravel, medium plasticity, slight hydrocarbon odor. | CL | | | | |
| 4 | | SILTY SANDY CLAY: Dark yellowish brown (10YR 4/4), stiff, dry, 50% clay, 30% fine - medium angular sand, 20% silt, no odor. Roots visible. | | | | | |
| 6 | | CLAYEY SANDY GRAVEL: Dark yellowish brown (10YR 4/4), dense, dry, 60% angular gravel up to 2 cm diameter, 30% medium - coarse angular sand, 10% clay, no odor. | GM | 16.3 | 12:55<br>A-4 @ 5 - 5.5 | ▨ | Top 5' logged from hand auger / airknife cuttings. |
| 8<br>10 | | NO RECOVERY | | | | | |
| 12<br>14 | | CLAYEY SAND: Olive gray (5Y 4/2), medium dense, dry, 85% fine - medium angular sand, 15% clay, no odor. | SM | | | ▨ | |
| | | GRAVELLY SAND: Olive gray (5Y 4/2), medium dense, dry, 70% fine - medium angular sand, 20% angular gravel up to 2 cm diameter, 10% clay, no odor. | | 2.0 | 13:15<br>A-4 @ 15 - 15.5 | ▨ | |
| 16<br>18<br>20 | | CLAYEY GRAVEL: Dark greenish gray (Gley1 4/10GY), medium dense, dry, 60% angular medium gravel, 25% fine sand, 15% clay, slight hydrocarbon odor.<br>@17' color change (Gley1 3/5G) green staining. Strong hydrocarbon odor. | GM | 16.7 | 13:25<br>A-4 @ 19.5 - 20 | ▨ | |
| 22 | | CLAYEY SILT: Yellowish brown (10YR 5/4), soft, dry, 60% silt, 30% clay, 10% fine sand, minor gravel, medium plasticity, strong hydrocarbon odor. | ML | | 13:32<br>A-4 @ 21.6 grab | ▨ | ▼ |

| Depth (ft bgs) | Symbol | Lithologic Description | USCS | PID (ppm) | Sample I.D. | Recovery | Comments |
|---|---|---|---|---|---|---|---|
| 24 | | | | 2537 | water sample<br>13:35 A-4 @ 23.5 - 24 | ▨ | |
| 26 | | SAND: Olive brown (2.5Y 4/3), loose, wet, 100% medium sand, minor angular gravel up to 3 cm diameter, strong hydrocarbon odor. | SP | | | ▨ | ∇ |
| 28 | | NO RECOVERY: No recovery due to sluffing from 28' to 35' | | | | ▨ | |
| 30 | | | | | 13:55 A-4 @ 31.5 - 32 | ▨ | Hydropunch driven from 34' to 36' in separate hole, 3 feet from A-4. Sample collected (A-4@34-36'). |
| 32 | | | | 50.3 | 14:50 A-4 @ 34 - 36 hydro-punch sample | | |
| 34 | | Refusal @ 35' bgs. | | | | | |
| 36 | | | | | | | |

**URS** 1333 Broadway, Suite 800
Oakland, California 94612

# LOG OF BORING

**Borehole ID:** A-5

**Total Depth:** 40 feet bgs.

## PROJECT INFORMATION

**Project:** Former BP Site #11117 Soil and Water Investigation
**Site Location:** 7210 Bancroft Ave, Oakland, CA
**Project Manager:** Lynelle Onishi
**PG:** Barbara Jakub
**Geologist:** Andrew Fowler
**Job Number:** 38487353.0A034

## DRILLING INFORMATION

**Drilling Company:** Gregg Drilling and Testing, Inc.
**Driller:** Paul Rogers
**Type of Drilling Rig:** Geoprobe
**Drilling Method:** 2" Direct Push
**Sampling Method:** Continuous Core
**Date(s) Drilled:** 9/26/05

## BORING INFORMATION

**Groundwater Depth:** 21.6 feet bgs.
**Boring Location:** East side of property, near 73rd Ave entrance.
**Air Knife or Hand Auger Depth:** 5.0 feet
**Boring Diameter:** 2"
**Coordinates:** X Y
**Boring Type:** Exploratory

| Depth (ft bgs) | Symbol | Lithologic Description | USCS | PID (ppm) | Sample ID | Recovery | Comments |
|---|---|---|---|---|---|---|---|
| 0 | | ASPHALT | | | | | |
| | | SP: Very dark greenish gray (Gley1 3/5GY), loose, dry, coarse angular sand, no odor. | SP | | | | |
| 2 | | SILTY CLAY: Very dark gray (10YR 3/1), stiff, dry, 80% clay, 15% silt, 5% fine med sand, minor gravel, medium plasticity. | CL | | | | Boring grouted with neat Portland Cement. Top 3" finished to grade with cement. |
| 4 | | CLAYEY SAND: Dark yellowish brown (10YR 4/4), loose, dry, 60% fine - coarse angular sand, 30% clay, 10% silt, no odor. | SP | | | | |
| 6 | | | | 1.6 | 10:25<br>A-5 @ 5 - 5.5 | ▨ | Top 5' logged from hand auger / airknife cuttings. |
| 8 | | SANDY CLAY: Brown (10YR 4/3), medium stiff, dry, 60% clay, 40% medium angular sand, minor angular gravel, medium plasticity. | CL | | | ▨ | |
| 10 | | @ 9' grades to clayey sand. | SM | 1.9 | 10:35<br>A-5 @ 10 - 10.5 | ▨ | |
| 12 | | SANDY SILTY GRAVEL: Olive gray (5Y 5/2), 45% angular gravel up to 5 cm diameter, 35% silt, 15% medium sand, 5% clay. | GM | | | ▨ | |
| 14 | | | | | | ▨ | |
| 16 | | @ 16' color change (Gley1 3/5G). Strong hydrocarbon odor. | | 12.3 | 10:45<br>A-5 @ 15 - 15.5 | ▨ | |
| 18 | | | | | A-5 @ 19.5 grab water sample | ▨ | ▼ |
| 20 | | | | 3.1 | 10:47<br>A-5 @ 19.5 - 20 | ▨ | |
| 22 | | @ 22' Red layer (5YR 4/6) 1" thick of well indurated sandstone. Lies above capillary fringe. | | 6.2 | 11:00<br>A-5 @ 22 - | ▨ | ▽ |
| | | SAND: Dark greenish gray (Gley1 4/10Y), loose, wet, 100% well sorted, | SP | | | ▨ | |

| Depth (ft bgs) | Symbol | Lithologic Description | USCS | PID (ppm) | Sample I.D. | Recovery | Comments |
|---|---|---|---|---|---|---|---|
| 24 | | rounded coarse sand, minor gravel. | | | 22.5 | ▨ | |
| 25 | | @ 25' gravel increase to 30% | | 3.6 | 11:05<br>A-5 @ 25 - 25.5 | ▨ | |
| 26 | | | | | | ▨ | |
| 28 | | | | | | ▨ | |
| 30 | | CLAYEY SANDY GRAVEL: Dark grayish brown (2.5Y 4/2), medium dense, dry, 60% angular gravel upto 5cm diameter, 20% coarse angular sand, 15% clay, 5% silt, strong hydrocarbon odor, green staining. | GM | 12.4 | 11:10<br>A-5 @ 30 - 30.5 | ▨ | Hydropunch driven from 28' to 30' in separate hole, 3 feet from A-5. No water in hydropunch hole after 1 hour. |
| 32 | | | | | | ▨ | |
| 34 | | | | | | ▨ | |
| 35 | | | | 8.5 | 11:20<br>A-5 @ 35 - 35.5 | ▨ | |
| 36 | | NO RECOVERY: Sluffing. | | | | | |
| 38 | | | | | | | |
| 40 | | | | | | | |

**URS**

1333 Broadway, Suite 800
Oakland, California 94612

# LOG OF BORING

**Borehole ID:** A-7

**Total Depth:** 36.5 feet bgs.

| PROJECT INFORMATION | DRILLING INFORMATION |
|---|---|
| **Project:** Former BP Station # 11117 Soil and Water Investigation | **Drilling Company:** Gregg Drilling and Testing, Inc. |
| **Site Location:** 7210 Bancroft Ave, Oakland, CA | **Driller:** Paul Rogers |
| **Project Manager:** Lynelle Onishi | **Type of Drilling Rig:** Geoprobe |
| **PG:** Barbara Jakub | **Drilling Method:** 4.5" Simco Augers |
| **Geologist:** Andrew Fowler | **Sampling Method:** 18" Splitspoon, 5' Sampling Intervals |
| **Job Number:** 38487353.0A034 | **Date(s) Drilled:** 11/3/05 |

## BORING INFORMATION

| | |
|---|---|
| **Groundwater Depth:** not encountered | **Boring Location:** Southeast Corner of Parking Lot for DD's Discounts |
| **Air Knife or Hand Auger Depth:** 5.0 feet | **Boring Diameter:** 4.5" |
| **Coordinates:** X Y | **Boring Type:** Exploratory |

| Depth (ft bgs) | Symbol | Lithologic Description | USCS | PID (ppm) | Sample ID | Recovery | Comments |
|---|---|---|---|---|---|---|---|
| 0 | | ASPHALT | | | | | |
| 2<br>4 | | BLANK: Boring logs for soil boring A-7 were stolen, lithologies were logged on 11/16/05 from samples submitted to Sequoia Analytical.<br>Boring airknifed to 5 feet bgs. | | | | | Boring grouted with neat Portland Cement. Top 3" finished to grade with concrete. |
| 6<br>8<br>10 | | CLAYEY SILT: Dark yellowish brown (10YR 4/4), medium stiff, dry, 70% silt, 30% clay, minor gravel up to 8 mm, medium plastic. | ML | | 12:55<br>A-7 @ 6-6.5' | | |
| 12<br>14 | | SANDY GRAVEL: Brown (10YR 4/3), loose, damp, 70% sub-rounded gravel up to 20 mm, 25% medium sand, 5% silt, no plasticity. | GM | | 13:00<br>A-7 @ 11-11.5' | | |
| 16<br>18<br>20 | | SILTY SAND: Brown (10YR 5/3), medium dense, moist, 65% medium to coarse angular sand, 25% clay, 10% sub-rounded gravel up to 10 mm. | SM | | 13:05<br>A-7 @ 16-16.5' | | |
| 22 | | @ 21 feet bgs, color change and gravel disappears; Dark yellowish brown (10YR 4/4), moist, 75% medium to coarse angular sand, 25% silt, slight odor. | | | 13:10<br>A-7 @ 21-21.5' | | |

**URS**

# LOG OF BORING

**Borehole ID: A-7**

| Depth (ft bgs) | Symbol | Lithologic Description | USCS | PID (ppm) | Sample I.D. | Recovery | Comments |
|---|---|---|---|---|---|---|---|
| 24 | | | | | | | |
| 26 | | CLAYEY GRAVEL: Brown (10YR 4/3), loose, moist, 70% sub-rounded to sub-angular gravel up to 10 mm, 25% clay, 5% silt, slight hydrocarbon odor. | GC | | 13:20<br>A-7@<br>25.5-26' | | No water encountered in boring A-7 after 1 hour. |
| | | NO RECOVERY | | | | | |
| 28 | | | | | | | |
| 30 | | | | | | | ▽<br>Hydropunch driven from 28' to 30' in separate hole, 3 feet from A-7. No water in hydropunch hole after 1 hour. |
| 32 | | | | | | | |
| 34 | | | | | 13:45<br>A-7 @<br>36-36.5' | | Boring terminated at 36.5'. |
| 36 | | CLAYEY SILT: Brown (10YR 5/3), medium stiff, wet, 80% silt, 20% clay, black specks throughout. | ML | | | | |

