Atlantic Richfield Company
(a BP affiliated company)

P.O. Box 1257
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21 July 2008

Re: Site Conceptual Model with Feasibility Study Report
Former BP Station # 11132
3201 35th Avenue
Oakland, California
ACEH Case #RO0000014

"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
Environmental Business Manger

SITE CONCEPTUAL MODEL WITH FEASIBILITY STUDY REPORT
Former BP Station #11132
3201 35th Avenue
Oakland, California

Prepared for:

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

Prepared by:

BROADBENT & ASSOCIATES, INC.
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21 July 2008

Project No. 06-08-655

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

21 July 2008

Project No. 06-08-655

Atlantic Richfield Company
P.O. Box 1257
San Ramon, CA 94583
Submitted via ENFOS

Attn.: Mr. Paul Supple

Re: Site Conceptual Model with Feasibility Study Report, Former BP Station #11132
3201 35th Avenue, Oakland, California; ACEH Case #RO0000014

Dear Mr. Supple:

Broadbent & Associates, Inc. (BAI) is pleased to submit this *Site Conceptual Model with Feasibility Study Report* for Former BP Station #11132 (herein referred to as Station #11132) located at 3201 35th Avenue, Oakland, California (Site). This report was prepared in response to a directive letter from Mr. Paresh Khatri of Alameda County Environmental Health (ACEH) dated 22 May 2008.

Should you have questions or require additional information, 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., C.HG.
Principal Hydrogeologist

Attachment

cc: Mr. Paresh Khatri, Alameda County Environmental Health (Submitted via ACEH ftp site)
Ms. Shelby Lathrop, ConocoPhillips, 76 Broadway, Sacramento, California 95818
Electronic copy uploaded to GeoTracker

SITE CONCEPTUAL MODEL WITH FEASIBILITY STUDY REPORT
Former BP Service Station No. 11132
3201 35th Avenue, Oakland, California
Fuel Leak Case No. RO0000014

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3201 35th Avenue, Oakland, California
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SITE CONCEPTUAL MODEL WITH FEASIBILITY STUDY REPORT
Former BP Service Station No. 11132
3201 35th Avenue, Oakland, California
Fuel Leak Case No. RO0000014

1.0 INTRODUCTION

On behalf of the Atlantic Richfield Company, RM - a BP affiliated company, Broadbent & Associates, Inc. (BAI) has prepared this Site Conceptual Model with Feasibility Study Report for the Former BP Service Station No. 11132, located at 3201 35th Avenue, Oakland, Alameda County, California (Site). This report was prepared in response to the request within the 22 May 2008 directive letter from Mr. Paresh Khatri of the Alameda County Environmental Health (ACEH). This report includes discussions on the site background and previous environmental activities, regional and Site geology and hydrogeology, definition of contamination within soil and ground water, discussion of preferential pathways, status of Site remediation, sensitive receptors, preliminary risk assessment, feasibility study of remediation alternatives, discussion of data gaps, conclusions and recommendations. Tables, figures, and appendices referenced within this report are provided following the conclusion of the document's text.

2.0 BACKGROUND INFORMATION

2.1 Site Background

The Site is currently a 76-branded gasoline service station located on the northeast corner of 35th Avenue and Sutter Street, southwest of Interstate 580, in a mixed commercial and residential area of Oakland. The Site has operated as a gasoline service station since at least the early 1970's. It was acquired in 1989 from Mobil by BP and operated under the BP brand. BP sold the station in 1994 to Tosco, which was acquired by ConocoPhillips who now operates the 76-branded station. The original underground storage tank (UST) release was reported on 15 April 1986, following a failed UST integrity test on 5 March 1986 (Mobil, 1986; PetroTite, 1986). The ACEH-assigned Fuel Leak Case number is RO0000014 / GeoTracker Global ID No. T0600100213.

A Quik Stop convenience store/gasoline station is located at 3130 35th Avenue across the street approximately 150 feet to the southwest of the Site. Two former gasoline service stations are located slightly further west of the Site along 35th Avenue: A former Texaco-branded gasoline station on the northeast corner of 35th Avenue and School Street, now operated as Tito's Car Washing & Detail Shop at 3101 35th Avenue; and a former Exxon-branded gasoline station on the northwest corner of 35th Avenue and School Street but presently a vacant lot. The former Exxon station is an active leaking UST case, ACEH Fuel Leak Case No.RO0000271 / GeoTracker Global ID No. T0600100538.

2.2 Previous Environmental Activities

Mobil reported that three former USTs at the Site failed a tank integrity test on 5 March 1986 (Mobile, 1986; PetroTite, 1986). Former USTs at the Site included one 12,000-gallon, one 8,000-gallon, and one 5,000-gallon steel UST. These USTs had been installed in 1972. Lee filed a closure plan with Alameda County on 20 March 1986 (Lee, 1986). Kaprealian Engineering,

Inc. (KEI) subsequently conducted a UST inspection and soil sampling during the removal of the three USTs in April 1986 (KEI, 1986). KEI reported ground water on the bottom of the excavation during UST removal and soil sampling, but did not report on the condition of the USTs or the excavated soil. Four soil samples were obtained beneath two USTs at two feet below the tanks within the native soil, and three samples were collected from beneath one UST. The samples were analyzed for Total Petroleum Hydrocarbons in the Gasoline Range (TPH-G). Concentrations of TPH-G (up to 210 mg/kg) were detected in five of the seven samples. The Bay Area Air Quality Management District (BAAQMD) issued a permit to aerate 150 cubic yards of soil onsite before disposal at a Class III landfill (BAAQMD, 1986). However, no evidence of excavation or soil analysis was found. Sample collection location maps and analytical results are provided within Appendix A.

KEI installed three monitoring wells (MW-1 through MW-3) on 30 July 1986 (KEI, 1986). MW-1 was drilled to 45 feet below ground surface (ft bgs), and MW-2 and MW-3 were drilled to 35 ft bgs. The boring logs indicated that silty clay with rock fragments and gravel were encountered during drilling. Copies of boring logs are provided within Appendix B. Ground water was encountered during drilling between 24 and 33 ft bgs. A faint gasoline odor was reported in the soil cuttings encountered between five and seven ft bgs. One soil sample from each boring, collected between 16 and 26 ft bgs, was analyzed for TPH-G. Concentrations of TPH-G (up to 12.0 mg/kg) were detected in the soil samples. Ground-water samples were also collected from each monitoring well and analyzed for TPH-G and Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX). Concentrations of TPH-G (up to 26,000 µg/L) and BTEX (up to 3,800 µg/L Benzene, 1,000 µg/L Toluene, and 1,700 µg/L Total Xylenes) were detected in ground-water samples collected from wells MW-1 and MW-2.

It appears that KEI performed monthly monitoring and quarterly sampling of the three monitoring wells from October 1986 to February 1989. Available reports indicated that ground water from well MW-1 had odors that increased from “moderate” to “strong,” while MW-2 had odors that increased from “slight” to “moderate.” Sheen was reported in well MW-1 on 23 December 1986. On 21 December 1988, KEI reported three inches of Separate-Phase Hydrocarbons (SPH or Free Product, FP) in well MW-1. FP was also reported in well MW-2 and sheen reported in well MW-3 on 15 February 1989. In a 28 September 1987 report, KEI stated that “the presence of a small amount of floating product in MW-1, undocumented until the present quarter, implies the possibility that a pocket of free product is being leached from the soil into the groundwater” (KEI, 1987). A figure attached to the KEI 16 March 1989 monitoring and sampling report indicated the direction of ground-water flow was to the south. Quarterly ground-water samples were collected and analyzed for TPH-G and BTEX. Concentrations of TPH-G (up to 210,000 µg/L), Benzene (up to 28,000 µg/L), Toluene (up to 30,000 µg/L), Ethylbenzene (up to 8.5 µg/L), and Total Xylenes (up to 12,000 µg/L) were detected in the three early wells. At the time, the highest concentrations of both TPH-G and BTEX were detected in ground-water samples collected from well MW-1, near the southeast corner of the UST complex.

Alton Geoscience, Inc. (Alton) drilled ten soil borings to various depths ranging from 25 to 35 ft bgs in January and February 1990 (Alton, 1990). The borings were advanced three to four feet beyond the depth at which first ground water was encountered. The report contained no information about Site geology or hydrogeology, other than a ground-water elevation contours figure showing that the direction of ground-water flow beneath the Site was toward the

southwest at the time of the investigation. The borings were converted into temporary wells (TW-1 through TW-10) and ground-water samples collected. Samples from MW-1 and TW-2 were not analyzed due to the presence of FP. Concentrations of TPH-G (up to 240,000 µg/L) were detected in samples collected from wells MW-2 and MW-3, and from temporary wells TW-1, TW-3, TW-5, TW-6, TW-9, and TW-10. Concentrations of BTEX (up to 2,400 µg/L Benzene, 7,300 µg/L Toluene, 5,600 µg/L Ethylbenzene, and 28,000 µg/L Total Xylenes) were detected in the analyzed samples. The highest concentrations of TPH-G and BTEX were detected in temporary wells TW-5 (located off-site to the southwest within 35th Avenue), and TW-10 (located near the northwest corner of the UST complex) (Alton, 1990).

Alton drilled two onsite soil borings based on the results of these activities. The borings were converted into one ground-water monitoring well (MW-4) and one recovery well (RW-1). Alton drilled three off-site soil borings that were converted into monitoring wells MW-5 through MW-7 (Alton, 1990). The borings were drilled to approximately 35 ft bgs. During drilling, soil samples were collected from borings at five-foot intervals until the first ground water was encountered, at about 26 ft bgs in MW-5 and 28 ft bgs in MW-6 and MW-7. Silty clay was the predominant soil type encountered in each boring. At the time of the investigation, ground-water elevation data indicated a southerly ground-water flow direction, with an average gradient of approximately 0.01 ft/ft. Alton reported no known or reported ground-water production wells in use as domestic or municipal water supply sources within the immediate vicinity or within a ½-mile radius of the Site (Alton, 1990).

Eighteen samples collected from the five well borings were analyzed for TPH-G and BTEX. Concentrations of TPH-G (up to 770 mg/kg), and BTEX (up to 4.8 mg/kg Benzene), 44 mg/kg Toluene, 13 mg/kg Ethylbenzene, and 94 mg/kg Total Xylenes) were detected in soil samples from RW-1, near the southwest corner of the UST complex, and MW-5, off-site towards the southwest.

Ground-water samples were collected from wells MW-3 through MW-7. Wells MW-1 and MW-2 were not sampled because FP was present in each well at measured thicknesses of 1.25 ft and 0.10 ft, respectively. Concentrations of TPH-G (up to 280 µg/L) and BTEX (up to 200 µg/L Benzene, 210 µg/L Toluene, 46 µg/L Ethylbenzene, and 290 µg/L Total Xylenes) were detected in the ground-water samples collected from wells MW-3 and MW-5. The sample from off-site well MW-5, the most down-gradient off-site monitoring well, had the highest concentrations of TPH-G and BTEX in both soil and ground-water samples. Alton noted that well MW-5 is located approximately ten feet from the Quik Stop's USTs (Alton 1990).

In August 1990, KEI conducted soil sampling during routine dispenser modifications and upgrades (KEI, 1990). Three soil samples (D1 through D3) were collected from beneath product dispensers at depths ranging from approximately three to seven ft bgs. Four soil samples (PT-1 through PT-4) were also collected from product pipe trenches at depths of approximately three ft bgs. The samples were analyzed for TPH-G, BTEX, and organic lead. Concentrations of TPH-G (21 mg/kg), Benzene (9.9 µg/kg), Toluene (62 µg/kg), Ethylbenzene (60 µg/kg), and Total Xylenes (38 mg/kg) were detected in soil sample PT-3, from the pipeline trench that supplied the northern dispenser island. Approximately 150 cubic yards of soil was disposed of at an approved Class III disposal facility (KEI, 1990).

Alton drilled three off-site soil borings (SB-8 through SB-10) in February 1991. The borings were converted into ground-water monitoring wells MW-8 through MW-10 (Alton, 1991). The borings were drilled to approximately 35 or 40 ft bgs. Soil samples were collected from the borings at five-foot intervals and at significant lithologic changes, until the first ground water was encountered, at approximately 25 ft bgs in each well. Silty clay was the predominant soil type encountered throughout each boring. Depth to ground water, as measured from the top of casing on 15 April 1991, ranged from 12 to 18 ft. The depth to water was not measured in RW-1 because an "oily substance" was present on the water surface. According to Alton, these data indicated a southeasterly ground-water flow direction with an average hydraulic gradient of approximately 0.003 ft/ft at the time of the investigation. A pumping test was also conducted to estimate aquifer parameters. Based on the pumping test data, the average hydraulic conductivity beneath the Site was determined to be 0.016 ft/min (Alton, 1991).

Nine soil samples, collected from 10.5 to 26.0 ft bgs, were analyzed for TPH-G and BTEX. Concentrations of TPH-G (up to 390,000 µg/L) and BTEX (up to 1,800 µg/L Benzene, 16,000 µg/L Toluene, 6,700 µg/L Ethylbenzene, and 37,000 µg/L Total Xylenes) were detected in samples taken from the borings. The highest concentrations were detected at 20.5 to 21.0 ft bgs in boring SB-8 (MW-8).

Alton conducted a sensitive receptors survey as part of their supplemental site investigation study. The report, dated 20 February 1991, stated that the nearest residence was 50 feet, the nearest hospital was 11,000 feet, and the nearest school was 1,000 feet from the Site. According to Alton, the aquifer was a Class III: Not a Potential Source of Drinking Water (Alton, 1991).

Hydro-Environmental Technologies, Inc. (HETI) prepared an Interim Remedial Action Plan on 20 March 1992. In this plan, HETI stated that FP was routinely removed by hand bailing from monitoring wells MW-1 and MW-2 and recovery well RW-1 during the quarterly sampling rounds. HETI estimated that 5 gallons of product were removed each quarter. HETI proposed an interim ground-water and product recovery system to facilitate removal of free- and dissolved-phase hydrocarbons from the ground water at the Site. HETI also stated that "while this system will not be designed to address the off-site portion of the hydrocarbon plume, it will provide data necessary to plan the most cost-effective long-term remedial solution" (HETI, 1992). Ground-water monitoring and sampling data since 1990 is summarized within Table 1 and Table 2.

The East Bay Municipal Utility District (EBMUD) issued a Wastewater Discharge Permit to BP on 10 November 1992. The remediation system was activated on 25 November 1992, and operated intermittently until September 1995. The ground-water extraction and treatment system removed 935,229 gallons at approximately one gallon per minute from recover well RW-1. The last discharge report submitted by BP to EBMUD was in October 1995.