**URS** 1333 Broadway, Suite 800
Oakland, California 94612

# LOG OF BORING

**Borehole ID:** A-8

**Total Depth:** 36.5 feet bgs.

| PROJECT INFORMATION | DRILLING INFORMATION |
|---|---|
| **Project:** Former BP Station #11117 Soil and Water Investigation | **Drilling Company:** Gregg Drilling and Testing, Inc. |
| **Site Location:** 7210 Bancroft Ave, Oakland, CA | **Driller:** Paul Rogers |
| **Project Manager:** Lynelle Onishi | **Type of Drilling Rig:** Geoprobe |
| **PG:** Barbara Jakub | **Drilling Method:** 4.5" Simco Augers |
| **Geologist:** Andrew Fowler | **Sampling Method:** 18" Splitspoon, 5' Sampling Intervals |
| **Job Number:** 38487353.0A034 | **Date(s) Drilled:** 11/3/05 |

## BORING INFORMATION

| | |
|---|---|
| **Groundwater Depth:** 24.6 feet bgs. | **Boring Location:** Adjacent to entrance into DD's Discounts |
| **Air Knife or Hand Auger Depth:** 5.0 feet | **Boring Diameter:** 4.5" |
| **Coordinates:** X Y | **Boring Type:** Exploratory |

| Depth (ft bgs) | Symbol | Lithologic Description | USCS | PID (ppm) | Sample ID | Recovery | Comments |
|---|---|---|---|---|---|---|---|
| 0 | | ASPHALT | | | | | |
| 2<br>4 | | BLANK: Boring logs for soilboring A-8 were stolen, lithologies were logged on 11/16/05 from samples submitted to Sequoia Analytical.<br>Boring Airknifed to 5 feet bgs. | | | | | Boring grouted with neat Portland Cement. Top 3" finished to grade with concrete. |
| 6<br>8<br>10 | | SILTY SAND: Yellowish brown (10YR 5/4), dense, dry, 80% fine sand, 20% silt, no plasticity.<br>1" layer; reddish brown (5YR 4/3), very hard, well indurated sandstone. | SM | | 09:00<br>A-8 @<br>6-6.5' | | |
| 12<br>14 | | | | | 09:05<br>A-8 @<br>11-11.5' | | |
| 16<br>18<br>20 | | SANDY GRAVEL: Yellowish brown (10YR 5/4), loose, damp, 65% sub-angular gravel up to 30 mm, 3% medium to coarse sand, 5% silt, no plasticity, no odor. | GM | | 09:10<br>A-8 @<br>15.5-16' | | |
| 22 | | CLAYEY GRAVEL: Yellowish brown (10YR 5/4), medium dense, damp, 60% sub-rounded to sub-angular gravel up to 20 mm, 20% clay, 10% coarse angular sand, 10% silt. | GC | | 09:15<br>A-8 @<br>21-21.5' | | |

| Depth (ft bgs) | Symbol | Lithologic Description | USCS | PID (ppm) | Sample I.D. | Recovery | Comments |
|---|---|---|---|---|---|---|---|
| 24 | | | | | 09:36<br>A-8 @<br>24.6'<br>(water) | | ▽ |
| | | SANDY GRAVEL: Brown (10YR 5/3), loose, wet, 55% sub-angular gravel up to 35 mm, 35% medium sand and rounded coarse sand, 10% silt. | GM | | | | |
| 26 | | | | | | | |
| 28 | | | | | 09:40<br>A-8 @<br>25-25.5' | | |
| 30 | | @ 30 feet bgs, gravel increases; loose, wet, 75% sub-rounded gravel up to 10 mm, 15% coarse sand, 55% silt. | | | 09:45<br>A-8 @<br>30-30.5' | | Hydropunch driven from 28' to 30' in separate hole, 3 feet from A-8. No water in hydropunch hole after 1 hour. |
| 32 | | | | | | | |
| 34 | | | | | 09:50<br>A-8 @<br>36-36.5' | | Boring terminated at 36.5'. |
| 36 | | CLAYEY SILT: Brown (10YR 5/3), medium stiff, wet, 80% silt, 20% clay. Black specs throughout, light olive brown mottling. | ML | | | | |

**URS** 1333 Broadway, Suite 800
Oakland, California 94612

# LOG OF BORING

**Borehole ID:** A-9
**Total Depth:** 36.5 feet bgs.

## PROJECT INFORMATION

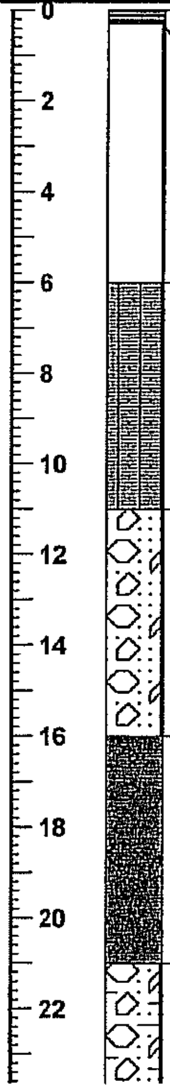
**Project:** Former BP Site #11117 Soil and Water Investigation
**Site Location:** 7210 Bancroft Ave, Oakland, CA
**Project Manager:** Lynelle Onishi
**PG:** Barbara Jakub
**Geologist:** Andrew Fowler
**Job Number:** 38487353.0A034

## DRILLING INFORMATION

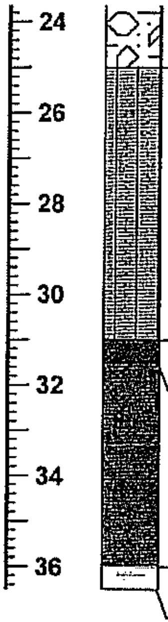
**Drilling Company:** Gregg Drilling and Testing, Inc.
**Driller:** Paul Rogers
**Type of Drilling Rig:** Geoprobe
**Drilling Method:** 4.5" Simco Augers
**Sampling Method:** 18" Splitspoon, 5' Sampling Intervals
**Date(s) Drilled:** 11/3/05

## BORING INFORMATION

**Groundwater Depth:** 24.2 feet bgs.
**Boring Location:** Offsite: North corner of site in adjacent parking lot
**Air Knife or Hand Auger Depth:** 5.0 feet
**Boring Diameter:** 4.5"
**Coordinates:** X Y
**Boring Type:** Exploratory



| Lithologic Description | USCS | PID (ppm) | Sample ID | Recovery | Comments |
|---|---|---|---|---|---|
| ASPHALT | | | | | |
| BLANK: Boring logs for soilboring A-9 were stolen, lithologies were logged on 11/16/05 from samples submitted to Sequoia Analytical.<br>Boring Airknifed to 5 feet bgs. | | | | | Boring grouted with neat Portland Cement. Top 3" finished to grade with concrete. |
| SILTY SAND: Yellowish brown (10YR 5/4), medium stiff, damp, 80% medium to coarse sand, 20% silt, low plasticity. | SM | | 11:15<br>A-9 @ 6-6.5' | | |
| GRAVELLY SAND: Yellowish brown (10YR 5/4), loose, damp, 60% well sorted medium sand, 30% gravel up to 20 mm, 10% silt, no plasticity, no odor. | SP | | 11:20<br>A-9 @ 11-11.5' | | |
| CLAYEY GRAVEL: Yellowish brown (10YR 5/4), medium dense, damp, 60% sub-rounded to sub-angular gravel up to 30 mm, 20% clay, 10% coarse angular sand, 10% silt, no odor. | GC | | 11:30<br>A-9 @ 16-16.5' | | |
| SANDY GRAVEL: Brown (10YR 5/3), loose, damp, 55% sub-rounded angular gravel up to 35 mm, 35% medium sand and rounded coarse sand, 10% silt, no plasticity, no odor. | GM | | 11:31<br>A-9 @ 21-21.5' | | |



| Depth (ft bgs) | Symbol | Lithologic Description | USCS | PID (ppm) | Sample I.D. | Recovery | Comments |
|---|---|---|---|---|---|---|---|
| 24 | | | | | 11:35<br>A-9 @ 24.2' (water) | | ▼<br>▽ |
| | | SILTY SAND: Yellowish brown (10YR 5/4), loose, wet, 65% medium to coarse sub-rounded to sub-angular sand, 30% silt, 5% clay, no plasticity, no odor. | SM | | 11:40<br>A-9 @ 25-25.5' | | Hydropunch driven from 28' to 30' in separate hole, 3 feet from A-9. No water in hydropunch hole after 1 hour. |
| | | CLAY: Dark grayish brown (10YR 4/2), medium stiff, dry, 90% clay, 10% silt, medium to high plasticity. | CL | | 11:45<br>A-9 @ 31-31.5' | | |
| | | CLAYEY GRAVEL: Brown (7.5YR 5/2), loose to medium dense, dry, 80% sub angular gravel up to 10 mm, 15% clay, 5% silt. | GC | | 11:50<br>A-9 @ 36-36.5' | | Boring terminated at 36.5'. |
| | | CLAYEY SILT: Brown (10YR 5/3), medium stiff, wet, 80% silt, 20% clay, no odor. Black specs throughout. | ML | | | | |

**URS** 1333 Broadway, Suite 800
Oakland, California 94612

# LOG OF BORING

**Borehole ID:** A-10
**Total Depth:** 39 feet bgs.

| PROJECT INFORMATION | DRILLING INFORMATION |
|---|---|
| **Project:** Former BP Site #11117 Soil and Water Investigation | **Drilling Company:** Gregg Drilling and Testing, Inc. |
| **Site Location:** 7210 Bancroft Ave, Oakland, CA | **Driller:** Paul Rogers |
| **Project Manager:** Lynelle Onishi | **Type of Drilling Rig:** Geoprobe |
| **PG:** Barbara Jakub | **Drilling Method:** 4.5" Simco Augers |
| **Geologist:** Barbara Jakub | **Sampling Method:** 18" Split Spoon |
| **Job Number:** 38487353.0A034 | **Date(s) Drilled:** 11/7/05 |

| BORING INFORMATION | |
|---|---|
| **Groundwater Depth:** 25 feet bgs | **Boring Location:** In center of planter, across 73rd Ave. from Site. |
| **Air Knife or Hand Auger Depth:** 5.0 feet | **Boring Diameter:** 4.5" |
| **Coordinates:** X Y | **Boring Type:** Exploratory |

| Depth (ft bgs) | Symbol | Lithologic Description | USCS | PID (ppm) | Sample ID | Recovery | Comments |
|---|---|---|---|---|---|---|---|
| 0 | | MUCLH: Mulch cover to 0.2 feet bgs. | | | | | |
| | | FILL: Angular gravel fill with clasts up to 120 mm in diameter. | FILL | | | | |
| 2 | | | | | | | Boring grouted with neat Portland Cement. Top 3" finished to grade with cement. |
| 4 | | CLAYEY SILT: Dark brown (10YR 3/3). 80% Silt, 15% clay, 5% sand. | ML | | | | |
| 6 | | SILT: Brown (10 YR 4/3), medium stiff, damp, 85% silt, 10% clay, 4% fine sand, 1% angular gravel up to 80 mm diameter, low plasticity. Trace black specs. | | | 09:48<br>A-10<br>@<br>5.5-6' | ▨ | Top 5' logged from hand auger / airknife cuttings. |
| 8 | | | | | | | |
| 10 | | SILTY SAND: Brown (7.5YR 4/3), loose, damp, 55% fine sand, 40% silt, 3% clay, 2% gravel, non plastic. Fines downward. | SM | | 10:02<br>A-10<br>@<br>10.5-11' | ▨ | |
| 12 | | | | | | | |
| 14 | | | | | | | |
| 16 | | SILT: Yellowish brown (10YR 5/4), stiff, damp, 85% silt, 10% clay, 5% fine sand, low plasticity. Manganese staining. | ML | | 10:05<br>A-10<br>@<br>15.5-16' | ▨ | |
| 18 | | | | | | | ▼ |
| 20 | | Silt content increases. 95% Silt, 5% clay. Medium stiff. | | | 10:10<br>A-10<br>@<br>20.5-21' | ▨ | |
| 22 | | | | | | | |

**URS**

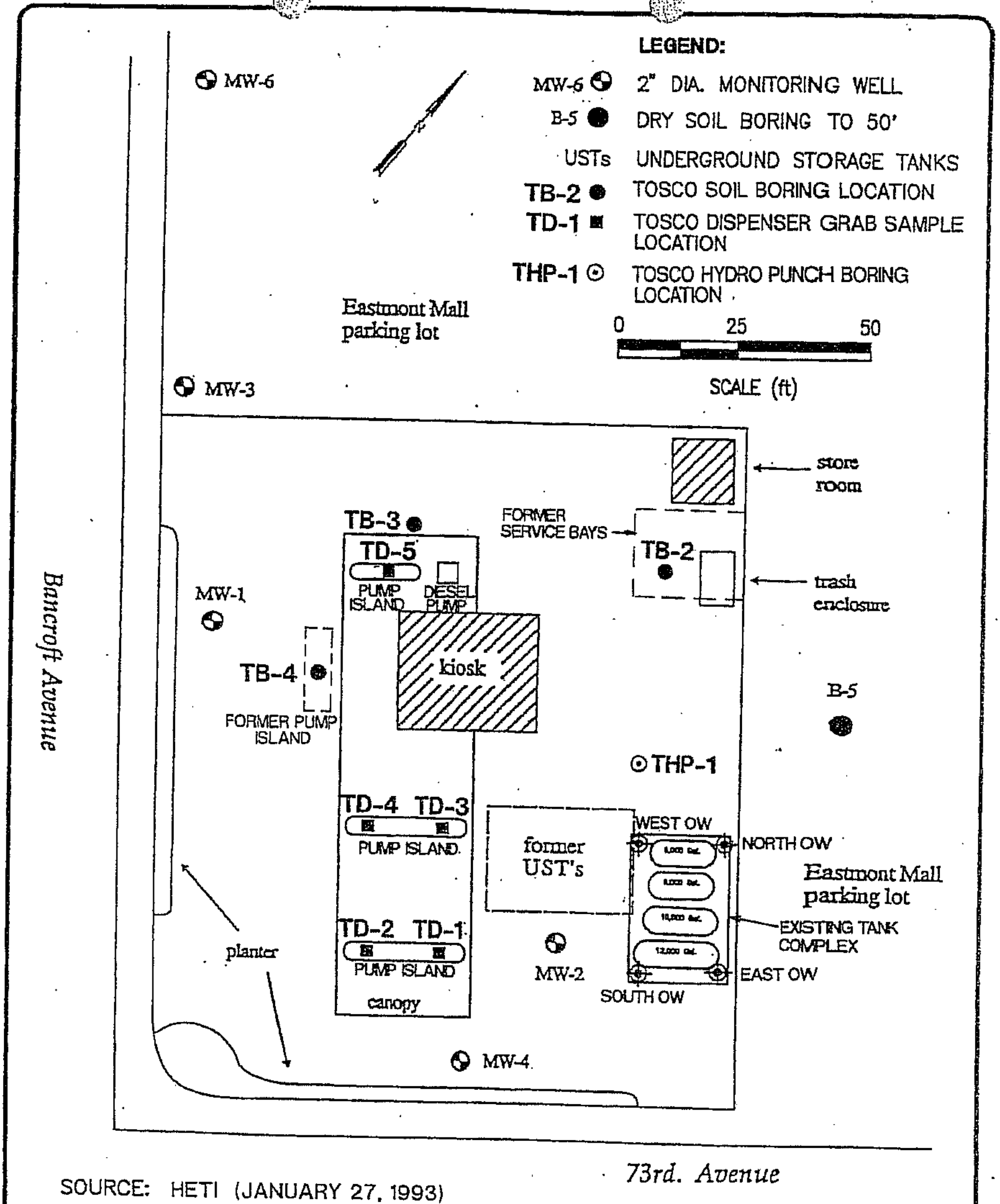
# LOG OF BORING

**Borehole ID: A-10**

| Depth (ft bgs) | Symbol | Lithologic Description | USCS | PID (ppm) | Sample I.D. | Recovery | Comments |
|---|---|---|---|---|---|---|---|
| 24 | ▓ | | | | | | |
| 26<br>28 | ░ | SANDY SILT: Yellowish brown (10YR 5/4), soft, moist, 80% silt, 17% fine sand, 3% clay. Trace black specs and white granules (possibly feldspar) up to 30 mm in diameter. | | | 10:19<br>A-10<br>@<br>25.5-26'<br>10:20<br>A-10<br>@ 25'<br>(water) | ▨ | ∇ |
| 30<br>32<br>34 | ▓ | SILT: Yellowish brown (10YR 5/4), soft, wet to saturated, 75% silt, 10% clay, 10% gravel, 5% sand. Angular chert gravel at base up to 30 mm in diameter. | | | 10:33<br>A-10<br>@<br>30.5-31' | ▨ | Hydropunch driven from 39' to 41' in separate hole, 3 feet from A-10. Sample taken (A-10@39'). |
| 36<br>38 | ▨ | SILTY GRAVEL: Yellowish brown (10YR 5/4), dense, wet, 70% angular to sub-angular gravel up to 30 mm in diameter with chert and sandstone clasts, 17% silt, 10% sand, 3% clay. | GM | | 10:42<br>A-10<br>@<br>35.5-36'<br>11:07<br>A-10<br>@ 39'<br>(water) | ▨ | Total depth 39 feet bgs. |
| 40 | | | | | | | |

# APPENDIX B.

# HISTORIC SOIL AND WATER ANALYTICAL DATA AND SAMPLE LOCATIONS



SOURCE: HETI (JANUARY 27, 1993)

EMCON
Northwest, Inc.

DATE 12-20-94
DWN. MLP
REV.
APPR.
PROJECT NO.
0952-033.03

Figure 1
TOSCO #11117
7210 BANCROFT AVENUE
OAKLAND, CALIFORNIA

**SITE PLAN**

## SOIL SAMPLES
## SUMMARY OF ANALYTICAL RESULTS

**BP Oil Facility No. 11117**
**7210 Bancroft Avenue**
**Oakland, California**

| Sample Description | Date | TPHg (ppm) | B (ppm) | T (ppm) | E (ppm) | X (ppm) |
|---|---|---|---|---|---|---|
| MW-1 @ 5' | 12/27/91 | ND | ND | ND | ND | ND |
| MW-1 @ 15' | 12/27/91 | ND | ND | ND | ND | ND |
| MW-1 @ 25' | 12/27/91 | ND | ND | ND | ND | ND |
| MW-2 @ 5' | 12/27/91 | ND | ND | ND | ND | ND |
| MW-2 @ 15' | 12/27/91 | ND | ND | ND | ND | ND |
| MW-2 @ 25' | 12/27/91 | ND | ND | ND | ND | ND |
| MW-4 @ 15' | 7/22/92 | 240 | ND | 6.6 | 5.7 | 27 |
| MW-4 @ 20' | 7/22/92 | 6,000 | 34 | 450 | 190 | 780 |
| MW-4 @ 25' | 7/22/92 | 1,100 | 1.6 | 36 | 27 | 140 |
| B-5 @ 30' | 7/22/92 | ND | ND | ND | ND | ND |
| MW-6 @ 30' | 7/23/92 | ND | ND | ND | ND | ND |

TPHg = Total petroleum hydrocarbons as gasoline

B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes

ND = Not detected above the laboratory method detection limit

TPHg and BTEX analyses EPA 8015/8020 (DHS modified)

## Site Number 11117
## 7210 Bancroft Avenue, Oakland, California

### Soil Sample Results of Analyses (ppm)

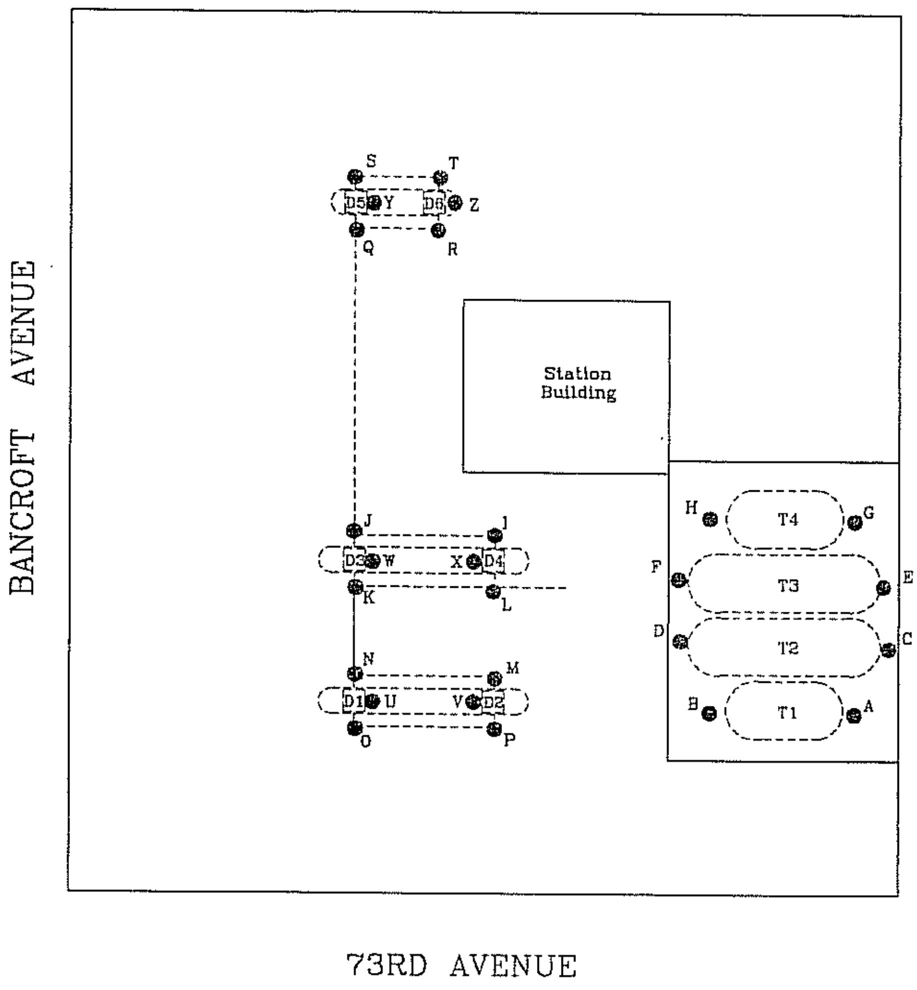
| Sample Number | Depth (feet) | Date Collected | California DHS LUFT Method TPH-G | California DHS LUFT Method Hydrocarbon Scan | | BTEX EPA Method 5030/8020 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | TPH-G | TPH-D | TPH-O | Benzene | Toluene | Ethylbenzene | Total Xylenes |
| TD-1 ** | *n/a* | 09/08/94 | 4.4 | 2,100 | 85 | *nd** | 0.077 | 0.042 | 0.26 |
| TD-2 | *n/a* | 09/08/94 | *nd* | 160 | 50 | *nd* | *nd* | *nd* | *nd* |
| TD-3 | *n/a* | 09/08/94 | 16 | 5,800 | 880 | *nd** | 0.088 | 0.053 | 0.51 |
| TD-4 | *n/a* | 09/08/94 | *nd* | 110 | 36 | *nd* | *nd* | *nd* | *nd* |
| TD-5 | *n/a* | 09/08/94 | *nd* | 2,400 | 340 | *nd* | *nd* | *nd* | 0.008 |
| THP-1-22′ *** | 22 | 09/08/94 | *nd* | *nd* | *nd* | *nd* | *nd* | *nd* | *nd* |
| TB2-S-13.5-14′ | 13.5-14 | 09/14/94 | *nd* | *nd* | *nd* | *nd* | *nd* | *nd* | *nd* |
| TB3-S-11′ | 11 | 09/14/94 | *nd* | *nd* | *nd* | *nd* | *nd* | *nd* | *nd* |
| TB4-S-6.5-7′ | 6.5-7 | 09/14/94 | *nd* | *nd* | *nd* | *nd* | *nd* | *nd* | *nd* |