EMCON conducted supplemental assessment activities at the Site on 11 November 1994. One exploratory soil boring (THP-1) was advanced using Cone-Penetrometer Testing (CPT) equipment, and soil samples were collected from the boring. The boring was advanced approximately 23 ft bgs near the northern side of the station building. Soil types logged from drilling included sandy gravel and silty sand underlain by clay to approximately 23 ft bgs. The CPT equipment met with refusal at the extent explored (23 ft bgs). The soil sample from boring

THP-1 was collected from 4.0-4.5 ft bgs and submitted for TPH-G, BTEX, Total Petroleum Hydrocarbons in the Diesel Range (TPH-D), Total Petroleum Hydrocarbons in the Oil Range (TPH-O) and Polychlorinated Biphenyls (PCBs). TPH-O, at a concentration of 120 mg/kg, was the only analyte reported (EMCON, 1994).

In April 2004, URS observed Gregg Drilling advance six on-site soil borings utilizing a truck-mounted Geoprobe direct push technologies (DPT) rig. The borings were advanced to an approximate depth between 26 and 42 ft bgs (UB-7 through UB-12). A site map depicting the soil boring locations is provided in Appendix C. Soil samples were collected for analysis at approximate ten foot intervals. Concentrations of Gasoline-Range Organics (GRO) were detected above laboratory reporting limits in six samples collected from four of the five on-site borings at concentrations up to 820 mg/kg in sample UB-10-25, where 25 represents the sample depth in feet bgs. Benzene was detected above the laboratory reporting limit in two samples from two on-site borings at concentrations of 0.0093 mg/kg in UB-7-41 and 0.17 mg/kg in UB-9-35. Toluene was detected above the laboratory reporting limit in sample UB-9-35 at a concentration of 0.014 mg/kg. Ethylbenzene was detected in four samples from four on-site borings at concentrations up to 5.7 mg/kg in UB-10-25. Total xylenes were detected above the laboratory reporting limit in 13 samples from each of the five on-site borings at concentrations up to 37 mg/kg in UB-10-35. MTBE was detected in 13 samples from four of the on-site borings at concentrations up to 0.20 mg/kg in UB-7-41. TBA was detected above the laboratory reporting limit in five samples from three on-site borings at concentrations up to 0.85 mg/kg in UB-10-35.

In July 2004, URS observed Gregg Drilling advance six off-site soil borings utilizing a van-mounted Cone Penetrometer Testing (CPT) rig to an approximate depth of 50 feet bgs (UB-1 through UB-6) (Appendix C). Selected soil samples were submitted for laboratory analysis based on field observations and ground-water elevations. MTBE was detected above the laboratory reporting limits in one sample from the four off-site borings at concentrations of 0.0056 mg/kg in UB-4-30 and 0.018 mg/kg in UB-4-30.5. No other analytes were detected above the laboratory reporting limits from the off-site samples. Historical soil analytical data are provided within Appendix A. Lithologic boring logs and well construction details are provided within Appendix B.

Stratus Environmental, Inc. performed the field activities associated with a mobile Dual-Phase Extraction (DPE) event conducted during 26-28 November 2007 (BAI, 2008). Existing onsite wells MW-1, MW-2, and RW-1 were used as individual extraction wells for the mobile DPE events. Selection of these wells for extraction was based on construction, quarterly ground-water monitoring levels, laboratory analytical results, and locations on the Site. The remaining onsite and offsite wells, with the exception of distant wells MW-5 and MW-6, were used as observation points to monitor for observable influence. The extraction events on each of the three wells lasted 11 to 12 hours. During the mobile DPE events, the average soil vapor extraction rate was approximately 48.3 scfm and the average applied system vacuum was approximately 25.0-inches Mercury. Laboratory analytical results reported relatively high GRO in soil vapor extracted from well MW-2 (maximum of 1,500 ppmv GRO). Initial concentrations of hydrocarbons in the extracted ground water during the event were relatively high for the samples collected from wells MW-1 and RW-1 (maximum of 3,000 µg/L GRO). The concentrations in soil vapor decreased over time during extraction from wells MW-1 and RW-1, while concentrations increased over

time during extraction from well MW-2. The concentration of hydrocarbons in ground water decreased over time during extraction from wells MW-1 and RW-1, while concentrations of GRO and MTBE increased over time during extraction from well MW-2. Approximately 2,090 gallons of ground water was extracted as a result of this mobile DPE event. Approximately 0.0091 lbs of GRO and 0.0003 lbs of Benzene in ground water and 14.0 lbs of GRO and 0.029 lbs of Benzene in soil vapor were removed from the subsurface during extraction activities. It is believed that contaminant recovery efficiency was limited due to the relatively tight soil permeability in the vadose zone and beneath the ground-water table.

3.0 HYDROCARBON SOURCE

3.1 Release Source and Volume

The exact release source and volume released is unknown. However, based on historical reports and the observed contaminant concentrations, the source area is believed to be the UST complex located in the southwestern portion of the Site. The predominant depth of first detected contamination in soils in the vicinity of the UST complex leads one to presume that the release occurred beneath the invert of the USTs. An unknown amount of petroleum hydrocarbon contamination is presently bound within the soil matrix in this area, and dissolved within ground-water under and downgradient of the Site. A fluctuating ground-water table has likely "smeared" contaminants in soils up to the high water mark downgradient of the Site, contributing to a secondary source of contamination after the suspect USTs were removed and replaced.

3.2 Release Intervention

The removal and replacement of underground petroleum storage and dispensing infrastructure was conducted as a measure to stop the release.

4.0 SITE CHARACTERIZATION

4.1 Current Site Use

The Site is currently an operational 76-branded service station located on the northeast corner of 35th Avenue and Sutter Street, southwest of Interstate 580, in a mixed commercial and residential area of Oakland. Improvements to the property include the two service station buildings sharing a common roof, one inactive pump island on the north side of the station building(s) and two active pump islands south of the building(s) each with two double-sided dispensers under one large canopy. An aboveground propane storage tank surrounded by bollard posts is located in the southeastern corner of the lot. A fenced remediation compound (inactive) is located in the northwestern portion of the Site. Concrete covers ground surfaces around the pump islands and over the UST complex, located in the southwestern portion of the Site. Asphalt covers the majority of the rest of the Site, with the exception of thin planters along the borders where driveways are absent. Existing USTs consist of one 12,000-gallon and two 10,000-gallon double-wall fiberglass USTs, installed in 1986. According to the station manager, these USTs contain regular unleaded, plus unleaded, and super unleaded gasoline and are equipped with an

electronic leak detection system. In addition, the station personnel inventory the contents of the USTs by manually gauging the tanks.

4.2 Soil Definition Status

Soils underlying the Site have been consistently characterized as silty clay or sandy clay, although clayey silt and sandy silt have also been described. These soils of low to very low permeability have complicated plans and available technologies for remediation at this Site. Copies of available lithologic soil boring logs and well construction details are provided within Appendix B. Constructed geologic cross-sections are provided within Appendix C.

4.3 Ground-Water Definition Status

4.3.1 Ground-Water Flow Direction, Depth, and Gradient

Ground-water depth varies across the Site and through time from approximately 11 to 24 ft bgs. Historically, the ground-water gradient has ranged from 0.003 ft/ft to 0.01 ft/ft. Based on ground-water elevation data, the ground-water flow direction has varied between southeast and southwest. Historic ground-water flow directions and gradients are provided in Table 3.

4.3.2 Separate-Phase Hydrocarbons

Separate-phase hydrocarbons (SPH) or free product were first detected in on-site well MW-1 during quarterly monitoring and sampling activities conducted on 21 December 1988 by KEI. Three inches of SPH were reported in MW-1 during this visit. On 15 February 1989, SPH were detected in well MW-2 and sheen was observed in well MW-3. On 25 and 26 February 1991, SPH were observed within well RW-1 during quarterly monitoring and sampling activities. Free product has also been observed in wells MW-8, MW-9, and MW-10 since monitoring began. Consistent free product measurement and removal began in 1990 for MW-1, 1993 for wells MW-8, MW-9, and MW-10, and 2001 for RW-1. Historical free product measurements and removal amounts are provided in Table 4.

The free product currently observed at the Site consists of a black, heavily-degraded, almost grease-like material. Through observation the product can be classified as very aged and viscous. Operation of the ground-water extraction remediation system from 1992 to 1995 appeared to have had little effect on the free product thickness in wells associated with the Site. Since free product removal was initiated, measurable SPH have steadily decreased in wells MW-1, MW-8, MW-9, MW-10, and RW-1. Free product measurements during the recent Second Quarter 2008 monitoring event ranged from non-detect to 0.04 feet.

4.3.3 Gasoline-Range Organics

Concentrations of TPH-G/GRO have been detected above laboratory reporting limits in each well associated with the Site (MW-1 through MW-10 and RW-1). However, concentrations in wells MW-3, MW-4, MW-6, and MW-7 have been intermittently detected at relatively low levels since monitoring first began. The highest on-site concentration of TPH-G/GRO was reported in well MW-1 (1,700,000 µg/L), which is located approximately ten feet directly north

of the UST complex and west of the dispenser islands. The highest off-site concentration of TPH-G/GRO was reported in MW-9 (1,500,000 µg/L), which is located approximately 35 feet east-southeast of the USTs. Results of ground-water sampling and laboratory analysis are summarized in Table 1 and Appendix A. Second Quarter 2008 GRO concentrations are included in the map of ground-water elevation contours provided as Drawing 3. Drawing 4 depicts the TPH-G/GRO iso-concentration contours map of the Site for First Quarter 2007 (from the most recent monitoring event that sampled the greatest number of Site wells).

4.3.4 Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations o BTEX have been detected above laboratory reporting limits in each well associated with the Site (MW-1 through MW-10 and RW-1). However, concentrations in wells MW-3, MW-4, MW-6, and MW-7 have been intermittently detected at relatively low levels since monitoring first began. The highest on-site concentrations of Benzene and Toluene were reported in well MW-2, which is located approximately 40 feet south of the UST complex, at 15,000 µg/L and 21,000 µg/L, respectively. The highest on-site concentrations of Ethylbenzene and Total Xylenes were reported in well MW-1 at 24,000 µg/L and 120,000 µg/L, respectively. The highest off-site concentrations of Benzene and Ethylbenzene were reported in well MW-8, which is located approximately 130 feet south-southeast of the UST complex, at 19,000 µg/L and 20,000 µg/L, respectively. The highest off-site concentration of Toluene was reported in MW-10, located approximately 100 feet south of the USTs, at 38,000 µg/L. The highest concentration of Total Xylenes was detected in MW-9 at 120,000 µg/L. Results of ground-water sampling and laboratory analysis are summarized in Table 1 and Appendix A. Second Quarter 2008 Benzene concentrations are included in the map of ground-water elevation contours provided as Drawing 3. Drawing 5 depicts the benzene iso-concentration contours map of the Site for First Quarter 2007 (from the most recent monitoring event that sampled the greatest number of Site wells).

4.3.5 Methyl-Tertiary Butyl Ether

Methyl-Tertiary Butyl Ether (MTBE) has been detected above laboratory reporting limits in each well associated with the Site (MW-1 through MW-10 and RW-1). However, concentrations in wells MW-3, MW-4, MW-6, and MW-7 have been intermittently detected at relatively low levels since monitoring first began. The highest on-site concentration of MTBE was reported in well RW-1, which is located approximately ten feet south of the UST complex, at 78,000 µg/L. The highest off-site concentration of MTBE was detected in MW-8 at 5,700 µg/L. Results of ground-water sampling and laboratory analysis are summarized in Table 1 and Appendix A. Second Quarter 2008 MTBE concentrations are included in the map of ground-water elevation contours provided as Drawing 3. Drawing 6 depicts the MTBE iso-concentration contours map of the Site for First Quarter 2007 (from the most recent monitoring event that sampled the greatest number of Site wells).

4.4 Regional Geology

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 muds. 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 Merritt sand in West Oakland was an important part of the early water supply for the City of Oakland. It is shallow (up to 60 feet), but before the turn of the last 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 to 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 Peralta Creek, located approximately 500 feet north of the Site. Peralta Creek flows generally east to west near the Site vicinity.

4.5 Topography

The Site is situated at an approximate elevation of 175 feet above mean sea level. The Site is relatively flat, but slopes slightly to the southwest, consistent with the local topography.

4.6 Stratigraphy

Sediments encountered at the Site consist primarily of silty clays or clayey silts with varying amounts of sand and gravel, extending from the ground surface to the total depth investigated, approximately 45 ft bgs. Boring logs are provided in Appendix B. Geologic cross-sections encompassing both on-site and off-site lithology are provided in Appendix C.

4.7 Preferential Pathway Analysis

Although some underground utilities within the public right-of-way were included in maps produced by URS (Appendix C), BAI has no record of a formal utility survey of the Site and surrounding area. Therefore, it is unknown whether utility trenches within and near the Site and current plume area could be serving as preferential pathways for contaminant migration above or below the ground-water table. However, due to the significantly greater depth to water than that of common underground utilities, it is unlikely that pathways created by underground conduits on or near the Site would act as preferential pathways for contaminant migration. This is especially true if the presumed mode of contaminant release was from the invert of the older USTs removed from the Site in 1986.

5.0 REMEDIATION STATUS

5.1 Remedial Actions Taken

As mentioned previously, each of the USTs were removed from the Site and replaced, along with the additional facilities associated with an active service station (dispenser islands, product lines, etc.). Numerous soil borings and monitor wells have also been installed to delineate and monitor the extent of contamination and migration as discussed in previous sections. A ground-water extraction remediation system was installed on-site and operated between November 1992 and September 1995. On-site well RW-1, located approximately ten feet south of the UST complex, was utilized as the sole extraction well during system operation. Approximately 935,229 gallons of water was extracted at approximately one gallon per minute from RW-1 between 1992 and 1995. In addition to the ground-water extraction system, free product measurement and removal has been conducted in wells MW-1, MW-2, MW-8, MW-9, MW-10, and RW-1. Since September 2007, absorbent socks have been suspended across the ground-water table within wells MW-1, MW-2, MW-8, MW-9, MW-10, and RW-1. A three-day mobile DPE event was conducted in late November 2007. Approximately 0.0091 lbs of GRO and 0.0003 lbs of Benzene in 2,090 gallons of ground water, and 14.0 lbs of GRO and 0.029 lbs of Benzene in soil vapor were removed from the subsurface during extraction activities.

5.2 Areas Remediated

Remedial action has taken place in the immediate vicinity of the USTs and dispenser islands. Monitor wells and investigative borings have been installed on-site to the east, west and south. Monitor wells and investigative borings have also been installed off-site to the west, southwest, south, and southeast of the property. Free product removal has been conducted primarily on the southern portion of the Site, off-site to the south (downgradient), and immediately north of the UST complex. The remediation system extracted ground water from well RW-1, which is located adjacent and just south (downgradient) of the USTs.

5.3 Remediation Effectiveness

Replacement of the facility infrastructure has substantially removed the primary onsite contaminant sources. Free product thickness and presence has dramatically decreased since measurement and removal was first initiated. The effectiveness of the ground-water extraction system appears to have had some effect. Contaminant concentrations within the ground water on-site and off-site were not noticeably decreased during or after the operation of the remediation system. No remedial action has been taken to address the onsite soil contamination.