### Groundwater Sample Results of Analyses (ppb)

| Sample Number | Depth to Water (feet) | Date Sampled | California DHS LUFT Method TPH-G | California DHS LUFT Method Hydrocarbon Scan | | BTEX EPA Method 5030/8020 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | TPH-G | TPH-D | TPH-O | Benzene | Toluene | Ethylbenzene | Total Xylenes |
| TB2-W-36' | 36 | 09/14/94 | *nd* | *nd** | *nd** | *nd* | *nd* | *nd* | *nd* |
| TB3-W-36' | 36 | 09/14/94 | *nd* | *nd** | *nd** | 0.7 | 0.6 | *nd* | *nd* |

NOTE:
TPH-G = Total petroleum hydrocarbons as gasoline.
TPH-D = Total petroleum hydrocarbons as diesel.
TPH-O = Total petroleum hydrocarbons as oil.
*nd* = Not detected at or above method reporting limit.
*n/a* = Not applicable.
— = Not analyzed.

TW = Tosco well.
TB = Tosco boring.
TD = Tosco dispenser soil sample.
THP = Tosco HydroPunch.
SGP = Soil gas probe.
* = Raised method reporting limits (see laboratory report in Attachment D).
** = TD-1 through TD-5 are referred to as PD-1 through PD-5 on lab reports.
*** = HP-1 is referred to as PHP-1 on lab report.



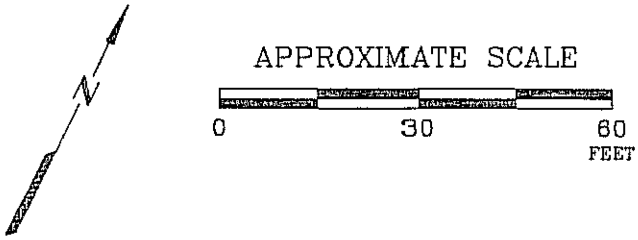
A) S-15-T1N
B) S-15-T1S
C) S-15-T2N
D) S-14-T2S
E) S-16-T3N
F) 2-15-T3S
G) S-15-T4N
H) S-14-T4S
I) S-3-PL1
J) 2-3-PL2
K) S-3-PL3
L) S-3-PL4
M) S-3-PL5
N) S-3-PL6
O) S-3-PL7
P) S-3-PL8
Q) S-3-PL9
R) S-3-PL10
S) S-3-PL11
T) S-3-PL12
U) S-3-D1
V) S-3-D2
W) S-3-D3
X) S-3-D4
Y) S-3-D5
Z) S-3-D6

FN 23490002

## EXPLANATION

● Soil Sample Location

S-15-T1N —— Tank/Product Line/Dispenser number
Depth
Soil Sample



ERI
ENVIRONMENTAL RESOLUTIONS, INC.

# GENERALIZED SITE PLAN

TOSCO 76 SERVICE STATION 11117
7210 Bancroft Avenue
Oakland, California

PROJECT NO.
2349

PLATE
2
Nov. 10, 1998

## RESULTS OF LABORATORY ANALYSES OF SOIL SAMPLES

Tosco 76 Service Station 11117
7210 Bancroft Avenue
Oakland, California
(Page 1 of 2)

| Sample # | Plate 2 Callout | Date Sampled | Depth (ft bgs) | TEPHd | TPPHg | MTBE | B | T | E | X | Total Lead |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | <......ppm......> | | | | | | | |
| Underground Storage Tanks | | | | | | | | | | | |
| S-15-T1N | A | 8/14/98 | 15 | 630 | 480 | 1.6 | 0.40 | 0.46 | 2.3 | 1.2 | NA |
| S-15-T1S | B | 8/14/98 | 15 | 800 | 5,300 | ND | ND | 100 | 63 | 530 | NA |
| S-15-T2N | C | 8/14/98 | 15 | NA | 440 | 1.3 | 0.79 | 6.2 | 4.6 | 35 | ND |
| S-14-T2S | D | 8/14/98 | 14 | NA | 3.7 | 0.055 | ND | 0.019 | 0.060 | 0.52 | NA |
| S-16-T3N | E | 8/14/98 | 16 | NA | 810 | 5.3 | 0.95 | 4.2 | 16 | 99 | NA |
| S-15-T3S | F | 8/14/98 | 15 | NA | ND | 0.065 | ND | ND | ND | 0.013 | NA |
| S-15-T4N | G | 8/14/98 | 15 | NA | ND | 0.26 | ND | ND | ND | ND | NA |
| S-14-T4S | H | 8/14/98 | 14 | NA | ND | 0.028 | ND | 0.0090 | ND | 0.016 | NA |
| Product Lines and Dispensers | | | | | | | | | | | |
| S-3-PL1 | I | 8/14/98 | 3 | NA | 240 | 15 | ND | 6.0 | 3.5 | 25 | 12 |
| S-3-PL2 | J | 8/14/98 | 3 | 14 | 3.3 | 0.10 | ND | 0.026 | 0.018 | 0.18 | NA |
| S-3-PL3 | K | 8/14/98 | 3 | 4.8 | ND | 0.86 | ND | ND | ND | ND | NA |
| S-3-PL4 | L | 8/14/98 | 3 | 21 | 6.8 | 12 | 0.063 | 0.0081 | 0.17 | 0.46 | NA |
| S-3-PL5 | M | 8/14/98 | 3 | NA | ND | ND | ND | ND | ND | ND | NA |
| S-3-PL6 | N | 8/14/98 | 3 | NA | 4.8 | ND | ND | 0.11 | 0.0054 | 0.038 | NA |
| S-3-PL7 | O | 8/14/98 | 3 | NA | 1.8 | 0.075 | ND | 0.084 | 0.019 | 0.097 | NA |
| S-3-PL8 | P | 8/14/98 | 3 | NA | ND | ND | ND | ND | ND | ND | NA |
| S-3-PL9 | Q | 8/14/98 | 3 | 18 | ND | ND | ND | ND | ND | ND | NA |
| S-3-PL10 | R | 8/14/98 | 3 | NA | ND | ND | ND | ND | ND | ND | NA |
| S-3-PL11 | S | 8/14/98 | 3 | 190 | 1.7 | ND | ND | ND | 0.0068 | 0.012 | NA |
| S-3-PL12 | T | 8/14/98 | 3 | ND | 1.4 | 0.048 | 0.0089 | 0.025 | 0.0061 | 0.035 | NA |
| S-3-D1 | U | 8/14/98 | 3 | NA | 72 | 10 | ND | ND | ND | 0.63 | NA |
| S-3-D2 | V | 8/14/98 | 3 | NA | ND | 0.054 | ND | ND | ND | ND | NA |
| S-3-D3 | W | 8/14/98 | 3 | NA | ND | 1.7 | ND | 0.010 | ND | 0.010 | NA |
| S-3-D4 | X | 8/14/98 | 3 | NA | 7200 | 72/ND* | 22 | 170 | 87 | 590 | 40 |
| S-3-D5 | Y | 8/14/98 | 3 | NA | ND | ND | ND | ND | ND | ND | NA |
| S-3-D6 | Z | 8/14/98 | 3 | ND | ND | 0.053 | ND | ND | ND | ND | NA |

## RESULTS OF LABORATORY ANALYSES OF SOIL SAMPLES

Tosco 76 Service Station 11117
7210 Bancroft Avenue
Oakland, California
(Page 2 of 2)

| Sample # | Plate 2 Callout | Date Sampled | Depth (ft bgs) | TEPHd | TPPHg | MTBE | B | T | E | X | Total Lead |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | < | | | | ppm | | | > |
| **Soil-Stockpile** | | | | | | | | | | | |
| SP-1-(1-4) | NA | 8/14/98 | NA | 9.3 | 16 | NA | 0.011 | 0.016 | 0.039 | 0.23 | 26 |
| SP-2-(1-4) | NA | 8/14/98 | NA | 17 | 19 | NA | 0.022 | ND | 0.034 | 0.11 | 30 |
| SP-3-(1-4) | NA | 8/14/98 | NA | 4.6 | 2.0 | NA | ND | ND | ND | 0.011 | 21 |
| SP-4-(1-4) | NA | 8/14/98 | NA | 5.3 | 2.4 | NA | ND | ND | ND | 0.014 | 23 |

Notes:

S-15-TIN = Soil Sample - depth - UST number/end.
S-3-PL1 = Soil Sample - depth - product line sample number.
S-3-D1 = Soil Sample - depth - dispenser number.
SP-1-(1-4) = Stockpiled soil sample - stockpile number - soil sleeve number.
TEPHd = Total extractable petroleum hydrocarbons as diesel analyzed using EPA method 8015 (modified).
TPPHg = Total purgeable petroleum hydrocarbons as gasoline analyzed using EPA method 8015 (modified).
MTBE = Methyl tertiary butyl ether analyzed using EPA method 8020.
BTEX = Benzene, toluene, ethyl benzene, and total xylenes analyzed using EPA method 8020.
Total Lead = Total threshold limit concentration of lead analyzed using EPA method 6010.
ft bgs = Feet below ground surface.
ppm = Parts per million.
NA = Not analyzed/not applicable.
ND = Not detected at or above laboratory method detection limits.
* = MTBE confirmed using EPA method 8260.