6.0 WELL AND SENSITIVE RECEPTOR SURVEY

6.1 Designated Beneficial Shallow and Deep Ground-Water Use

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 California Regional Water Quality Control Board – San Francisco Bay Region'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.

6.2 Well Survey Results

A sensitive receptors survey was conducted by Alton Geoscience on 20 February 1991. This survey concluded that no public water supply wells are located within 2,500 feet of the Site and no private water supply wells are located within 1,000 feet of the Site. The nearest residence was stated to be within approximately 50 feet of the Site. Allandale School is located approximately 1,000 feet from the Site and the nearest hospital is approximately 11,000 feet away. Peralta Creek is the nearest surface body of water at approximately 500 feet north of the Site. The local water supply was described as public and supplied by the East Bay Municipal Water District. The supplier's water source was said to be provided by Sierra snow melt and the Pardee Dam. The aquifer was classified as a Class III aquifer, which is not a potential source of drinking water. A copy of the Sensitive Receptors Survey/Site Survey and Literature Search conducted by Alton is provided within Appendix D.

6.3 Likelihood of Impact to Wells

Based on the results of the well survey, it is unlikely that the ground-water contamination associated with the Site poses a potential threat to wells. No private wells were identified within 1,000 feet of the Site and no public wells were identified within 2,500 feet of the Site.

6.4 Likelihood of Impact to Surface Water

Based on the results of the well survey, Peralta Creek is the closest surface water to the Site (approximately 500 feet north). Ground-water contamination associated with the Site is unlikely to impact Peralta Creek due to the observed ground-water flow direction, which is generally between southwest and southeast.

7.0 RISK ASSESSMENT

7.1 Site Conceptual Exposure Model

The Site is currently an operational 76-brand service station owned by ConocoPhillips. The Site is open to the public and by authorized environmental professionals performing sampling or other relevant activities. Review of historical investigation data indicates that the majority of soil and ground-water contamination associated with the Site is present at depths generally greater than 15 ft beneath and downgradient of the UST complex area. Public and general occupational exposure to these secondary sources of contamination is believed to be remote and/or of short duration.

7.2 Exposure Pathways

Potential exposure pathways associated with this Site include human inhalation, ingestion, and absorption risks by environmental professionals. A remote but unknown potential exposure pathway might be human inhalation by tradesmen in the underground utility installation and maintenance occupation. The likelihood of vapor migration has not been verified by a soil-gas investigation. However, the soil concentrations present would seem unlikely to present a viable exposure pathway of concern. It is also noted that the majority of soil and ground-water contamination associated with this Site is located in the southern portion of the Site near Sutter Street and 35th Avenue, away from the station building, where employees are present for extended periods of time. Soil and ground-water contamination also appears to be present off-site to the south and southwest within roadways, which are rarely frequented by people not traveling in a vehicle. In addition, customers are not present for extended periods while utilizing the station, and would be congregating in open-air areas.

7.3 Risk Assessment Status

A formal Risk Assessment has not been performed for this Site. Based on the geologic/ hydrogeologic characteristics and limited viable exposure pathways, consideration should be given to development of risk-based cleanup levels in lieu of strict adherence to Maximum Contaminant Levels for drinking water, Environmental Screening Levels or California Human Health Screening Levels.

7.4 Identified Human Exceedances

Human exceedances are unknown at this time but unlikely due to the geologic/hydrogeologic characteristics and location of the contaminants.

7.5 Identified Ecological Exceedances

Ecological exceedances are unknown at this time but unlikely due to the geologic/hydrogeologic characteristics and location of the contaminants.

8.0 FEASIBILITY STUDY

8.1 Screening of Remediation Technologies

Several potential full-scale remediation technologies described within the Remediation Technologies Screening Matrix and Reference Guide, 4th Edition (Federal Remediation Technologies Roundtable, 2002) were evaluated to identify feasible remediation alternatives for the complex conditions and contamination at the Site. The Federal Remediation Technologies Roundtable is a working group including the Federal Environmental Protection Agency, Department of Defense, Department of Energy, Department of the Air Force, Department of the Interior, Department of the Army, Department of the Navy, and National Aeronautics and Space Administration. Of the approximately 60 remediation technologies described, 11 remediation technologies (and two methods of recovery enhancement) were screened for viability in this section. In addition to the technologies listed, a No-

Action option was 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 Remediation Technologies Evaluated

	Media	
Remediation Technology	**Soil**	**Water**
No Action		
Excavation	X	
Bioventing	X	
Soil Vapor Extraction	X	
Dual-Phase Extraction and Treatment	X	X
Chemical Oxidation	X	X
Enhanced Bioremediation	X	X
Air Sparging	(X)	X
In-Well Air Stripping	(X)	X
Bioslurping		X
Ground Water Extraction and Treatment		X
Monitored Natural Attenuation		X
Recovery Enhancements		
Thermal Treatment	X	X
Fracturing/Hydrofracturing	X	X

8.1.1 No Action

Based on the hydrocarbon concentration trends in ground water, the no action option is not expected to be acceptable to ACEH. The no-action option is retained as a baseline for comparison.

8.1.2 Excavation

With excavation, contaminated material is physically removed and transported to permitted off-site treatment and/or disposal facilities. Factors that limit the applicability and effectiveness of the general process include:

- Generation of fugitive emissions may be a problem during operations.
- The distance from the contaminated site to the nearest disposal facility with the required permit(s) will affect cost.
- Depth and composition of the media requiring excavation must be considered.
- Transportation of the soil through populated areas may affect community acceptability.

At this time, deeper soil impacts are known to exist at the Site, potentially beyond the reach of conventional excavating equipment. Excavation would not address the significant concentrations of hydrocarbons in ground water at the Site. Furthermore and most importantly, the presumed majority of the secondary source area is beneath the existing USTs at the Site. These USTs are owned and operated by ConocoPhillips and therefore generally not able to be disturbed or their operations hindered. Excavation is therefore screened from consideration at this time. Excavation may be

reassessed at a future date, however, if the work could be performed to coincide with an action such as UST replacement where excavation would not disrupt ConocoPhillips operation of the station.

8.1.3 Bioventing

Bioventing is an in-situ biological treatment that stimulates the natural in-situ biodegradation of aerobically degradable compounds in soil by providing oxygen to existing soil microorganisms. It does not directly address contamination in ground water. In contrast to soil vacuum vapor extraction (SVE), bioventing uses low air flow rates to provide just enough oxygen to sustain aerobic microbial activity. Oxygen is most commonly supplied through direct air injection into residual contamination in soil. In addition to degradation of adsorbed fuel residuals, volatile compounds are biodegraded as vapors move slowly through biologically active soil. Regulatory acceptance of this technology has been obtained in 30 states and in all 10 EPA regions. Bioventing is a medium to long-term technology. Cleanup ranges from a few months to several years. However, a critical factor that limits the applicability and effectiveness of this process is the presence of low permeability soils. Therefore, bioventing alone will not be retained for further consideration and evaluation due to the extensive presence of clays and silty clays at the Site which would severely reduce bioventing performance, and its inability to directly address ground-water contamination.

8.1.4 Soil Vapor Extraction

Soil Vapor Extraction (SVE) is an in situ unsaturated (vadose) zone soil remediation technology in which a vacuum is applied to the soil to induce the controlled flow of air and remove volatile contaminants from the soil. The gas leaving the soil may be treated to recover or destroy the contaminants, depending on local and state air discharge regulations. Vertical extraction vents are typically used at depths of five feet or greater and have been successfully applied as deep as 300 feet. Horizontal extraction vents (installed in trenches or horizontal borings) can be used as warranted by contaminant zone geometry, drill rig access, or other site-specific factors. For the soil surface, geomembrane covers are often placed over the soil surface to prevent short circuiting and to increase the radius of influence of the wells. Ground-water depression pumps may be used to reduce ground water upwelling induced by the vacuum or to increase the depth of the vadose zone. Air injection is effective for facilitating extraction of deep contamination, contamination in low permeability soils, and contamination in the saturated zone. The duration of operation and maintenance for in situ SVE is typically medium- to long-term.

Factors that may limit the applicability and effectiveness of the process include:

- Soil that has a high percentage of fines and a high degree of saturation will require higher vacuums (increasing costs) and/or hindering the operation of the in situ SVE system.
- Large screened intervals are required in extraction wells for soil with highly variable permeabilities or stratification, which otherwise may result in uneven delivery of gas flow from the contaminated regions.
- Soil that has high organic content or is extremely dry has a high sorption capacity for VOCs, which results in reduced removal rates.
- Exhaust air from in situ SVE system may require treatment to eliminate possible harm to the public and the environment.
- As a result of off-gas treatment, residual liquids may require treatment/disposal. Spent activated carbon will require regeneration or disposal.

- SVE is not effective in the saturated zone. However, lowering the water table can expose more media to SVE (this may address concerns regarding LNAPLs).

The critical factor that limits the applicability and effectiveness of this process at the Site is the presence of very low permeability soils. Therefore, SVE alone will not be retained for further consideration and evaluation due to the extensive presence of clays and silty clays at the Site which would severely reduce SVE performance, and its inability to directly address ground-water contamination.

8.1.5 Dual-Phase Extraction and Treatment

Dual-Phase Extraction (DPE), also known as multi-phase extraction and vacuum enhanced extraction, is a technology that uses a high vacuum system to remove various combinations of contaminated ground water, separate-phase petroleum hydrocarbons, and hydrocarbon vapor from the subsurface. Extracted liquids and vapors are treated and collected for disposal, or re-injected to the subsurface (where permissible under applicable state laws). In DPE systems for liquid/vapor treatment, a high vacuum system is used to remove liquid and gas from low permeability or heterogeneous formations. The vacuum extraction well includes a screened section in the zone of contaminated soils and ground water. It removes contaminants from above and below the water table. The system lowers the water table around the well, exposing more of the formation. Contaminants in the newly exposed vadose zone are then accessible to vapor extraction. Once above ground, the extracted vapors or liquid-phase organics and ground water are separated and treated.

Factors that may limit the applicability and effectiveness of the process include:

- Site geology and contaminant characteristics/distribution.
- Combination with complementary technologies (e.g., pump-and-treat) may be required to recover ground water from high yielding aquifers.
- DPE requires both water treatment and vapor treatment.
- Soil type determines permeability, which is the primary cost driver. DPE works best for permeable sand-silt mixtures. Impermeable (clayey) or excessively permeable (gravel/sand) soils are more recalcitrant.

The critical factor that limits the applicability and effectiveness of this process at the Site is the presence of very low permeability soils. A Mobile DPE Event was conducted at the Site during three days in late November 2007 as an Interim Response Measure. Approximately 0.0091 lbs of GRO and 0.0003 lbs of Benzene in 2,090 gallons of ground water and 14.0 lbs of GRO and 0.029 lbs of Benzene in soil vapor were removed from the subsurface during extraction activities. It is believed that contaminant recovery efficiency was limited due to the relatively tight soil permeability in the vadose zone and beneath the ground-water table. Although not optimum due to the extensive presence of clays and silty clays at the Site, DPE will be retained for further consideration and evaluation.

8.1.6 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.

8.1.7 Enhanced Bioremediation

Enhanced bioremediation is a process in which indigenous or inoculated micro-organisms (e.g., fungi, bacteria, and other microbes) degrade (metabolize) organic contaminants found in soil and/or ground water, converting them to innocuous end products. Nutrients, oxygen, or other amendments may be used to enhance bioremediation and contaminant desorption from subsurface materials. In the presence of sufficient oxygen (aerobic conditions), and other nutrient elements, microorganisms will ultimately convert many organic contaminants to carbon dioxide, water, and microbial cell mass.

Enhanced bioremediation typically involves the percolation or injection of ground water or uncontaminated water mixed with nutrients and saturated with dissolved oxygen. Sometimes acclimated microorganisms (bioaugmentation) and/or another oxygen source such as hydrogen peroxide is also added. An infiltration gallery is typically used for shallow contaminated soils, and injection wells are used for deeper contaminated soils and ground water.

In the absence of oxygen (anaerobic conditions), the organic contaminants will be ultimately metabolized to methane, limited amounts of carbon dioxide, and trace amounts of hydrogen gas. Under sulfate-reduction conditions, sulfate is converted to sulfide or elemental sulfur. Under nitrate-reduction conditions, dinitrogen gas is ultimately produced.

Enhanced bioremediation may be classified as a long-term technology which may take several years for cleanup of a plume. However, factors that may limit the applicability and effectiveness of the process include:

- Cleanup goals may not be attained if the soil matrix prohibits contaminant-microorganism contact.
- The circulation of water-based solutions through the soil may increase contaminant mobility and increase contaminant mobility and concentrations of the underlying ground water.
- Preferential colonization by microbes may occur causing clogging of nutrient and water injection wells.
- Preferential flow paths may severely decrease contaminant contact between injected fluids and contaminants through the contaminated zones. System is not optimal for clay, highly layered, or heterogeneous subsurface environments because of oxygen (or other electron acceptor) transfer limitations.
- Concentrations of hydrogen peroxide greater than 100-200 ppm in ground water inhibit the activity of microorganisms.

Enhanced Bioremediation is a potentially effective treatment technology for the Site and will be retained for further evaluation and comparison of viable treatment alternatives.

8.1.8 Air Sparging

Air sparging is an in situ technology in which air is injected through a contaminated aquifer. Injected air traverses horizontally and vertically in channels through the soil column, creating an underground stripper that removes contaminants by volatilization. This injected air helps flush (bubble) the contaminants up into the unsaturated zone where a vapor extraction system is usually implemented in conjunction with air sparging to remove the generated vapor phase contamination. This technology is designed to operated at high flow rates to maintain increased contact between ground water and soil and strip more ground water by sparging. Oxygen added to contaminated ground water and vadose zone soils can also enhance biodegradation of contaminants below and above the water table. Air sparging has a medium to long duration which may last, generally, up to a few years.
Factors that may limit the applicability and effectiveness of the process include:

- Air flow through the saturated zone may not be uniform, which implies that there can be uncontrolled movement of potentially dangerous vapors.
- Depth of contaminants and specific site geology must be considered.
- Air injection wells must be designed for site-specific conditions.
- Soil heterogeneity may cause some zones to be relatively unaffected.

The predominant clay layer from the surface to below ground water at the Site is thought to reduce the likely effectiveness of air sparging at the Site. Therefore, air sparging will not be retained for further evaluation.

8.1.9 In-Well Air Stripping

With in-well air stripping technology air is injected into a vertical well that has been screened at two depths. The lower screen is set in the saturated zone, and the upper screen is in the unsaturated

(vadose) zone. Pressurized air is injected into the well below the water table, aerating the water. The aerated water rises in the well and flows out of the system at the upper screen. Contaminated ground water is drawn into the system at the lower screen. The VOCs vaporize within the well at the top of the water table, as the air bubbles out of the water. The vapors are drawn off by a soil vapor extraction (SVE) system. The partially treated ground water is never brought to the surface; it is forced into the unsaturated zone, and the process is repeated as water follows a hydraulic circulation pattern or cell that allows continuous cycling of ground water. As ground water circulates through the treatment system in situ, contaminant concentrations are gradually reduced. Modification to the basic in-well stripping process may involve additives injected into the stripping well to enhance biodegradation (e.g., nutrients, electron acceptors, etc.). The duration of in-well air stripping is short- to long-term, depending upon contaminant concentrations, Henry's law constants of the contaminants, the radius of influence, and site hydrogeology.

Circulating wells provide a technique for subsurface remediation by creating a three-dimensional circulation pattern of the ground water. Ground water is drawn into a well through one screened section and is pumped through the well to a second screened section where it is reintroduced to the aquifer. The flow direction through the well can be specified as either upward or downward to accommodate site-specific conditions. Because ground water is not pumped above ground, pumping costs and permitting issues are reduced and eliminated, respectively. Also, the problems associated with storage and discharge are removed. In addition to ground water treatment, circulating well systems can provide simultaneous vadose zone treatment in the form of bioventing or soil vapor extraction.

Circulating well systems can provide treatment inside the well, in the aquifer, or a combination of both. For effective in-well treatment, the contaminants must be adequately soluble and mobile so they can be transported by the circulating ground water. Because circulating well systems provide a wide range of treatment options, they provide some degree of flexibility to a remediation effort.

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

- In general, in-well air strippers are more effective at sites containing high concentrations of dissolved contaminants with high Henry's law constants.
- Fouling of the system may occur by infiltrating precipitation containing oxidized constituents.
- Shallow aquifers may limit process effectiveness.
- Effective circulating well installations require a well-defined contaminant plume to prevent the spreading or smearing of contamination. They should not be applied to sites containing non-aqueous phase liquids to prevent the possibility of smearing the contaminants.
- Circulating wells are limited to sites with horizontal conductivities greater than 10^{-5} cm/sec and a ratio of horizontal to vertical conductivities between three and ten. A ratio of less than three indicates short circulation times and a small radius of influence. If the ratio is greater than ten, the circulation time may be unacceptably long.
- Circulating wells should not be utilized at sites that have lenses of low-conductivity deposits.
- In well stripping may not be efficient in sites with strong natural flow patterns.

The low hydraulic conductivities measured in the clays at the Site is thought to limit the effectiveness of circulating wells at the Site. Therefore, in-well air stripping will not be retained for further evaluation.

8.1.10 Bioslurping

Bioslurping is the adaptation and application of vacuum enhanced dewatering technologies to remediate hydrocarbon-contaminated sites. Bioslurping utilizes elements of both, bioventing and free-product recovery, to address two separate contaminant media. Bioslurping combines elements of both technologies to simultaneously recover free product and bioremediate vadose zone soils. Bioslurping can improve free-product recovery efficiency without extracting large quantities of ground water. In bioslurping, vacuum-enhanced pumping allows light, non-aqueous phase liquids to be lifted off the water table and release from the capillary fringe. This minimizes changes to the water table elevation which minimizes the creation of a smear zone. Bioventing of vadose zone soils is achieved by drawing air into the soil due to withdrawing soil gas via the recovery well. The system is designed to minimize environmental discharge of ground water and soil gas. When free-product removal activities are completed, the bioslurping system is easily converted to a conventional bioventing system to complete the remediation. Operation and maintenance duration for bioslurping varies from a few months to years, depending on specific site conditions.

Factors that may limit the applicability and effectiveness of the bioslurping process include:

- Bioslurping is less effective in tight (low-permeability) soils.
- Low soil moisture content may limit biodegradation and the effectiveness of bioventing which tends to dry out soils.
- Low temperatures slow remediation.
- Frequently, the off-gas from the bioslurper system requires treatment before discharge. However, the treatment of off-gas may only be required shortly after the startup of the system as fuel rates decrease.
- At some sites, bioslurper systems can extract large volumes of water that may need to be treated prior to discharge depending upon the concentration of contaminants in the process water.
- Since the fuel, water and air are removed from the subsurface in one stream, mixing of the phases occurs. These mixtures may require special oil/water separators or treatment before the process water can be discharged.

The critical factor that limits the applicability and effectiveness of this process at the Site is the presence of very low permeability soils. In addition, the nature of the separate-phase hydrocarbons at the Site is that of a viscous, black grease, not very amenable at flowing through the contaminated formation without some additional method of enhancing formation recovery. Therefore, bioslurping alone will not be retained for further consideration and evaluation.

8.1.11 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. A GWET system operated at the Site from November 1992 through September 1995 removing 935,229 gallons at approximately one gallon per minute from recovery well RW-1. GWET will not

be retained for further evaluation based on poor cost-effectiveness when compared to other technologies.

8.1.12 Monitored Natural Attenuation

Monitored Natural Attenuation (MNA) is sometimes referred to as Intrinsic Remediation, Bioattenuation, or Intrinsic Bioremediation. Natural subsurface processes such as dilution, volatilization, biodegradation, adsorption, and chemical reactions with subsurface materials are allowed to reduce contaminant concentrations to acceptable levels. MNA is not a "technology" per se, and there is significant debate among technical experts about its use at contaminated sites. Consideration of this option usually requires modeling and evaluation of contaminant degradation rates and pathways and predicting contaminant concentration at down-gradient receptor points. The primary objective of site modeling is to demonstrate that natural processes of contaminant degradation will reduce concentrations below regulatory standards or risk-based levels before potential exposure pathways are completed. In addition, long-term monitoring must be conducted throughout the process to confirm that degradation is proceeding at rates consistent with meeting cleanup objectives.

Monitored natural attenuation is not the same as "no action," although it is often perceived as such. CERCLA requires the evaluation of a "no action" alternative but does not require evaluation of natural attenuation. MNA is considered on a case-by-case basis, and guidance on its use is still evolving.

Compared with other remediation technologies, natural attenuation has the following advantages:

- Less generation or transfer of remediation wastes;
- Less intrusive as few surface structures are required;
- May be applied to all or part of a given site, depending on site conditions and cleanup objectives;
- MNA may be used in conjunction with, or as a follow-up to, other (active) remedial measures;
- Overall cost will likely be lower than active remediation.

Factors that may limit applicability and effectiveness include:

- Data used as input parameters for modeling need to be collected;
- MNA is not appropriate where imminent site risks are present;
- Contaminants may migrate before they are degraded;
- Institutional controls may be required, and the site may not be available for reuse until contaminant levels are reduced;
- If free product exists, it may have to be removed;
- Long-term monitoring and associated costs;
- Longer time frames may be required to achieve remediation objectives, compared to active remediation;
- The hydrologic and geochemical conditions amenable to MNA are likely to change over time and could result in renewed mobility of previously stabilized contaminants and may adversely impact remedial effectiveness; and

- More extensive outreach efforts may be required in order to gain public acceptance of MNA.

Based on the hydrocarbon concentration trends in ground water at the Site, 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. MNA is retained for possible combination with other active technologies.

8.1.13 Hydrofracturing

Hydrofracturing is not a remediation treatment technology per se, but a method of enhancing conductivity into a contaminated formation. Hydrofracturing is a pilot-scale technology in which pressurized water is injected to increase the permeability of consolidated material or relatively impermeable unconsolidated material. Fissures created in the process are filled with a porous medium that can facilitate bioremediation and/or improve extraction efficiency. Fractures promote more uniform delivery of treatment fluids and accelerated extraction of mobilized contaminants. Typical applications are linked with soil vapor extraction, insitu bioremediation, and pump-and-treat systems.

The fracturing process begins with the injection of water into a sealed borehole until the pressure of the water exceeds the overburden pressure and a fracture is created. A slurry composed of a coarse-grained sand and guar gum gel or a similar substitute is then injected as the fracture grows away from the well. After pumping, the sand grains hold the fracture open while an enzyme additive breaks down the viscous fluid. The thinned fluid is pumped from the fracture, forming a permeable subsurface channel suitable for delivery or recovery of a vapor or liquid.

The hydraulic fracturing process can be used in conjunction with soil vapor extraction technology to enhance recovery. Hydraulically-induced fractures are used to deliver fluids, substrates, and nutrients for insitu bioremediation applications. The technology has widespread use in the petroleum and water-well construciton industries but is an innovative method for use at remediating hazardous waste sites.

Factors that may limit the applicability and effectiveness of this process include:

- The technology should not be used in bedrock susceptible to seismic activity.
- Investigation of possible underground utilities, structures, or trapped free product is required.
- The potential exists to open new pathways leading to the unwanted spread of contaminants.
- Pockets of low permeability may still remain after using this technology.
- There is an inability to control the final location or size of the fractures that are created.
- Fractures are anticipated to collapse due to overburden pressure.

Additionally, a number of factors affect the estimated costs of creating hydraulic fractures at a site. These factors include physical site conditions such as site accessibility and degree of soil consolidation, degree of soil saturation, and geographical location which affects availability of services and supplies. The first two factors also affect the effectiveness of hydraulic fracturing. However, a further complication is the issue of potential impacts to and liability for damage to operating USTs and underground infrastructure owned by others. Hydrofracturing is therefore

screened from consideration at this time. Hydrofracturing may be reassessed at a future date, however, if the work could be performed to coincide with an action such as UST and product line replacement, where hydrofracturing would not disrupt ConocoPhillips operation of the station.

8.1.14 Thermal Treatment

Thermal treatment is not a remediation treatment technology per se, but a method of enhancing volatility and or mobility of contaminants within a geologic formation. Thermal treatment is an emerging full-scale technology that uses electrical resistance/electromagnetic/fiber optic/radio frequency heating or hot-air/steam injection to increase the volatility of contaminants and facilitate extraction. The process is typically linked with soil vapor extraction, insitu bioremediation, and pump-and-treat systems. However, a complication is the issue of potential impacts to and liability for damage to operating USTs and underground infrastructure owned by others. Thermal treatment is therefore screened from consideration at this time. Thermal treatment may be reassessed at a future date, however, if the work could be performed to coincide with an action such as UST and product line removal, where thermal treatment would not disrupt ConocoPhillips operation of the station.

8.2 Alternative 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
- Alternative 2: Dual-Phase Extraction and Treatment
- Alternative 3: Chemical Oxidation
- Alternative 4: Enhanced Bioremediation
- Alternative 5: Monitored Natural Attenuation

Using the *Remediation Technologies Screening Matrix and Reference Guide*, each of the alternatives were evaluated against the following screening factors:

- **Relative Costs?** 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. Above average means a low degree of genral costs relative to other options. Average means an average degree of general costs relative to other options. Below average means a high degree of general costs relative to the other options.
- **Capital Intensive?** Is the technology capital-intensive, with significant costs for design and construction? Above average means low degree of capital investment. Average means average degree of capital investment. Below average means high degree of capital investment.
- **O&M Intensive?** Is the technology O&M-intensive, with significant costs for labor, operation, maintenance, and repair? Above average means low degree of O&M intensity. Average means average degree of O&M intensity. Below average means high degree of O&M intensity.

- **System Reliability/Maintainability?** The expected range of demonstrated reliability and maintenance relative to other effective technologies. Above average means high reliability and low maintenance. Average means average reliability and average maintenance. Below average means low reliability and high maintenance.
- **Time?** Time required to clean up a "standard" site using the technology. Above average means less than one year for in situ soils and less than three years for ground water. Average means one to three years for in situ soils and three to ten years for ground water. Below average means more than three years for in situ soil and more than ten years for ground water.

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 *Remediation Technologies Screening Matrix and Reference Guide*.

Technology	Relative Cost	Capital Intensive	O&M Intensive	System Reliability / Maintainability	Time
No Action	Above Average	Below Average	Above Average	Above Average	Below Average
DPE	Average	Below Average	Below Average	Average	Average
Chemical Oxidation	Average	Average	Below Average	Average	Above Average
Enhanced Bioremediation	Above Average	Average	Below Average	Average	Unknown
Monitored Natural Attenuation	Above Average	Average	Below Average	Average	Unknown

It must be understood that the purpose of this feasibility study was not to identify the single-best remediation technology and recommend it for full-scale implementation. The purpose was to narrow the field of potentially viable remediation technologies worthy of further investigation and potential pilot testing. This objective has been met.

8.3 Data Gaps

To further evaluate the applicability of the potentially viable remediation technologies identified above, additional data must be gathered. The following data gaps have been identified:

- The mobile DPE event in November 2007 was conducted as an interim remedial measure. An 11 or 12 hour DPE event was conducted on just wells MW-1, MW-2 and RW-1. Although useful data was collected, its first objective was whether any contamination would be removed from the subsurface. It is presently unknown the effect of longer-duration tests on those wells, or whether yields from wells MW-8, MW-9, or MW-10 would justify extraction from these off-site wells.
- Aside from dissolved oxygen and ph, no data has been gathered yet on bio-parameters which would indicate aerobic/anaerobic or oxidizing/reducing conditions are present at

the Site. Additional data that would be useful includes: Oxidation-Reduction Potential, Alkalinity, Methane, Carbon Dioxide, Nitrate, Sulfate, Dissolved Sulfide, Ferrous Iron, and Manganese. Availability of this data is critical to determining the viability of Chemical Oxidation, Enhanced Bioremediation, or even Monitored Natural Attenuation as remediation technologies for the Site.

- Very limited information has been obtained to date regarding the presence and type of underground infrastructure both on and off the Site. As mentioned previously, the potential for preferential pathway migration through underground infrastructure trenches is remote given the depth of the release. However, knowledge of onsite and offsite underground utility locations is important for planning future remediation activities, especially with respect to giving any further thought to the potential recovery enhancement technologies described above.

9.0 CONCLUSIONS AND RECOMMENDATIONS

9.1 Conclusions

The findings and conclusions of this Site Conceptual Model with Feasibility Study Report are summarized below:

- Three steel USTs, originally installed in 1972, were removed from the southwestern portion of the Site in 1986 following a tank integrity test failure.
- In 1989 Mobil Oil Corporation sold the station to BP. In 1994, BP sold the station to Tosco, which was acquired by ConocoPhillips who now operates the 76-brand gasoline service station at the Site.
- Based on observations recorded on soil boring and monitoring well construction logs, soil types at the Site generally consist of low permeability silty clays.
- The average depth to ground water at the Site is approximately 20 ft bgs, but has fluctuated between 15 ft bgs to 25 ft bgs due to seasonal/annual precipitation and ground-water recharge.
- Ground-water flow direction beneath the Site is generally towards the southwest with the hydraulic gradient ranging between 0.003 ft/ft to 0.01 ft/ft.
- A ground-water extraction and treatment system operated for almost two years drawing approximately one gallon per minute from recovery well RW-1. The thickness of separate-phase hydrocarbons was reduced from a maximum of 1.8 ft in 1994 to the current 0.05-0.01 ft.
- The separate-phase hydrocarbons have degraded significantly and now resemble a black, viscous grease-like material.
- Due to the historically fluctuating ground-water table, it is believed that a thick smear zone has developed in the plume area.
- The fact that the existing USTs were placed back within the same area as the older USTs that had failed their integrity test, and the fact that the station is currently operated by

ConocoPhillips somewhat limits the ability of BP to actively pursue some of the more aggressive remediation technologies available at the present time.