# SOIL SAMPLE ANALYTICAL RESULTS

BP STATION No. 11117
7210 BANCROFT AVENUE, OAKLAND, CALIFORNIA

| Sample No. | Date | TPHg (ppm) | B (ppm) | T (ppm) | E (ppm) | X (ppm) |
|---|---|---|---|---|---|---|
| MW-7-25' (1) | 10/6/94 | ND<1.0 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 |
| MW-8-25' | 10/6/94 | ND<1.0 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 |
| MW-9-25' | 10/6/94 | ND<1.0 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 |

**Notes:**

Sample No. : Soil boring designation and sample collection depth.
Date : Sample collection date.
TPHg : Total petroleum hydrocarbons as gasoline by EPA Method 8015 (modified).
BTEX : Benzene, toluene, ethylbenzene and total xylenes by EPA Method 8020 (modified).
ppm : Parts per million (mg/kg).
ND : Not detected in concentrations exceeding the indicated laboratory method detection limit (MDL).
(1): Rock and gravel encountered at 25 ft bgs. Sample collected at 26.5 bgs.

Summary of Soil Analytical Data

| Sample ID - Depth | TPPH-g | Benzene | Toluene | Ethylbenzene | Xylenes | MtBE |
|---|---|---|---|---|---|---|
| MW-10 - 6' | <0.1 mg/kg | <1 µg/kg | <2 µg/kg | <2 µg/kg | <2 µg/kg | <100 µg/kg |
| MW-10 - 11' | <0.1 mg/kg | <1 µg/kg | <2 µg/kg | <2 µg/kg | <2 µg/kg | <100 µg/kg |
| MW-10 - 30' | <0.1 mg/kg | <1 µg/kg | <2 µg/kg | <2 µg/kg | <2 µg/kg | <100 µg/kg |
| MW-10 - 35' | <0.1 mg/kg | <1 µg/kg | <2 µg/kg | <2 µg/kg | <2 µg/kg | <100 µg/kg |

Notes:

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

CAMBRIA

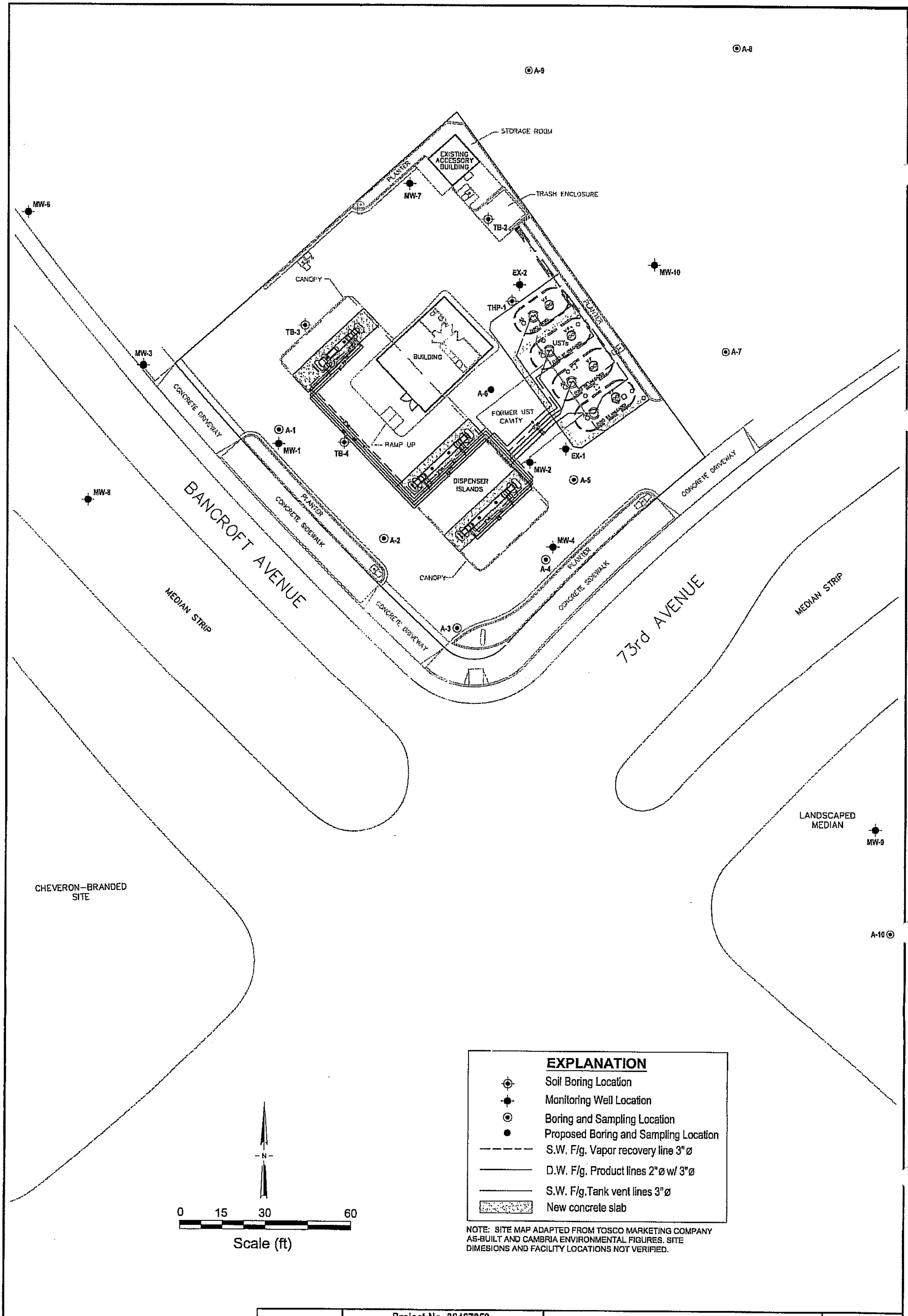
## Soil Analytical Data - BP Oil Site No. 11117,
## 7210 Bancroft Avenue, Oakland, California

| Sample ID (Depth - ft bgs) | Date Sampled | TPHg (mg/kg) | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Xylenes (mg/kg) | MTBE (mg/kg) | Total Lead (mg/kg) | TOC (% w/w) |
|---|---|---|---|---|---|---|---|---|---|
|  | EPA Method: | 8015m | 8260 | 8260 | 8260 | 8260 | 8260 | 6010 | Walkley-Black |
| EX-1-15.5 | 11/30/99 | <1.0 | <0.005 | <0.005 | <0.005 | <0.005 | 0.011 | - | - |
| EX-1-21 | 11/30/99 | <1.0 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | - | - |
| EX-1-25.5 | 11/30/99 | - | - | - | - | - | - | - | <0.318 |
| EX-1-36 | 11/30/99 | - | - | - | - | - | - | - | <0.318 |
| EX-2-11 | 11/30/99 | <1.0 | <0.005 | <0.005 | <0.005 | <0.005 | 0.012 | - | - |
| EX-2-15.5 | 11/30/99 | - | - | - | - | - | - | - | <0.318 |
| EX-2-20.5 | 11/30/99 | <1.0 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | - | - |
| COMP | 11/30/99 | 1.0 | 0.016 | 0.096 | 0.042 | 0.236 | 0.17 | 5.85 | - |

**Abbreviations and Notes:**

TPHg = Total petroleum hydrocarbons as gasoline
MTBE = Methyl tert-butyl ether
TOC = Total organic carbon
mg/kg = Milligrams per kilogram

Nov 21, 2005 - 1:36pm
X:\X_ENV_WASTE\BPG-UY3A\SITES\LNI-M8B1\11117\Reports\Swi-1\Drawings\Figure 2.dwg



NOTE: SITE MAP ADAPTED FROM TOSCO MARKETING COMPANY AS-BUILT AND CAMBRIA ENVIRONMENTAL FIGURES. SITE DIMESIONS AND FACILITY LOCATIONS NOT VERIFIED.

URS

Project No. 38487353

Former BP Station #11117
7210 Bancroft Avenue
Oakland, California

## SOIL BORING LOCATIONS

FIGURE
2

## Soil Analytical Data

Former BP #11117

7210 Bancroft Ave., Oakland, CA

| Soil Sample ID | Sample Depth (feet bgs) | Date Sampled | GRO (mg/kg) | Benzene (mg/kg) | Toluene (mg/kg) | Ethylbenzene (mg/kg) | Xylenes (mg/kg) | TBA (mg/kg) | MTBE (mg/kg) | Lead (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| A-1 (6-6.5') | 6.0 | 09/27/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-1 (11-11.5') | 11.0 | 09/27/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-1 (16-16.5') | 16.0 | 09/27/05 | ND<0.099 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-1 (21-21.5') | 21.0 | 09/27/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | NA |
| A-1 (25.5-26') | 25.5 | 09/27/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | NA |
| A-1 (30.5-31') | 30.5 | 09/27/05 | ND<0.099 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-1 (35.5-36') | 35.5 | 09/27/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | NA |
| A-1 (39-39.5') | 39.0 | 09/27/05 | **76** | ND<0.10 | ND<0.10 | **0.11** | **0.11** | ND<10 | ND<0.050 | NA |
| A-1 (46-46.5') | 46.0 | 09/27/05 | ND<2.5 | ND<0.050 | ND<0.050 | ND<0.050 | ND<0.050 | ND<5.0 | **0.84** | NA |
| A-2 (5-5.5') | 5.0 | 09/27/05 | ND<0.099 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-2 (10-10.5') | 10.0 | 09/27/05 | ND<0.099 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-2 (15-15.5') | 15.0 | 09/27/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | NA |
| A-2 (19.5-20') | 19.5 | 09/27/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | NA |
| A-2 (25-25.5') | 25.0 | 09/27/05 | **34** | ND<0.10 | ND<0.10 | ND<0.10 | ND<0.10 | ND<10 | ND<0.050 | NA |
| A-2 (30-30.5') | 30.0 | 09/27/05 | **120** | ND<0.25 | ND<0.25 | ND<0.25 | ND<0.25 | ND<25 | ND<0.12 | NA |
| A-2 (33.5-34') | 33.5 | 09/27/05 | **17** | ND<0.050 | ND<0.050 | **0.25** | **0.99** | ND<5.0 | ND<0.025 | NA |
| A-3 (5-5.5') | 5.0 | 09/27/05 | **0.27** | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | **0.0050** | NA |
| A-3 (14.5-15') | 14.5 | 09/27/05 | **0.13** | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-3 (19.5-20') | 19.5 | 09/27/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-3 (23.5-24') | 23.5 | 09/27/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-3 (26-26.5') | 26.0 | 09/27/05 | **220** | ND<1.0 | ND<1.0 | **4.5** | **18** | ND<100 | ND<0.50 | **8.5** |