9.2 Recommendations

Based on the findings presented within this Site Conceptual Model and Feasibility Study Report, BAI proposes the following recommendations:

- Begin collection of bio-parameters during the regularly-scheduled quarterly monitoring/ sampling events. In addition to pH and Dissolved Oxygen currently collected, also collect Oxidation-Reduction Potential, Alkalinity, Methane, Carbon Dioxide, Nitrate, Sulfate, Dissolved Sulfide, Ferrous Iron, and Manganese. Samples should be collected by micro-purging in accordance with the Standard Operating Procedure contained within Appendix A to American Petroleum Institute Publication No.4658 – Methods for Measuring Indicators of Intrinsic Bioremediation: Guidance Manual.
- Perform a utility survey to identify public and private underground infrastructure both onsite and offsite in the area of impacted soil and ground water.
- Prepare a work plan for a DPE pilot test, this time of longer duration at wells MW-1, MW-2, and RW-1, as well as investigating offsite wells MW-8, MW-9, and MW-10 if equipment and traffic control logistics can be overcome.

10.0 CLOSURE

The findings presented in this document are based upon: observations of field personnel from previous consultants, the points investigated, and results of analytical 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 or implied was made. This report has been prepared for the exclusive use of BP. 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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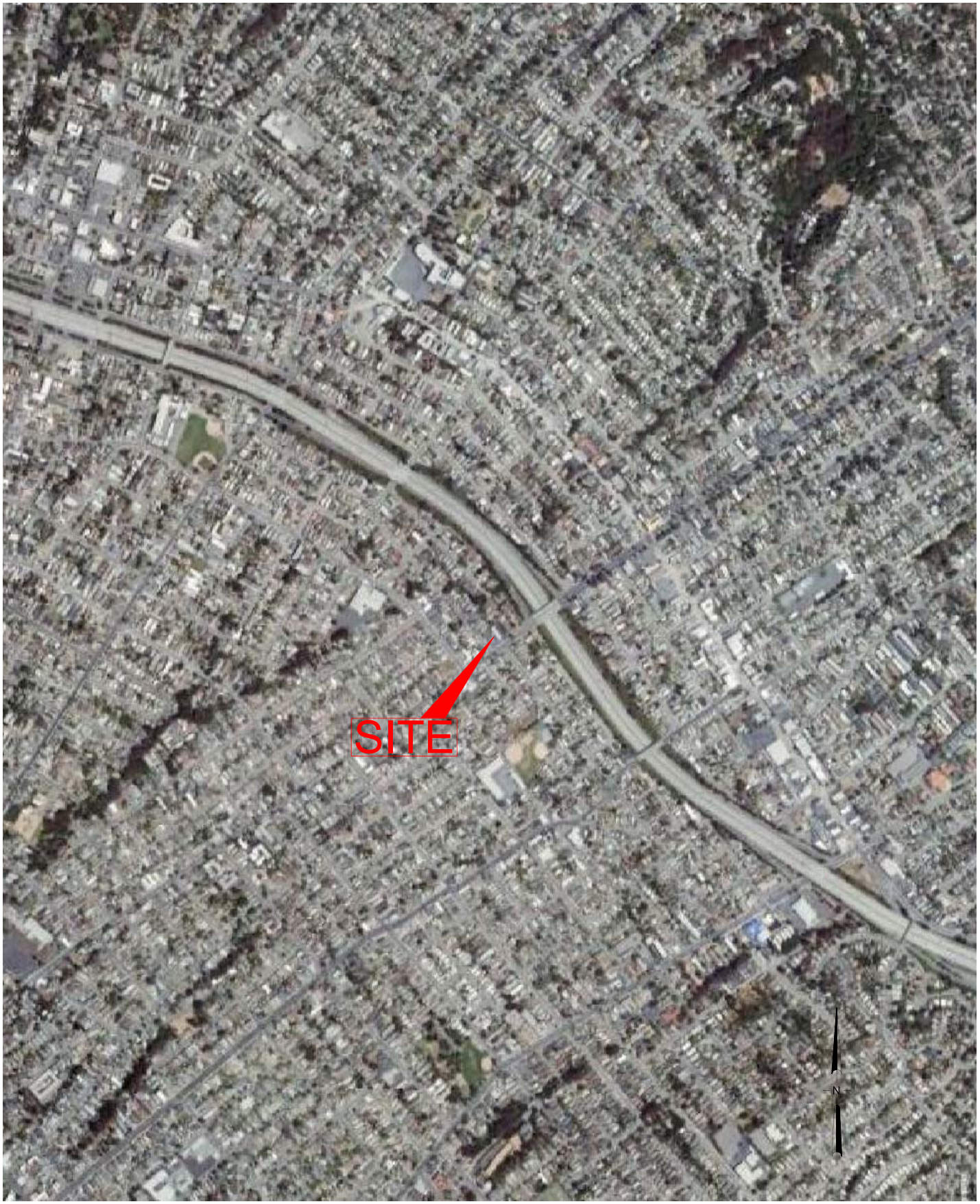


0 1,000 2,000

SCALE (feet)

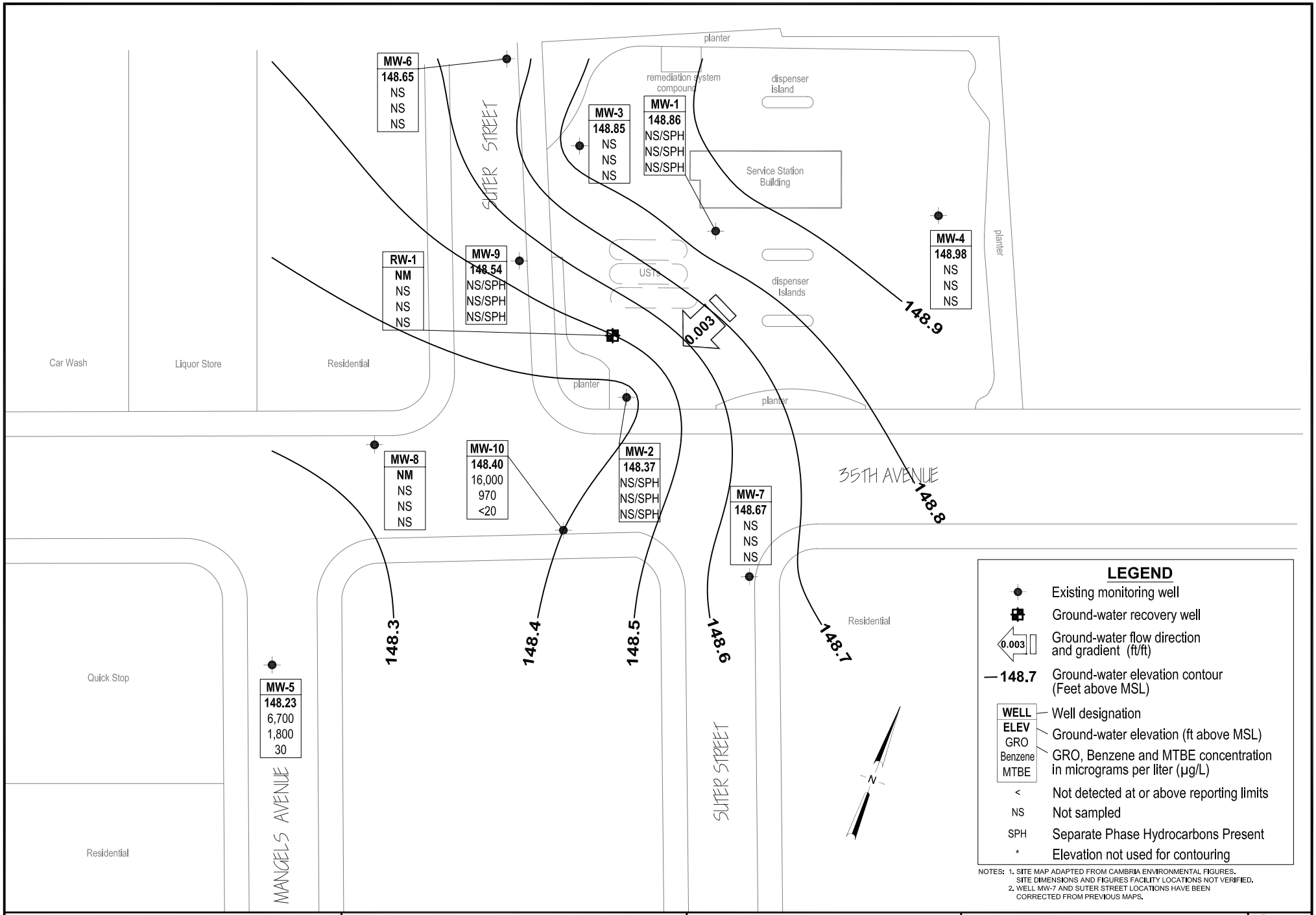
BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California

Project No.: 06-08-655 Date: 7/21/08

Former BP Service Station #11132
3201 35th Avenue
Oakland, California

Site Location Map

Drawing
1

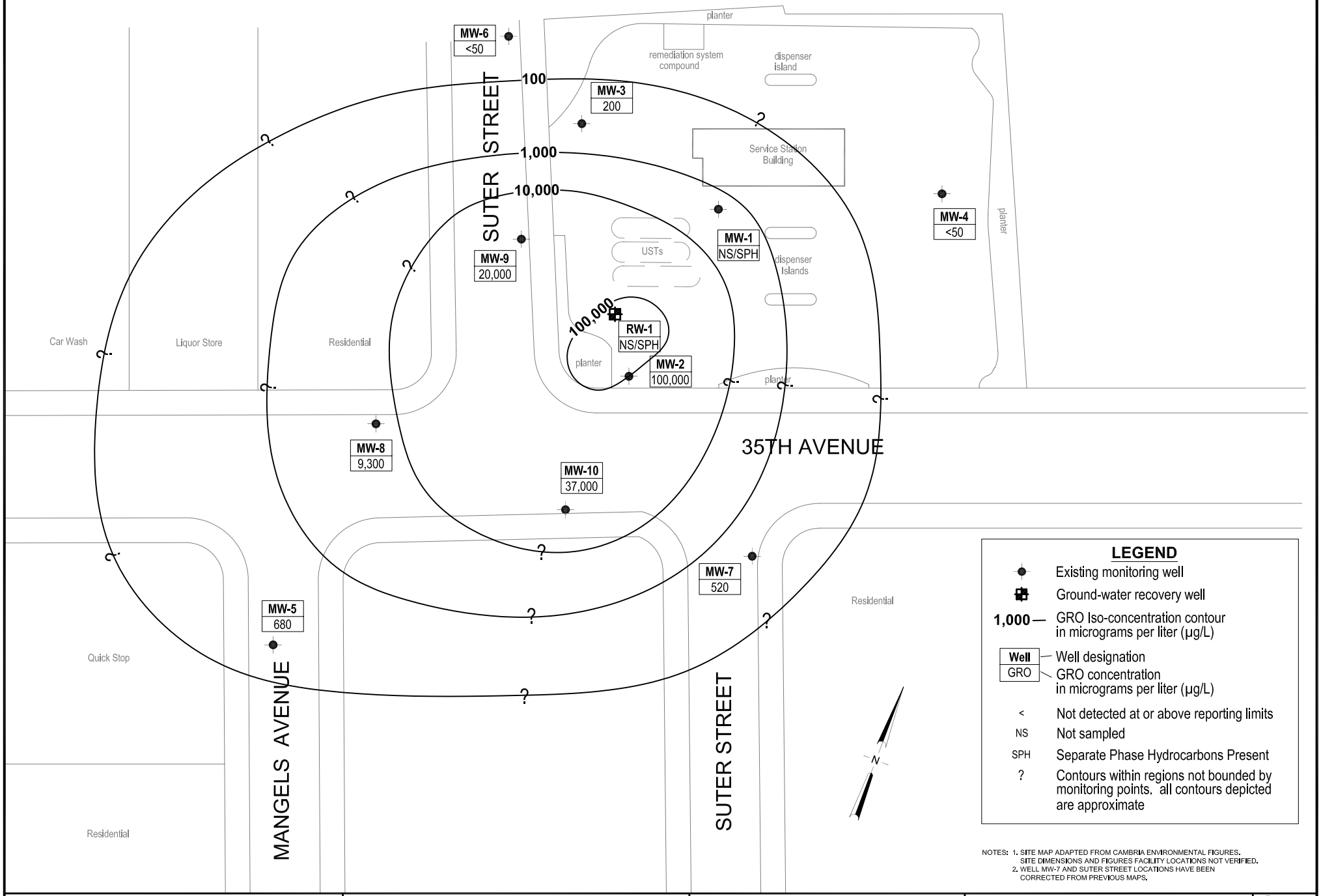


BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California 95926
Project No.: 06-08-655 Date: 7/10/08