## Soil Analytical Data

Former BP #11117
7210 Bancroft Ave., Oakland, CA

| Soil Sample ID | Sample Depth (feet bgs) | Date Sampled | GRO (mg/kg) | Benzene (mg/kg) | Toluene (mg/kg) | Ethylbenzene (mg/kg) | Xylenes (mg/kg) | TBA (mg/kg) | MTBE (mg/kg) | Lead (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| A-4 (5-5.5') | 5.0 | 09/26/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-4 (15-15.5') | 15.0 | 09/26/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-4 (19.5-20') | 19.5 | 09/26/05 | **0.44** | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | NA |
| A-4 (23.5-24') | 23.5 | 09/26/05 | **490** | ND<1.0 | **18** | **18** | **87** | ND<100 | ND<0.0050 | **11** |
| A-4 (31.5-32') | 31.5 | 09/26/05 | **5.1** | **0.15** | **0.088** | **0.24** | **1.1** | ND<5.0 | **0.48** | NA |
| | | | | | | | | | | |
| A-5 (5-5.5') | 5.0 | 09/26/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-5 (10-10.5') | 10.0 | 09/26/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-5 (15-15.5') | 15.0 | 09/26/05 | **0.34** | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | **0.0085** | NA |
| A-5 (19.5-20') | 19.5 | 09/26/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | **0.0053** | NA |
| A-5 (22-22.5') | 22.0 | 09/26/05 | ND<0.099 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | **0.0058** | NA |
| A-5 (25-25.5') | 25.0 | 09/26/05 | **0.23** | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | **0.022** | **0.035** | NA |
| A-5 (30-30.5') | 30.0 | 09/26/05 | **1.3** | **0.0068** | **0.014** | **0.032** | **0.18** | ND<0.020 | **0.015** | NA |
| A-5 (35-35.5') | 35.0 | 09/26/05 | **28** | **0.11** | **0.81** | **0.57** | **3.1** | ND<5.0 | **0.030** | NA |
| | | | | | | | | | | |
| A-7 (6-6.5') | 6.0 | 11/03/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-7 (11-11.5') | 11.0 | 11/03/05 | ND<0.099 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-7 (16-16.5') | 16.0 | 11/03/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-7 (21-21.5') | 21.0 | 11/03/05 | ND<0.098 | ND<0.0049 | ND<0.0049 | ND<0.0049 | ND<0.0049 | ND<0.020 | ND<0.0049 | NA |
| A-7 (25.5-26') | 25.5 | 11/03/05 | ND<25 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<50 | **0.43** | NA |
| A-7 (36-36.5') | 36.0 | 11/03/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | **0.0064** | NA |

## Soil Analytical Data
Former BP #11117
7210 Bancroft Ave., Oakland, CA

| Soil Sample ID | Sample Depth (feet bgs) | Date Sampled | GRO (mg/kg) | Benzene (mg/kg) | Toluene (mg/kg) | Ethylbenzene (mg/kg) | Xylenes (mg/kg) | TBA (mg/kg) | MTBE (mg/kg) | Lead (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| A-8 (6-6.5') | 6.0 | 11/03/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-8 (11-11.5') | 11.0 | 11/03/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-8 (15.5-16') | 15.5 | 11/03/05 | ND<0.099 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-8 (21-21.5') | 21.0 | 11/03/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-8 (25-25.5') | 25.0 | 11/03/05 | ND<0.099 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-8 (30-30.5') | 30.0 | 11/03/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-8 (36-36.5') | 36.0 | 11/03/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| | | | | | | | | | | |
| A-9 (6-6.5') | 6.0 | 11/03/05 | ND<0.099 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-9 (11-11.5') | 11.0 | 11/03/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-9 (16-16.5') | 16.0 | 11/03/05 | ND<0.099 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-9 (21-21.5') | 21.0 | 11/03/05 | ND<0.098 | ND<0.0049 | ND<0.0049 | ND<0.0049 | ND<0.0049 | ND<0.020 | ND<0.0049 | NA |
| A-9 (25-25.5') | 25.0 | 11/03/05 | ND<0.099 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-9 (31-31.5') | 31.0 | 11/03/05 | ND<2.5 | ND<0.050 | ND<0.050 | ND<0.050 | ND<0.050 | ND<5.0 | **0.16** | NA |
| A-9 (36-36.5') | 36.0 | 11/03/05 | ND<0.099 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| | | | | | | | | | | |
| A-10 (5.5-6') | 5.5 | 11/07/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-10 (10.5-11') | 10.5 | 11/07/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-10 (15.5-16') | 15.5 | 11/07/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-10 (20.5-21') | 20.5 | 11/07/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-10 (25.5-26') | 25.5 | 11/07/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-10 (30.5-31') | 30.5 | 11/07/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |
| A-10 (35.5-36') | 35.5 | 11/07/05 | ND<0.10 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.0050 | ND<0.020 | ND<0.0050 | NA |

## Soil Analytical Data

Former BP #11133
2220 98th Ave., Oakland, CA

Notes: All Samples analyzed by EPA Method 8260B. Di-isopropyl ether, 1,2-dibromoethane, 1,2-dichloroethane, ethyl tertiary butyl ether, tertiary amyl methyl ether and ethanol were not detected at or above their respective laboratory reporting limit.

Total lead analyzed by EPA Method 6000/7000 series for soil disposal purposes.

bgs = below ground surface
GRO = Gasoline range organics
TBA = tert-butyl alcohol
MTBE = Methyl tert-butyl ether
mg/kg = milligrams per kilogram
ND< = Not detected at or above stated laboratory reporting limit
NA = Not analyzed

# Soil Boring Groundwater Analytical Data

Former BP #11117
7210 Bancroft Ave., Oakland, CA

| Sample ID | DTW or Hydropunch screen interval (feet bgs) | Date Sampled | GRO (ug/L) | Benzene (ug/L) | Toluene (ug/L) | Ethylbenzene (ug/L) | Xylenes (ug/L) | TBA (ug/L) | MTBE (ug/L) |
|---|---|---|---|---|---|---|---|---|---|
| A-1 (22.6') | 22.6 | 09/27/05 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<20 | ND<0.50 |
| A-2 (21.3') | 21.3 | 09/27/05 | **510,000** | ND<250 | ND<250 | **7,200** | **29,000** | ND<10,000 | ND<250 |
| A-2 (40'-42') | 40-42 | 09/27/05 | **36,000** | **1,800** | **97** | **1,300** | **1,200** | ND<1,000 | **110** |
| A-3 (19.4') | 19.4 | 09/27/05 | **25,000** | **12** | **43** | **500** | **1,900** | ND<500 | ND<12 |
| A-3 (34'-36') | 34-36 | 09/27/05 | **12,000** | **21** | **24** | ND<5.0 | **130** | ND<200 | **8.3** |
| A-4 (21.6') | 21.6 | 09/26/05 | **150,000** | **2,500** | **7,300** | **5,500** | **18,000** | ND<2,000 | **820** |
| A-4 (34'-36') | 34-36 | 09/26/05 | **120,000** | **11,000** | **2,400** | **4,000** | **19,000** | ND<10,000 | **39,000** |
| A-5 (19.5') | 19.5 | 09/26/05 | **790** | **10** | ND<2.5 | **2.8** | **3.8** | **350** | **510** |
| A-8 (24.6') | 24.6 | 11/03/05 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<20 | ND<0.50 |
| A-9 (24.2') | 24.2 | 11/03/05 | **68** | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<20 | **20** |
| A-10 (25') | 25 | 11/07/05 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | **0.50** | ND<20 | ND<0.50 |
| A-10 (39') | 39 | 11/07/05 | **51** | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<20 | **27** |

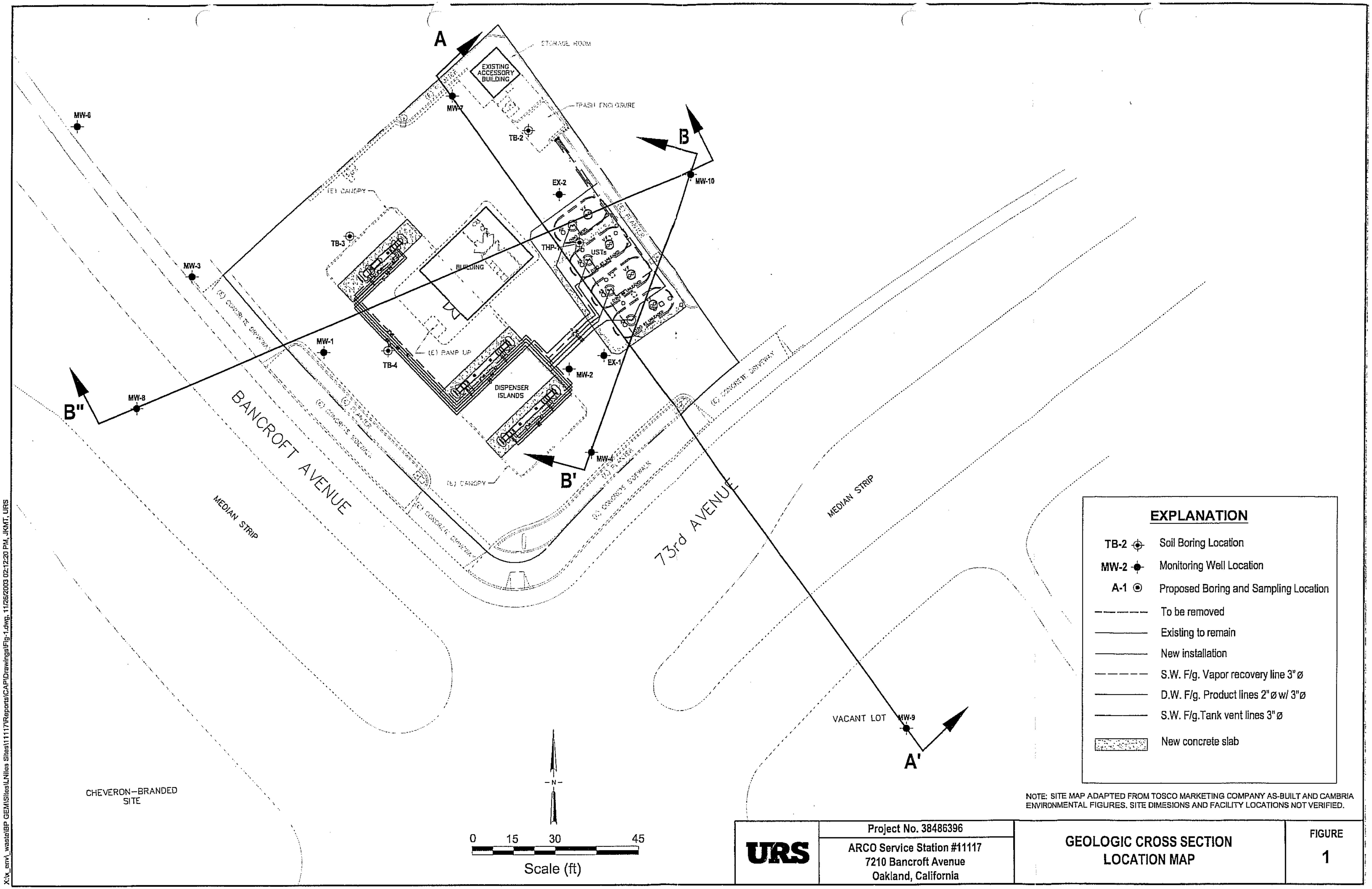
## Soil Boring Groundwater Analytical Data
Former BP #11117
7210 Bancroft Ave., Oakland, CA

Notes: All Samples analyzed by EPA Method 8260B. Di-isopropyl ether, 1,2-dibromoethane, 1,2-dichloroethane, ethyl tertiary butyl ether, tertiary amyl methyl ether and ethanol were not detected at or above their respective laboratory reporting limit.
Total lead analyzed by EPA Method 6000/7000 series for soil disposal purposes.

DTW = Depth to water
bgs = below ground surface
GRO = Gasoline range organics
TBA = tert-butyl alcohol
MTBE = Methyl tert-butyl ether
ug/L = micrograms per liter
ND< = Not detected at or above stated laboratory reporting limit
NA = Not analyzed

# APPENDIX C.

# GEOLOGIC CROSS SECTIONS



NOTE: SITE MAP ADAPTED FROM TOSCO MARKETING COMPANY AS-BUILT AND CAMBRIA ENVIRONMENTAL FIGURES. SITE DIMESIONS AND FACILITY LOCATIONS NOT VERIFIED.

**URS**

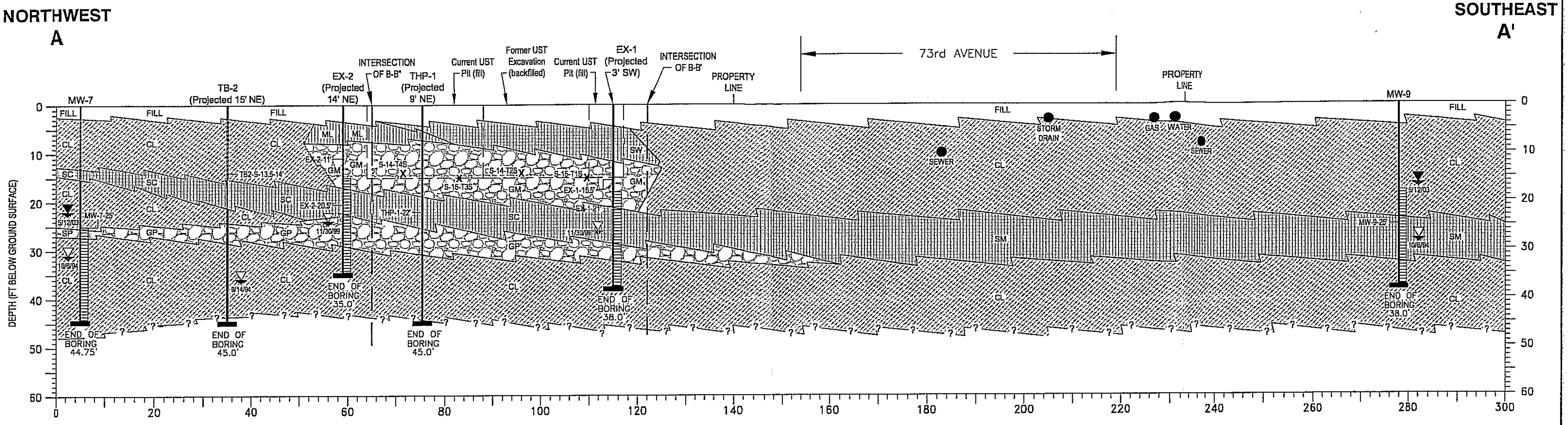
Project No. 38486396

ARCO Service Station #11117
7210 Bancroft Avenue
Oakland, California

## GEOLOGIC CROSS SECTION LOCATION MAP

FIGURE
1

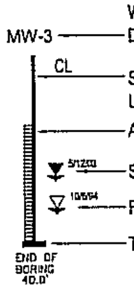
X:\x_env_waste\BP GEM\Sites\LNiles Sites\11117\Reports\CAP\Drawings\Fig-1.dwg, 11/26/2003 02:12:20 PM, JKMT, URS



| SOIL CONCENTRATIONS (ppm) | | | | |
|---|---|---|---|---|
| Sample ID | Date | TPH-g | Benzene | MTBE |
| EX-2-11 | 11/30/99 | ND<1.0 | ND<0.005 | 0.012 |
| EX-2-20.5 | 11/30/99 | ND<1.0 | ND<0.005 | ND<0.005 |
| EX-1-15.5 | 11/30/99 | ND<1.0 | ND<0.005 | 0.011 |
| EX-2-21 | 11/30/99 | ND<1.0 | ND<0.005 | ND<0.005 |
| MW-7-25 | 10/6/94 | ND<1.0 | ND<0.005 | -- |
| MW-9-25 | 10/6/94 | ND<1.0 | ND<0.005 | -- |
| S-14-T4S | 8/14/98 | ND | ND | 0.028 |
| S-15-T3S | 8/14/98 | ND | ND | 0.065 |
| S-14-T2S | 8/14/98 | 3.7 | ND | 0.055 |
| S-15-T1S | 8/14/98 | 5,300 | ND | ND |
| TB2-S-13.5-14 | 9/14/94 | ND | ND | ND |
| THP-1-22 | 9/14/94 | ND | ND | ND |

**LEGEND**

| | |
|---|---|
| CL | Gravelly clays, sandy clays, silty clays, lean clays |
| ML | Silts and very fine sands |
| SW-SM, SC | Gravelly and/or silty to clayey sand |
| GP-GM | Sandy and/or silty gravel |



MW-3 — Well or Soil Boring Number Distance and Direction of Projection

CL — Soil Type using the Unified Soil Classification System

Analyzed Soil Sample

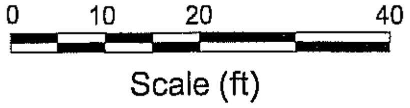
Static water level/date

First encountered water/date

Total depth of boring

THP-1-22' — Soil sample analytical results with TPH-g, Benzene, and MTBE concentrations in milligrams per kilogram (mg/kg) shown on table

Utility information provided by PG&E, EBMUD, and City of Oakland



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Project No. 38486396

Former BP Service Station #11117
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Oakland, California

## GEOLOGIC CROSS SECTION
## A - A'

FIGURE
2

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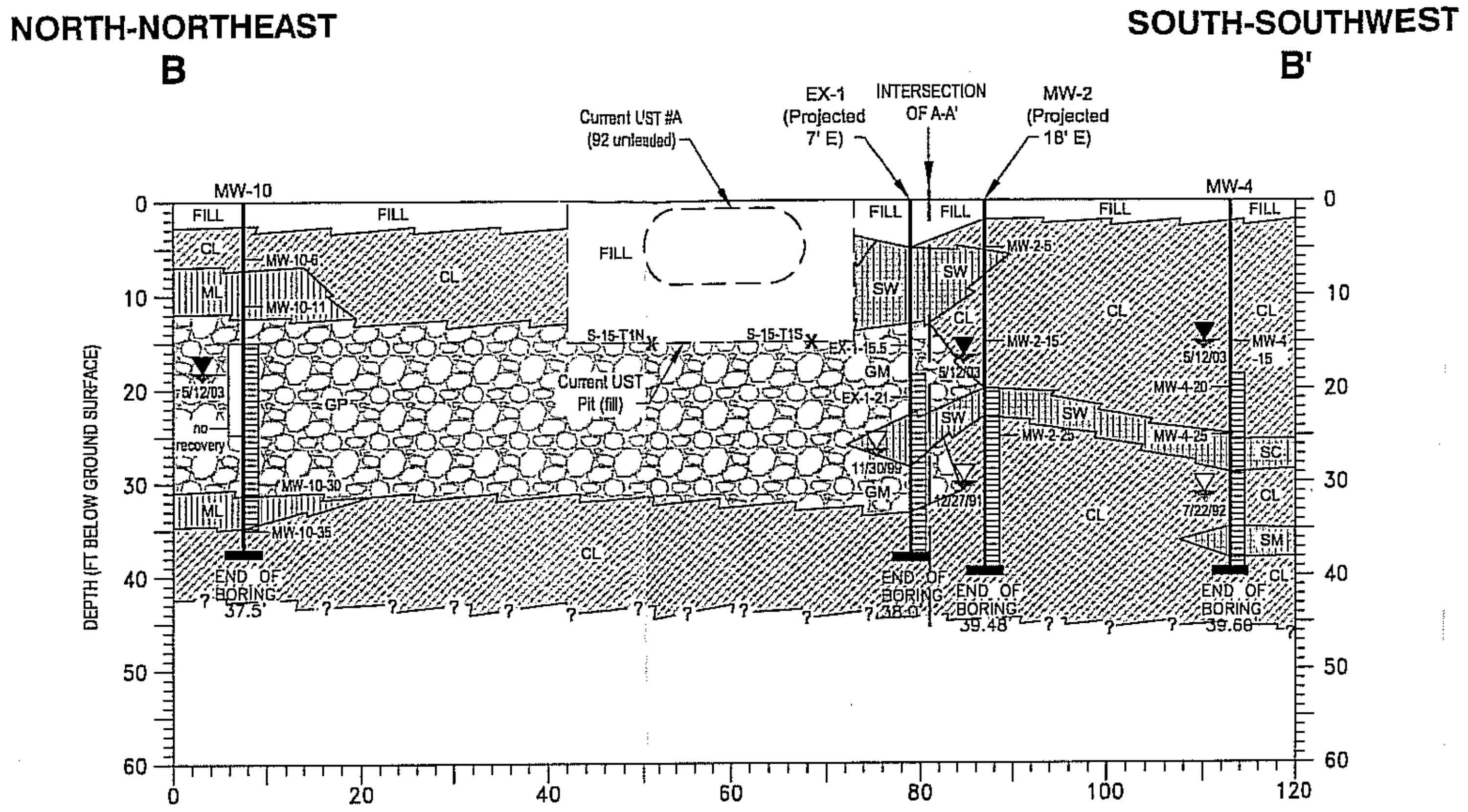
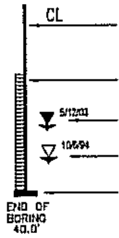


| SOIL CONCENTRATIONS (ppm) | | | | |
|---|---|---|---|---|
| Sample ID | Date | TPH-g | Benzene | MTBE |
| EX-1-15.5 | 11/30/99 | ND<1.0 | ND<0.005 | 0.011 |
| EX-1-21 | 11/30/99 | ND<1.0 | ND<0.005 | ND<0.005 |
| MW-2-5 | 12/27/91 | ND | ND | ND |
| MW-2-15 | 12/27/91 | ND | ND | ND |
| MW-2-25 | 12/27/91 | ND | ND | ND |
| MW-4-15 | 7/22/92 | 240 | ND | -- |
| MW-4-20 | 7/22/92 | 6,000 | 34 | -- |
| MW-4-25 | 7/22/03 | 1,100 | 1.6 | -- |
| MW-10-6 | -- | ND<0.1 | ND<0.001 | ND<0.1 |
| MW-10-30 | -- | ND<0.1 | ND<0.001 | ND<0.1 |
| MW-10-35 | -- | ND<0.1 | ND<0.001 | ND<0.1 |
| S-15-T1N | 8/14/98 | 480 | 0.4 | 1.6 |
| S-15-T1S | 8/14/98 | 5,300 | ND | ND |

LEGEND

| | |
|---|---|
| CL | Gravelly clays, sandy clays, silty clays, lean clays |
| ML | Silts and very fine sands |
| SW-SM, SC | Gravelly and/or silty to clayey sand |
| GP-GM | Sandy and/or silty gravel |
| MW-4 | Well or Soil Boring Number<br>Distance and Direction of Projection |