Former BP Service Station #11132
3201 35th Avenue
Oakland, California

Ground-Water Elevation Contours and Analytical Summary Map
7 May 2008

Drawing
2



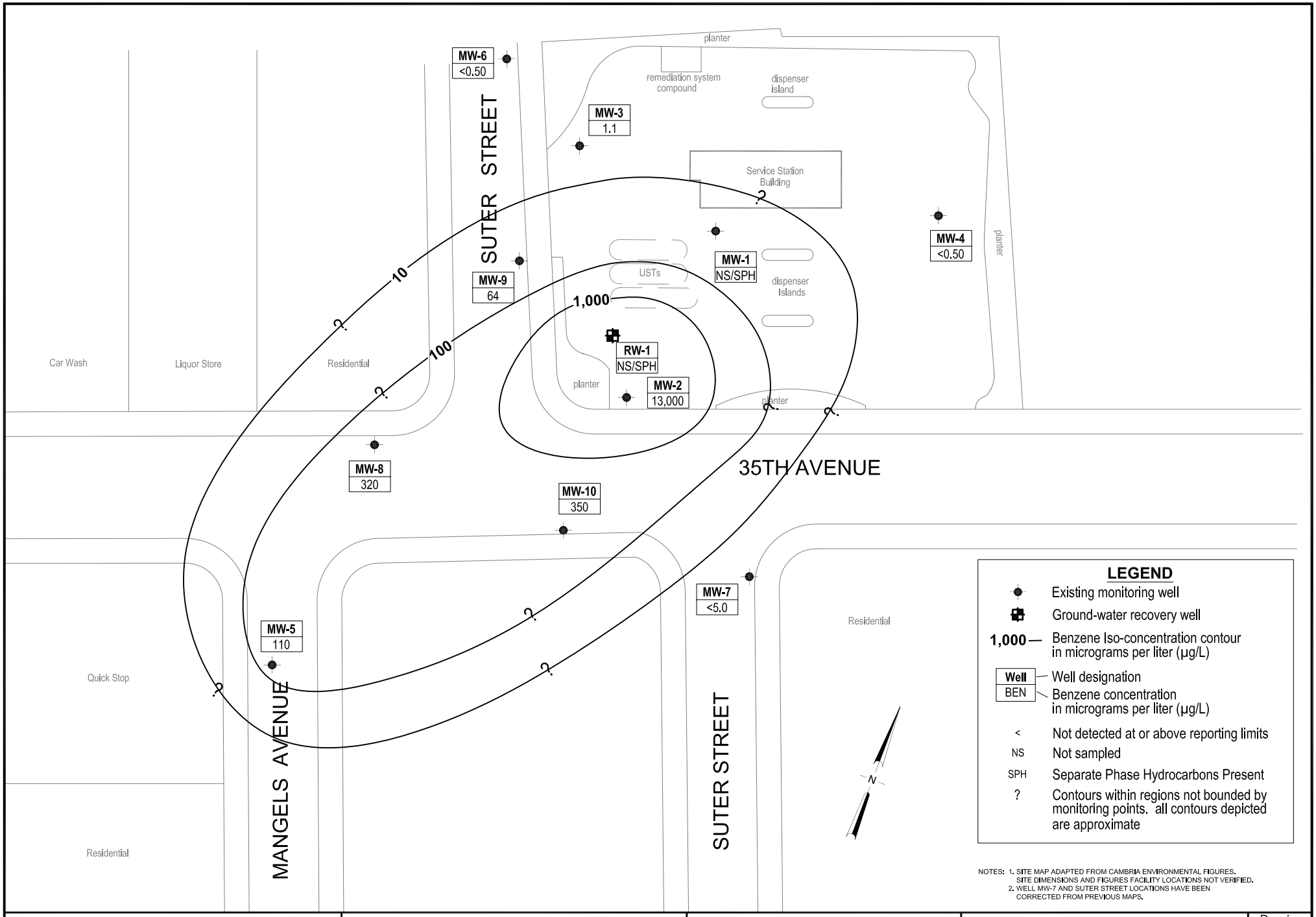
0 50 100
SCALE (ft)

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California 95926
Project No.: 06-08-655 Date: 7/17/08

Former BP Service Station #11132
3201 35th Avenue
Oakland, California

Gasoline Range Organics
Iso-Concentration Contours Map
14 February 2007

Drawing
3



NOTES: 1. SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FIGURES FACILITY LOCATIONS NOT VERIFIED.
2. WELL MW-7 AND SUTER STREET LOCATIONS HAVE BEEN CORRECTED FROM PREVIOUS MAPS.

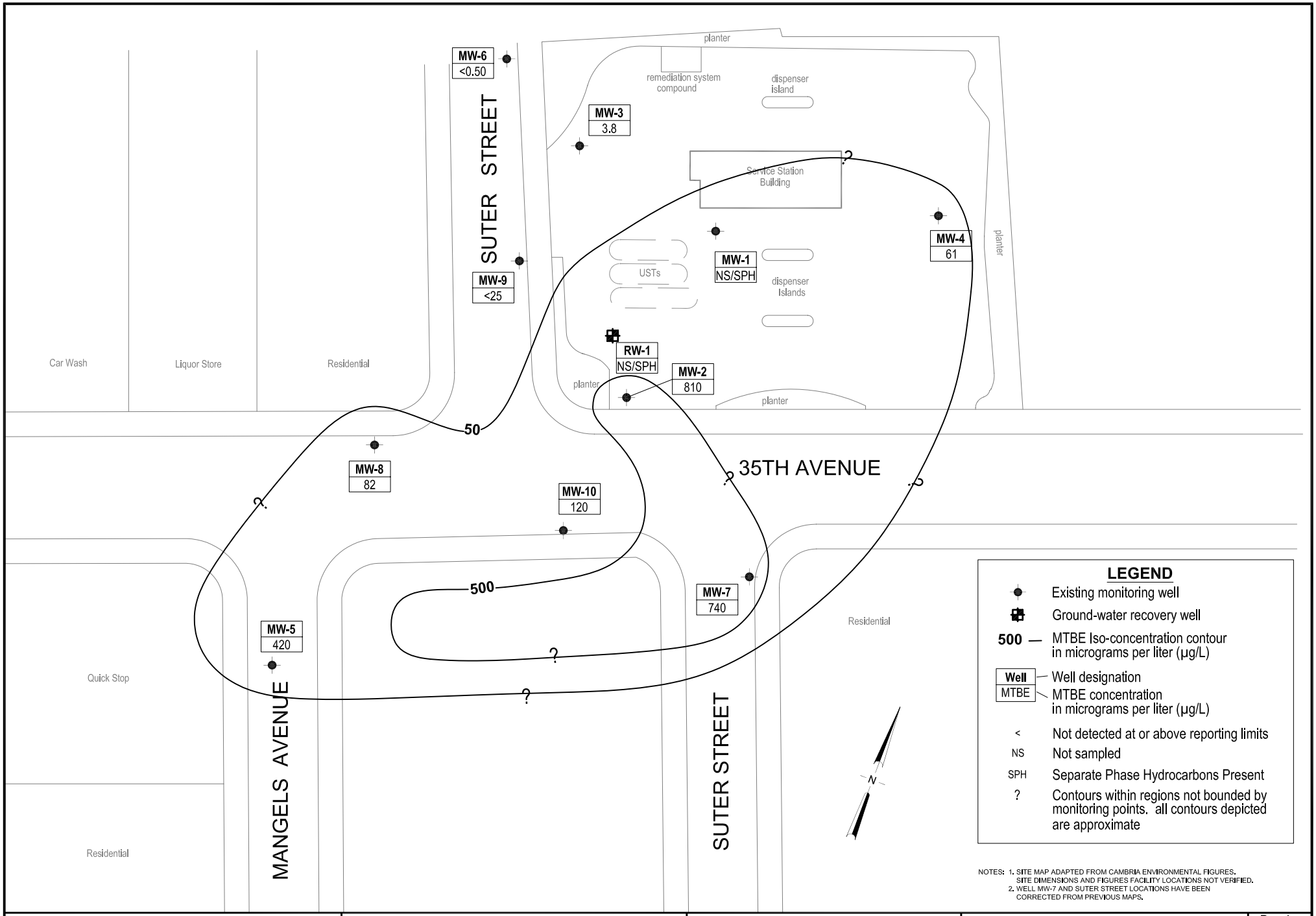
0 50 100
SCALE (ft)

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California 95926
Project No.: 06-08-655 Date: 7/18/08

Former BP Service Station #11132
3201 35th Avenue
Oakland, California

Benzene
Iso-Concentration Contours Map
14 February 2007

Drawing
4



NOTES: 1. SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FIGURES FACILITY LOCATIONS NOT VERIFIED.
2. WELL MW-7 AND SUTER STREET LOCATIONS HAVE BEEN CORRECTED FROM PREVIOUS MAPS.

0 50 100
SCALE (ft)

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California 95926
Project No.: 06-08-655 Date: 7/18/08

Former BP Service Station #11132
3201 35th Avenue
Oakland, California

MTBE Iso-Concentration Contours Map
14 February 2007

Drawing
5

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
MW-1															
7/9/1990	--	169.75	--	0.22	--	--	--	--	--	--	--	--	--	--	
12/21/1990	--	169.75	--	0.58	--	--	--	--	--	--	--	--	--	--	
3/7/1991	--	169.75	20.59	0	149.16	--	--	--	--	--	--	--	--	--	
4/1/1991	--	169.75	16.51	0.15	153.09	--	--	--	--	--	--	--	--	--	
6/27/1991	--	169.75	--	0.18	--	--	--	--	--	--	--	--	--	--	
9/27/1991	--	169.75	--	0.27	--	--	--	--	--	--	--	--	--	--	
12/18/1991	--	169.75	--	0.28	--	--	--	--	--	--	--	--	--	--	
7/3/1992	--	169.75	22.30	0.27	147.18	--	--	--	--	--	--	--	--	--	
10/5/1992	--	169.75	23.98	0.24	145.53	--	--	--	--	--	--	--	--	--	
1/13/1993	--	169.75	17.03	0.24	152.48	--	--	--	--	--	--	--	--	--	
4/23/1993	--	169.75	18.10	0.42	151.23	--	--	--	--	--	--	--	--	--	
7/12/1993	--	169.75	22.02	0.49	147.24	--	--	--	--	--	--	--	--	--	
10/21/1993	--	169.75	25.12	1.09	143.54	--	--	--	--	--	--	--	--	--	
1/21/1994	--	169.75	23.02	0.76	145.97	--	--	--	--	--	--	--	--	--	
4/20/1994	--	169.75	24.54	1.8	143.41	--	--	--	--	--	--	--	--	--	
8/1/1994	--	169.75	24.11	0.35	145.29	--	--	--	--	--	--	--	--	--	
12/23/1994	--	169.75	18.19	--	151.56	--	--	--	--	--	--	--	--	--	
1/26/1995	--	169.75	16.25	1.1	152.40	--	--	--	--	--	--	--	--	--	
6/8/95-6/28/95	--	169.75	--	1.25	145.63	--	--	--	--	--	--	--	--	--	
6/8/1995	--	169.75	22.92	--	146.83	--	--	--	--	--	--	--	--	--	
8/22/1995	--	169.75	24.45	0.85	144.45	--	--	--	--	--	--	--	--	--	
10/27/1995	--	169.75	25.41	--	143.65	--	--	--	--	--	--	--	--	--	
10/30/95-12/23/95	--	169.75	--	0.69	--	--	--	--	--	--	--	--	--	--	
1/25/1996	--	169.75	18.20	--	151.55	--	--	--	--	--	--	--	--	--	
1/25/96-2/16/96	--	169.75	--	1.40	150.15	--	--	--	--	--	--	--	--	--	
4/19/1996	--	169.75	19.06	1.22	149.47	--	--	--	--	--	--	--	--	--	
7/23/1996	--	169.75	22.98	0.89	145.88	--	--	--	--	--	--	--	--	--	
11/11/1996	--	169.75	23.99	0.89	144.78	--	--	--	--	--	--	--	--	--	
1/21/1997	--	169.75	16.80	0.9	152.05	--	--	--	--	--	--	--	--	--	
4/29/1997	--	169.75	21.90	0.85	147.00	--	--	--	--	--	--	--	--	--	
4/30/1997	--	169.75	--	--	--	92,000	3,500	8,100	4,400	23,800	6,900	--	--	--	c

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
MW-1 Cont.															
4/30/1997	--	169.75	--	--	--	100,000	3,600	8,000	4,000	21,300	7,700	5.2	--	--	
8/21/1997	--	169.75	--	--	--	120,000	3,200	8,100	3,800	19,600	5,200	--	--	--	c
8/21/1997	--	169.75	23.40	--	146.35	140,000	3,000	8,500	3,900	22,100	5,700	5.3	--	--	
11/2/97-12/9/97	--	169.75	--	0.87	--	--	--	--	--	--	--	--	--	--	
11/5/1997	--	169.75	--	--	--	88,000	7,300	4,800	3,600	16,900	8,200	--	--	--	c
11/5/1997	--	169.75	23.70	--	145.51	68,000	6,200	4,400	3,300	14,300	8,000	4.7	--	--	
2/3/1998	--	169.75	13.63	0.32	155.80	--	--	--	--	--	--	--	--	--	
2/4/1998	--	169.75	--	--	--	160,000	2,300	8,400	5,000	29,400	<10000	--	--	--	c
2/4/1998	--	169.75	--	--	--	190,000	2,200	10,000	5,600	32,000	<10000	5.3	--	--	
5/28/1998	--	169.75	18.03	0.17	151.55	87,000	980	3,900	3,600	19,000	2,900	3.8	--	--	
12/30/1998	--	169.75	19.50	0.08	150.17	70,000	530	3,200	2,900	16,000	3,600	--	--	--	
2/2/1999	--	169.75	18.93	0.03	150.79	79,000	480	3,100	3,500	21,000	3,500	--	--	--	
5/10/1999	--	169.75	18.28	0.03	151.44	110,000	160	1,900	3,700	24,000	3,000	--	--	--	
8/24/1999	--	169.75	20.13	0.06	149.56	110,000	850	1,300	1,900	19,000	<50	--	--	--	
11/3/1999	--	169.75	22.27	0.36	147.12	65,000	6,300	1,100	3,300	9,500	8,900	--	--	--	
3/1/2000	--	169.75	14.79	0.23	154.73	--	--	--	--	--	--	--	--	--	h
4/21/2000	--	169.75	18.10	0.33	151.32	61,000	330	780	2,700	17,000	1,300	--	--	--	
7/31/2000	--	169.75	21.60	0.53	147.62	1,500,000	340	2,100	24,000	120,000	2,700	--	--	--	
11/20/2000	--	169.75	21.69	0.37	147.69	1,700,000	1,800	2,300	19,000	93,000	3,900	--	--	--	
2/18/2001	--	169.75	16.70	0.13	152.92	--	--	--	--	--	--	--	--	--	
2/26/2001	--	169.75	14.38	0.15	155.22	100,000	658	466	4,210	15,000	1,890	--	--	--	
6/7/2001	--	169.75	20.78	0	148.97	70,000	705	440	3,870	12,200	2,720	--	--	--	
9/5/2001	--	169.75	23.36	0.35	146.04	--	--	--	--	--	--	--	--	--	j
11/30/2001	--	169.75	20.85	0.41	148.49	--	--	--	--	--	--	--	--	--	k
12/6/2001	--	169.75	18.72	0.27	150.76	39,000	3,500	237	2,150	4,500	5,400	--	--	--	
2/20/2002	--	169.75	17.43	0.15	152.17	52,000	465	271	1,600	11,400	106	--	--	--	
6/20/2002	--	169.75	21.18	0.34	148.23	--	--	--	--	--	--	--	--	--	j
9/11/2002	--	169.75	22.86	0.4	146.49	--	--	--	--	--	--	--	--	--	j
11/12/2002	--	169.75	22.65	0.37	146.73	--	--	--	--	--	--	--	--	--	j
1/29/2003	--	169.75	18.15	0.3	151.30	--	--	--	--	--	--	--	--	--	j,n
5/22/2003	--	169.75	18.49	0.2	151.06	--	--	--	--	--	--	--	--	--	j

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
MW-1 Cont.															
6/24/2003	--	169.75	21.44	0.35	147.96	--	--	--	--	--	--	--	--	--	o
7/28/2003	--	169.75	22.72	0.35	146.68	--	--	--	--	--	--	--	--	--	j
8/12/2003	--	169.75	22.64	0.23	146.88	--	--	--	--	--	--	--	--	--	o
9/12/2003	--	169.75	20.70	0.24	148.81	--	--	--	--	--	--	--	--	--	o
10/3/2003	--	169.75	--	0.23	--	--	--	--	--	--	--	--	--	--	
11/18/2003	NP	169.75	21.70	0.25	148.25	--	--	--	--	--	--	--	--	--	
12/31/2003	--	169.75	--	0.15	--	--	--	--	--	--	--	--	--	--	
2/2/2004	--	169.75	--	0.15	--	--	--	--	--	--	--	--	--	--	
02/23/2004	NP	169.75	16.34	0.09	153.48	--	--	--	--	--	--	--	--	--	
3/18/2004	--	169.75	--	0.09	--	--	--	--	--	--	--	--	--	--	
4/13/2004	--	169.75	--	0.24	--	--	--	--	--	--	--	--	--	--	
05/04/2004	NP	169.75	21.28	0.16	148.60	--	--	--	--	--	--	--	--	--	
6/2/2004	--	169.75	--	0.08	--	--	--	--	--	--	--	--	--	--	
7/2/2004	--	169.75	--	0.28	--	--	--	--	--	--	--	--	--	--	
08/04/2004	--	169.75	22.54	0.10	147.29	--	--	--	--	--	--	--	--	--	
09/22/2004	NP	169.75	22.76	0.20	147.15	--	--	--	--	--	--	--	--	--	
10/26/2004	--	169.75	--	0.12	--	--	--	--	--	--	--	--	--	--	
11/10/2004	--	169.75	20.19	0.14	149.67	--	--	--	--	--	--	--	--	--	
12/27/2004	--	169.75	--	0.08	--	--	--	--	--	--	--	--	--	--	
01/13/2005	--	169.75	14.58	0.03	155.19	--	--	--	--	--	--	--	--	--	
02/15/2005	--	169.75	16.13	0.04	153.65	--	--	--	--	--	--	--	--	--	
03/07/2005	--	169.75	13.31	0.01	156.45	--	--	--	--	--	--	--	--	--	
4/29/2005	--	169.75	--	0.01	--	--	--	--	--	--	--	--	--	--	
05/16/2005	--	169.75	15.74	0.02	154.03	--	--	--	--	--	--	--	--	--	j
6/21/2005	--	169.75	--	0.01	--	--	--	--	--	--	--	--	--	--	
7/7/2005	--	169.75	--	0.18	--	--	--	--	--	--	--	--	--	--	
08/17/2005	--	169.75	21.15	0.08	148.66	--	--	--	--	--	--	--	--	--	j
9/6/2005	--	169.75	--	0.02	--	--	--	--	--	--	--	--	--	--	
10/4/2005	--	169.75	--	0.12	--	--	--	--	--	--	--	--	--	--	
11/18/2005	--	169.75	20.15	--	149.60	--	--	--	--	--	--	--	--	--	j
12/30/2005	--	169.75	--	0.03	--	--	--	--	--	--	--	--	--	--	

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE				
MW-1 Cont.															
1/24/2006	--	169.75	--	0.00	--	--	--	--	--	--	--	--	--	--	
02/07/2006	--	169.75	15.19	0.01	154.57	--	--	--	--	--	--	--	--	--	j
3/30/2006	--	169.75	--	0.00	--	--	--	--	--	--	--	--	--	--	
5/19/2006	P	169.75	17.42	--	152.33	44,000	73	510	3,300	5,300	86	--	SEQM	6.9	u, t
8/23/2006	--	169.75	22.01	0.14	147.74	--	--	--	--	--	--	--	--	--	b, j
11/15/2006	--	169.75	21.98	0.18	147.91	--	--	--	--	--	--	--	--	--	b, j
2/14/2007	--	169.75	17.12	0.17	152.76	--	--	--	--	--	--	--	--	--	b, j
5/22/2007	--	169.75	19.49	0.01	150.26	--	--	--	--	--	--	--	--	--	b, j
8/15/2007	--	169.75	22.24	0.01	147.52	--	--	--	--	--	--	--	--	--	b, j
11/8/2007	--	169.75	21.84	0.01	147.92	--	--	--	--	--	--	--	--	--	b, j
2/20/2008	--	169.75	16.52	0.02	153.25	--	--	--	--	--	--	--	--	--	b, j
5/7/2008	--	**169.75**	**20.91**	**0.02**	**148.86**	--	--	--	--	--	--	--	--	--	**b, j**
MW-2															
7/9/1990	--	168.14	--	--	--	--	--	--	--	--	--	--	--	--	
12/21/1990	--	168.14	--	--	--	--	--	--	--	--	--	--	--	--	
3/7/1991	--	168.14	19.18	--	148.96	--	--	--	--	--	--	--	--	--	
4/1/1991	--	168.14	15.21	--	152.93	--	--	--	--	--	--	--	--	--	
6/27/1991	--	168.14	--	--	--	--	--	--	--	--	--	--	--	--	
9/27/1991	--	168.14	--	--	--	--	--	--	--	--	--	--	--	--	
12/18/1991	--	168.14	--	--	--	--	--	--	--	--	--	--	--	--	
7/3/1992	--	168.14	20.93	--	147.21	--	--	--	--	--	--	--	--	--	
10/5/1992	--	168.14	22.74	--	145.40	--	--	--	--	--	--	--	--	--	
1/13/1993	--	168.14	15.55	--	152.59	--	--	--	--	--	--	--	--	--	
4/23/1993	--	168.14	16.54	--	151.60	--	--	--	--	--	--	--	--	--	
7/12/1993	--	168.14	20.46	--	147.68	--	--	--	--	--	--	--	--	--	
10/21/1993	--	168.14	24.91	--	143.23	--	--	--	--	--	--	--	--	--	
1/21/1994	--	168.14	21.20	--	146.94	--	--	--	--	--	--	--	--	--	
4/20/1994	--	168.14	22.44	--	145.70	1,800	140	370	54	290	24	1.7	--	--	i
8/1/1994	--	168.14	22.24	--	145.90	--	--	--	--	--	--	--	--	--	
12/23/1994	--	168.14	16.25	--	151.89	--	--	--	--	--	--	--	--	--	

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
MW-2 Cont.															
1/26/1995	--	168.14	14.55	--	153.59	--	--	--	--	--	--	--	--	--	
6/8/1995	--	168.14	21.18	--	146.96	--	--	--	--	--	--	--	--	--	
8/22/1995	--	168.14	22.76	--	145.38	--	--	--	--	--	--	--	--	--	
10/27/1995	--	168.14	23.61	--	144.53	--	--	--	--	--	--	--	--	--	
1/25/1996	--	168.14	15.95	--	152.19	--	--	--	--	--	--	--	--	--	
4/19/1996	--	168.14	17.33	--	150.81	--	--	--	--	--	--	--	--	--	
7/23/1996	--	168.14	21.25	--	146.89	--	--	--	--	--	--	--	--	--	
11/11/1996	--	168.14	22.27	--	145.87	--	--	--	--	--	--	--	--	--	
1/21/1997	--	168.14	15.19	--	152.95	--	--	--	--	--	--	--	--	--	
4/29/1997	--	168.14	20.22	--	147.92	--	--	--	--	--	--	--	--	--	
4/30/1997	--	168.14	--	--	--	130,000	4,600	15,000	6,000	37,000	<5000	5	--	--	
8/21/1997	--	168.14	21.74	--	146.40	110,000	6,000	16,000	4,700	28,000	<500	4.6	--	--	
11/5/1997	--	168.14	21.61	--	146.53	120,000	7,800	18,000	4,900	28,100	<2500	4.6	--	--	
2/3/1998	--	168.14	11.51	--	156.63	75,000	590	1,500	1,800	12,800	<2500	4.5	--	--	
5/28/1998	--	168.14	16.51	--	151.63	79,000	3,900	3,100	3,100	18,000	900	4.3	--	--	
12/30/1998	--	168.14	17.70	--	150.44	95,000	4,700	3,500	3,700	21,000	<250	--	--	--	
2/2/1999	--	168.14	15.46	--	152.68	170,000	3,500	1,500	5,200	34,000	<500	--	--	--	
5/10/1999	--	168.14	16.52	--	151.62	84,000	3,200	3,200	3,700	20,000	75	--	--	--	
8/24/1999	--	168.14	20.73	--	147.41	130,000	9,100	9,200	4,700	27,000	<250	--	--	--	
11/3/1999	--	168.14	20.93	--	147.21	120,000	10,000	21,000	4,700	30,200	2,200	--	--	--	
3/1/2000	--	168.14	13.37	--	154.77	39,000	1,400	1,500	1,700	8,100	44	--	--	--	
4/21/2000	--	168.14	16.59	--	151.55	68,000	3,300	2,500	3,100	20,000	260	--	--	--	
7/31/2000	--	168.14	16.37	--	151.77	99,000	5,600	1,400	4,300	22,000	490	--	--	--	
11/20/2000	--	168.14	19.71	--	148.43	37,000	5,100	1,500	1,300	4,800	2,800	--	--	--	
2/18/2001	--	168.14	15.29	--	152.85	54,000	5,020	3,880	2,850	15,400	1,010	--	--	--	
6/7/2001	--	168.14	19.43	--	148.71	110,000	7,240	4,380	4,160	22,100	567	--	--	--	
9/5/2001	--	168.14	22.44	--	145.70	69,000	5,750	5,790	2,770	14,200	1,510	--	--	--	
11/30/2001	--	168.14	19.58	--	148.56	120,000	7,270	6,540	4,590	23,000	794	--	--	--	
2/20/2002	--	168.14	16.39	--	151.75	56,000	2,410	2,270	2,910	14,300	160	--	--	--	
6/20/2002	--	168.14	19.77	--	148.37	86,000	7,310	6,490	3,080	14,600	659	--	--	--	
9/11/2002	--	168.14	21.60	--	146.54	130,000	7,600	13,000	5,400	30,000	<5000	--	--	--	

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE				
MW-2 Cont.															
11/12/2002	--	168.14	21.34	--	146.80	46,000	4,100	4,300	1,900	10,000	1,900	--	--	--	t
1/29/2003	--	168.14	16.80	--	151.34	77,000	4,700	2,600	2,800	13,000	820	--	--	--	n,t
5/22/2003	--	168.14	17.15	--	150.99	52,000	6,400	2,600	1,800	7,400	1,000	--	--	--	t
7/28/2003	--	168.14	21.47	--	146.67	31,000	6,900	5,500	2,200	12,000	1,700	--	--	--	p
11/18/2003	P	168.14	20.50	--	147.64	23,000	3,300	800	500	2,000	500	--	SEQM	6.6	
02/23/2004	P	168.14	14.77	--	153.37	84,000	14,000	6,200	3,100	14,000	790	--	SEQM	6.6	t
05/04/2004	P	168.14	20.09	--	148.05	120,000	15,000	17,000	4,900	24,000	780	--	SEQM	6.6	t
08/04/2004	P	168.14	21.39	--	146.75	38,000	9,100	3,300	1,900	5,800	430	--	SEQM	6.69	t
11/10/2004	P	168.14	18.98	--	149.16	22,000	4,400	2,000	940	3,600	310	--	SEQM	7.5	
02/15/2005	P	168.14	15.62	--	152.52	67,000	11,000	4,200	3,000	11,000	690	--	SEQM	7.1	t
05/16/2005	P	168.14	14.71	--	153.43	94,000	11,000	7,600	4,100	17,000	560	--	SEQM	6.5	
08/17/2005	P	168.14	20.00	--	148.14	110,000	13,000	8,000	4,300	18,000	480	--	SEQM	6.6	
11/18/2005	P	168.14	20.89	--	147.25	37,000	11,000	2,400	1,500	4,600	340	--	SEQM	6.6	
02/07/2006	P	168.14	13.31	--	154.83	74,000	8,900	5,800	3,600	14,000	440	--	SEQM	6.7	
5/19/2006	P	168.14	16.30	--	151.84	78,000	11,000	3,700	4,500	14,000	430	--	SEQM	6.6	t
8/23/2006	P	168.14	20.83	--	147.31	100,000	12,000	9,100	5,800	25,000	480	--	TAMC	6.6	
11/15/2006	--	168.14	20.80	--	147.34	46,000	8,800	3,600	2,300	8,500	400	0.70	TAMC	6.73	
2/14/2007	P	168.14	15.96	SHEEN	152.18	100,000	13,000	3,600	6,200	26,000	810	1.43	TAMC	6.97	t
5/22/2007	P	168.14	18.20	--	149.94	91,000	15,000	8,700	4,700	20,000	1,000	0.08	TAMC	6.90	
8/15/2007	P	168.14	21.23	SHEEN	146.91	14,000	7,300	130	280	600	260	4.24	TAMC	6.78	
11/8/2007	P	168.14	20.32	--	147.82	22,000	7,400	420	640	1,700	240	1.21	TAMC	7.03	
2/20/2008	--	168.14	15.20	0.06	152.99	--	--	--	--	--	--	--	--	--	b, j
5/7/2008	**--**	**168.14**	**19.80**	**0.04**	**148.37**	--	--	--	--	--	--	--	--	--	**b, j**
MW-3															
7/9/1990	--	167.17	--	--	--	140	5.3	4.6	2	3.8	--	--	--	--	
12/21/1990	--	167.17	--	--	--	0.19	100	6	0.9	27	--	--	--	--	
3/7/1991	--	167.17	17.40	--	149.77	0.4	69	22	6.1	57	--	--	--	--	
4/1/1991	--	167.17	13.69	--	153.48	--	--	--	--	--	--	--	--	--	
6/27/1991	--	167.17	--	--	--	380	28	26	13	46	--	--	--	--	
9/27/1991	--	167.17	--	--	--	0.07	7.9	--	0.4	1.1	--	--	--	--	