Soil Type using the Unified Soil Classification System

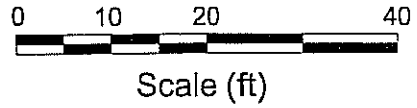
Analyzed Soil Sample

Static water level/date

First encountered water/date

Total depth of boring

THP-1-22' — Soil sample analytical results with TPH-g, Benzene and MTBE concentrations in milligrams per kilogram (mg/kg) shown on table



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## GEOLOGIC CROSS SECTION
## B - B'

FIGURE
3

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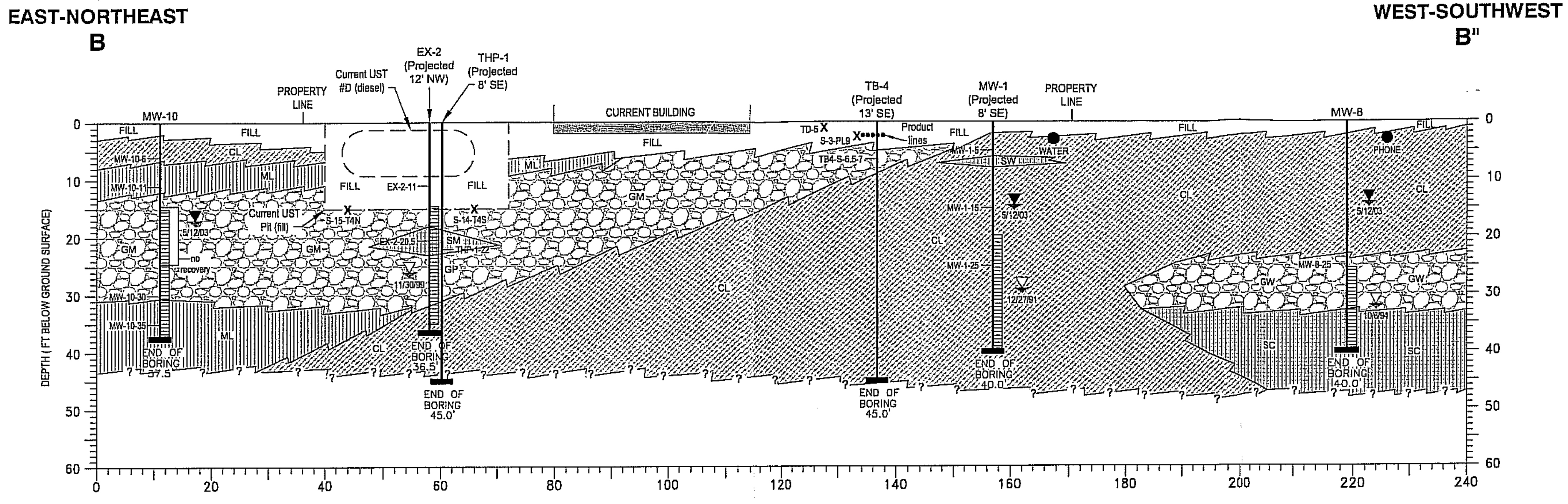

**SOIL CONCENTRATIONS (ppm)**

| Sample ID | Date | TPH-g | Benzene | MTBE |
|---|---|---|---|---|
| EX-2-11 | 11/30/99 | ND<1.0 | ND<0.005 | ND<0.005 |
| EX-2-20.5 | 11/30/99 | ND<1.0 | ND<0.005 | ND<0.005 |
| MW-1-5 | 12/27/91 | ND | ND | ND |
| MW-1-15 | 12/27/91 | ND | ND | ND |
| MW-1-25 | 12/27/91 | ND | ND | ND |
| MW-8-25 | 10/6/94 | ND<1.0 | – | – |
| MW-10-6 | 7/7/97 | ND<1.0 | – | – |
| MW-10-11 | 7/7/97 | ND<1.0 | – | – |
| MW-10-30 | 7/7/97 | ND<1.0 | – | – |
| MW-10-35 | 7/7/97 | ND<1.0 | – | – |
| S-3-PL9<br>(proj. 8' NW) | 8/14/98 | ND | ND | ND |
| S-14-T4S | 8/14/98 | ND | ND | 0.028 |
| S-15-T4N | 8/14/98 | ND | ND | 0.26 |
| TB4-S-6.5-7 | 9/14/94 | ND | ND | ND |
| TD-5<br>(proj. 14' NW) | 9/8/94 | ND | ND | ND |
| TPH-1-22 | 9/8/94 | ND | ND | ND |

**LEGEND**

| | |
|---|---|
| CL | Gravelly clays, sandy clays, silty clays, lean clays |
| ML | Silts and very fine sands |
| SW-SM, SC | Gravelly and/or silty to clayey sand |
| GP-GM | Sandy and/or silty gravel |
| MW-1 | Well or Soil Boring Number<br>Distance and Direction of Projection |
| CL | Soil Type using the Unified Soil Classification System |
| | Analyzed Soil Sample |
| ▼ 5/12/03 | Static water level/date |
| ▽ 10/6/94 | First encountered water/date |
| END OF BORING 40.0' | Total depth of boring |
| THP-1-22' | Soil sample analytical results with TPH-g, Benzene and MTBE concentrations in milligrams per kilogram (mg/kg) shown on table |

Utility information provided by PG&E, EBMUD, and City of Oakland

0 10 20 40

Scale (ft)

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## GEOLOGIC CROSS SECTION
## B - B"

FIGURE
4

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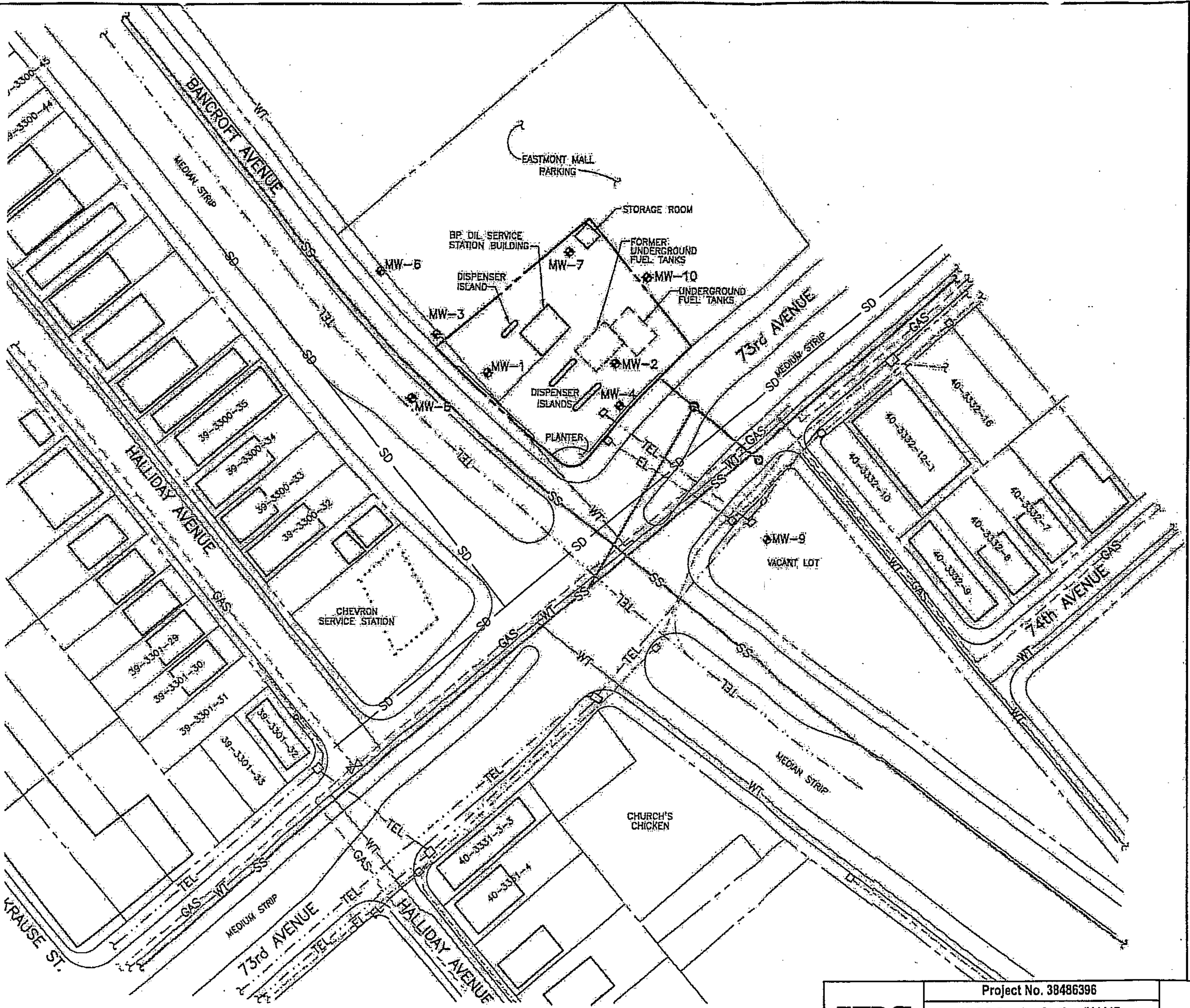
# APPENDIX D.

# UNDERGROUND UTILITIES SITE MAP



## EXPLANATION

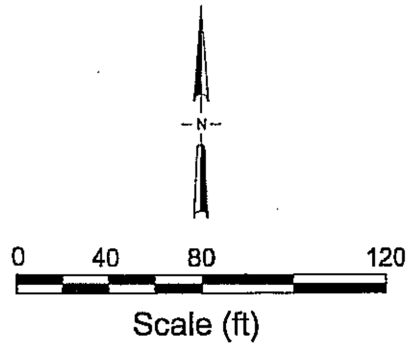
| | |
|---|---|
| ⊕ | Monitoring Well Location |
| ? | Assessor's Parcel Number |
| ▦ | Drop Inlet Grate |
| ○ | Manhole |
| □ | Above Ground Transformer |
| ⊠ | Television Cable Vault |
| SSCO ○ | Sanitary Sewer Cleanout |
| ● | Fire Hydrant |
| ⋈ | Valve |
| ● | Power Pole |

## UNDERGROUND UTILITY LINES

| | |
|---|---|
| SS | Sanitary Sewer Pipe |
| SD | Storm Drain Pipe |
| WT | Water Service Pipe |
| GAS | Gas Pipe |
| EL | Electrical Line |
| TEL | Telephone Line |
| TCL | Television Cable Line |
| ——? | Unknown Destination |
| ——] | End Of Pipe |
| (?) | Invert Elevation Relative To Bench Mark |

NOTE:

Location of utilities are approximate and based upon information provided at the time of preparation. This map is not to be used for any construction or related activities.



NOTE: SITE MAP ADAPTED FROM ALISTO ENGINEERING GROUP FIGURES.
SITE DIMESIONS AND FACILITY LOCATIONS NOT VERIFIED.

SOURCE: Pacific Gas and Electric Company, Pacific Bell, East Bay Municipal Utility District, City Of Oakland, Alameda County Assessor's Office.

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URS

Project No. 38486396

ARCO Service Station #11117
7210 Bancroft Avenue
Oakland, California

### UTILITIES SITE MAP