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
MW-3 Cont.															
12/18/1991	--	167.17	--	--	--	0.26	34	24	0.8	28	--	--	--	--	
7/3/1992	--	167.17	19.59	--	147.58	71	9.4	0.9	5	13	--	--	--	--	
10/5/1992	--	167.17	--	--	--	<50	2.2	<0.5	1.5	2.8	--	--	--	--	c
10/5/1992	--	167.17	21.22	--	145.95	67	5.1	1.1	6.1	8.1	--	--	--	--	
1/13/1993	--	167.17	13.63	--	153.54	830	50	34	42	89	--	--	--	--	i
4/23/1993	--	167.17	15.02	--	152.15	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	i
4/23/1993	--	167.17	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	c,i
7/12/1993	--	167.17	19.16	--	148.01	250	12	4.2	12	16	<5.0	--	--	--	i
10/21/1993	--	167.17	--	--	--	65	7.4	1	6.9	4.2	--	--	--	--	c
10/21/1993	--	167.17	21.81	--	145.36	52	4.4	1.4	4.7	3.3	<5.0	--	--	--	i
1/21/1994	--	167.17	19.94	--	147.23	57	3	3.4	3.6	9	<5.0	--	--	--	i
4/20/1994	--	167.17	20.24	--	146.93	600	26	23	33	88	28.7	1.8	--	--	i
8/1/1994	--	167.17	--	--	--	120	7.7	1.6	5.9	6.7	5.43	--	--	--	c,i
8/1/1994	--	167.17	20.74	--	146.43	99	6.2	1.1	4.5	5.2	<5.0	1.4	--	--	i
12/23/1994	--	167.17	14.70	--	152.47	<50	<0.5	0.78	<0.5	<0.5	9.8	1.7	--	--	i
12/23/1994	--	167.17	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	c
1/26/1995	--	167.17	12.89	--	154.28	190	16	0.5	35	24	--	6.6	--	--	d
6/8/1995	--	167.17	19.95	--	147.22	330	21	4	34	32	--	7	--	--	
8/22/1995	--	167.17	21.41	--	145.76	150	14	<0.50	<0.50	1.6	<5.0	6.6	--	--	d
10/27/1995	--	167.17	22.43	--	144.74	--	--	--	--	--	--	--	--	--	
10/30/1995	--	167.17	--	--	--	51	2.4	<0.50	<0.50	<1.0	<5.0	6.9	--	--	
1/25/1996	--	167.17	14.03	--	153.14	<50	<0.50	<0.50	<0.50	<1.0	5.1	--	--	--	
4/19/1996	--	167.17	15.26	--	151.91	460	55	4	33	63	<10	9.4	--	--	
7/23/1996	--	167.17	19.19	--	147.98	<50	<0.5	<0.5	<0.5	<0.5	<10	9.2	--	--	
11/11/1996	--	167.17	20.24	--	146.93	<250	<2.5	<5.0	<5.0	<5.0	<50	8.4	--	--	
1/21/1997	--	167.17	13.09	--	154.08	<50	<0.5	<1.0	<1.0	<1.0	<10	5.4	--	--	
4/29/1997	--	167.17	18.14	--	149.03	<50	<0.5	<1.0	<1.0	<1.0	<10	4.3	--	--	
8/21/1997	--	167.17	19.64	--	147.53	<50	<0.5	<1.0	<1.0	<1.0	<10	4.9	--	--	
11/5/1997	--	167.17	19.95	--	147.22	<250	<2.5	<5.0	<5.0	<5.0	<50	4.5	--	--	
2/3/1998	--	167.17	10.57	--	156.60	<50	<0.50	<1.0	<1.0	<1.0	<10	4.7	--	--	
5/28/1998	--	167.17	14.65	--	152.52	330	<2.5	<5.0	<5.0	<5.0	<50	4.2	--	--	

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
MW-3 Cont.															
12/30/1998	--	167.17	16.63	--	150.54	--	--	--	--	--	--	--	--	--	
2/2/1999	--	167.17	13.12	--	154.05	<250	<5.0	<5.0	<5.0	<5.0	<5.0	--	--	--	
5/10/1999	--	167.17	14.21	--	152.96	--	--	--	--	--	--	--	--	--	
8/24/1999	--	167.17	14.36	--	152.81	--	--	--	--	--	--	--	--	--	
11/3/1999	--	167.17	19.21	--	147.96	--	--	--	--	--	--	--	--	--	
3/1/2000	--	167.17	15.17	--	152.00	<50	<0.5	0.57	<0.5	0.62	<0.5	--	--	--	
4/21/2000	--	167.17	14.88	--	152.29	--	--	--	--	--	--	--	--	--	
7/31/2000	--	167.17	15.29	--	151.88	--	--	--	--	--	--	--	--	--	
11/20/2000	--	167.17	17.31	--	149.86	--	--	--	--	--	--	--	--	--	
2/18/2001	--	167.17	12.85	--	154.32	160	1.95	1.31	10.2	9.09	1	--	--	--	
6/7/2001	--	167.17	18.00	--	149.17	--	--	--	--	--	--	--	--	--	
9/5/2001	--	167.17	20.32	--	146.85	--	--	--	--	--	--	--	--	--	
11/30/2001	--	167.17	16.94	--	150.23	--	--	--	--	--	--	--	--	--	
2/20/2002	--	167.17	14.84	--	152.33	86	<0.5	0.845	6.58	5.75	<0.5	--	--	--	
6/20/2002	--	167.17	18.40	--	148.77	--	--	--	--	--	--	--	--	--	
9/11/2002	--	167.17	20.06	--	147.11	--	--	--	--	--	--	--	--	--	
11/12/2002	--	167.17	19.84	--	147.33	--	--	--	--	--	--	--	--	--	
1/27/2003	--	167.17	14.83	--	152.34	850	20	9.7	24	45	0.76	--	--	--	n
5/22/2003	--	167.17	15.60	--	151.57	--	--	--	--	--	--	--	--	--	
7/28/2003	--	167.17	20.12	--	147.05	--	--	--	--	--	--	--	--	--	p
11/18/2003	--	167.17	19.15	--	148.02	--	--	--	--	--	--	--	--	--	
02/23/2004	--	167.17	13.53	--	153.64	160	<0.50	1.1	9.6	12	<0.50	--	SEQM	6.7	
05/04/2004	--	167.17	18.61	--	148.56	--	--	--	--	--	--	--	--	--	
08/04/2004	--	167.17	19.21	--	147.96	--	--	--	--	--	--	--	--	--	
11/10/2004	--	167.17	17.48	--	149.69	--	--	--	--	--	--	--	--	--	
02/15/2005	P	167.17	14.31	--	152.86	500	7.8	1.8	9.2	9.6	1.7	--	SEQM	7.5	
05/16/2005	--	167.17	13.11	--	154.06	--	--	--	--	--	--	--	--	--	
08/17/2005	--	167.17	18.53	--	148.64	--	--	--	--	--	--	--	--	--	
11/18/2005	--	167.17	19.34	--	147.83	--	--	--	--	--	--	--	--	--	
02/07/2006	P	167.17	11.64	--	155.53	65	<0.50	<0.50	1.4	2.3	<0.50	--	SEQM	7.1	
5/19/2006	--	167.17	14.88	--	152.29	--	--	--	--	--	--	--	--	--	

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
MW-3 Cont.															
8/23/2006	--	167.17	19.43	--	147.74	--	--	--	--	--	--	--	--	--	
11/15/2006	--	167.17	19.22	--	147.95	--	--	--	--	--	--	--	--	--	
2/14/2007	P	167.17	13.80	--	153.37	200	1.1	<0.50	5.9	3.2	3.8	0.68	TAMC	7.52	
5/22/2007	--	167.17	16.80	--	150.37	--	--	--	--	--	--	--	--	--	
8/15/2007	--	167.17	19.87	--	147.30	--	--	--	--	--	--	--	--	--	
11/8/2007	--	167.17	19.27	--	147.90	--	--	--	--	--	--	--	--	--	
2/20/2008	P	167.17	13.58	--	153.59	240	1.1	<0.50	0.99	0.79	2.3	2.58	CEL	7.06	
5/7/2008	**--**	**167.17**	**18.32**	**--**	**148.85**	--	--	--	--	--	--	--	--	--	
MW-4															
7/9/1990	--	170.36	--	--	--	--	--	--	--	--	--	--	--	--	
12/21/1990	--	170.36	--	--	--	--	--	--	--	0.8	--	--	--	--	
3/7/1991	--	170.36	20.72	--	149.64	--	2.2	3.8	1.5	2.8	--	--	--	--	
4/1/1991	--	170.36	17.49	--	152.87	--	--	--	--	--	--	--	--	--	
6/27/1991	--	170.36	--	--	--	--	6.3	1.8	0.4	1	--	--	--	--	
9/27/1991	--	170.36	--	--	--	--	--	--	--	--	--	--	--	--	
12/18/1991	--	170.36	--	--	--	--	--	--	--	--	--	--	--	--	
7/3/1992	--	170.36	22.16	--	148.20	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	
10/5/1992	--	170.36	23.38	--	146.98	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	
1/13/1993	--	170.36	17.58	--	152.78	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	i
4/23/1993	--	170.36	15.72	--	154.64	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	i
7/12/1993	--	170.36	21.74	--	148.62	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	i
10/21/1993	--	170.36	23.84	--	146.52	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	i
1/21/1994	--	170.36	22.42	--	147.94	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	i
4/20/1994	--	170.36	22.66	--	147.70	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.2	--	--	i
8/1/1994	--	170.36	23.01	--	147.35	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.9	--	--	i
12/23/1994	--	170.36	17.03	--	153.33	--	--	--	--	--	--	--	--	--	
1/26/1995	--	170.36	17.42	--	152.94	<50	<0.5	<0.5	<0.5	<1	--	7.5	--	--	
6/8/1995	--	170.36	21.55	--	148.81	--	--	--	--	--	--	--	--	--	
8/22/1995	--	170.36	23.47	--	146.89	<50	<0.50	<0.50	<0.50	<1.0	<5.0	6.4	--	--	d
10/27/1995	--	170.36	24.50	--	145.86	--	--	--	--	--	--	--	--	--	

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
MW-4 Cont.															
1/25/1996	--	170.36	18.74	--	151.62	<50	<0.50	<0.50	<0.50	<1.0	58	--	--	--	
4/19/1996	--	170.36	18.63	--	151.73	--	--	--	--	--	--	--	--	--	
7/23/1996	--	170.36	22.56	--	147.80	--	--	--	--	--	--	--	--	--	
11/11/1996	--	170.36	23.63	--	146.73	<50	<1.0	<1.0	<1.0	<1.0	34	8.2	--	--	
1/21/1997	--	170.36	16.59	--	153.77	--	--	--	--	--	--	--	--	--	
4/29/1997	--	170.36	21.43	--	148.93	<50	<0.5	<1.0	<1.0	<1.0	<10	4.7	--	--	
8/21/1997	--	170.36	22.91	--	147.45	--	--	--	--	--	--	--	--	--	
11/5/1997	--	170.36	22.34	--	148.02	60	<0.5	<1.0	<1.0	<1.0	76	4.9	--	--	
2/3/1998	--	170.36	12.26	--	158.10	--	--	--	--	--	--	--	--	--	
5/28/1998	--	170.36	18.50	--	151.86	70	<0.5	<1.0	<1.0	<1.0	160	4.2	--	--	
12/30/1998	--	170.36	19.69	--	150.67	--	--	--	--	--	--	--	--	--	
2/2/1999	--	170.36	18.26	--	152.10	70	<1.0	<1.0	<1.0	<1.0	130	--	--	--	
5/10/1999	--	170.36	17.86	--	152.50	--	--	--	--	--	--	--	--	--	
8/24/1999	--	170.36	17.93	--	152.43	--	--	--	--	--	--	--	--	--	
11/3/1999	--	170.36	22.78	--	147.58	--	--	--	--	--	--	--	--	--	
3/1/2000	--	170.36	18.04	--	152.32	<50	<0.5	0.67	<0.5	0.7	110	--	--	--	
4/21/2000	--	170.36	17.36	--	153.00	--	--	--	--	--	--	--	--	--	
7/31/2000	--	170.36	17.83	--	152.53	--	--	--	--	--	--	--	--	--	
11/20/2000	--	170.36	18.91	--	151.45	--	--	--	--	--	--	--	--	--	
2/18/2001	--	170.36	17.72	--	152.64	88	<0.5	<0.5	<0.5	<0.5	97.3	--	--	--	
6/7/2001	--	170.36	20.23	--	150.13	--	--	--	--	--	--	--	--	--	
9/5/2001	--	170.36	22.76	--	147.60	--	--	--	--	--	--	--	--	--	
11/30/2001	--	170.36	21.30	--	149.06	--	--	--	--	--	--	--	--	--	
2/20/2002	--	170.36	19.32	--	151.04	76	<0.5	<0.5	<0.5	<1.0	81	--	--	--	
6/20/2002	--	170.36	20.71	--	149.65	--	--	--	--	--	--	--	--	--	
9/11/2002	--	170.36	22.22	--	148.14	--	--	--	--	--	--	--	--	--	
11/12/2002	--	170.36	22.22	--	148.14	--	--	--	--	--	--	--	--	--	
1/29/2003	--	170.36	19.80	--	150.56	100	<0.5	<0.5	<0.5	<0.5	66	--	--	--	n
5/22/2003	--	170.36	19.35	--	151.01	--	--	--	--	--	--	--	--	--	
7/28/2003	--	170.36	22.18	--	148.18	--	--	--	--	--	--	--	--	--	p
11/18/2003	--	170.36	21.65	--	148.71	--	--	--	--	--	--	--	--	--	

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
MW-4 Cont.															
02/23/2004	P	170.36	17.53	--	152.83	75	<0.50	<0.50	<0.50	<0.50	65	--	SEQM	6.8	
05/04/2004	--	170.36	20.62	--	149.74	--	--	--	--	--	--	--	--	--	
08/04/2004	--	170.36	21.30	--	149.06	--	--	--	--	--	--	--	--	--	
11/10/2004	--	170.36	20.65	--	149.71	--	--	--	--	--	--	--	--	--	
02/15/2005	P	170.36	18.91	--	151.45	<50	<0.50	<0.50	<0.50	<0.50	62	--	SEQM	7.6	
05/16/2005	--	170.36	17.34	--	153.02	--	--	--	--	--	--	--	--	--	
08/17/2005	--	170.36	21.31	--	149.05	--	--	--	--	--	--	--	--	--	
11/18/2005	--	170.36	21.67	--	148.69	--	--	--	--	--	--	--	--	--	
02/07/2006	P	170.36	16.74	--	153.62	100	<0.50	<0.50	1.0	3.0	29	--	SEQM	6.8	
5/19/2006	--	170.36	18.22	--	152.14	--	--	--	--	--	--	--	--	--	
8/23/2006	--	170.36	20.95	--	149.41	--	--	--	--	--	--	--	--	--	
11/15/2006	--	170.36	22.21	--	148.15	--	--	--	--	--	--	--	--	--	
2/14/2007	P	170.36	18.25	--	152.11	<50	<0.50	<0.50	<0.50	<0.50	61	0.95	TAMC	7.34	
5/22/2007	--	170.36	20.16	--	150.20	--	--	--	--	--	--	--	--	--	
8/15/2007	--	170.36	22.34	--	148.02	--	--	--	--	--	--	--	--	--	
11/8/2007	--	170.36	21.86	--	148.50	--	--	--	--	--	--	--	--	--	
2/20/2008	P	170.36	17.74	--	152.62	<50	<0.50	<0.50	<0.50	<0.50	36	2.13	CEL	6.93	
5/7/2008	--	**170.36**	**21.38**	--	**148.98**	--	--	--	--	--	--	--	--	--	
MW-5															
7/9/1990	--	165.14	--	--	--	280	200	210	46	290	--	--	--	--	
12/21/1990	--	165.14	--	--	--	0.69	300	34	8.4	39	--	--	--	--	
3/7/1991	--	165.14	16.60	--	148.54	--	17	0.9	0.7	1.6	--	--	--	--	
4/1/1991	--	165.14	11.99	--	153.15	800	250	54	11	60	--	--	--	--	
6/27/1991	--	165.14	--	--	--	330	120	10	12	8	--	--	--	--	
9/27/1991	--	165.14	--	--	--	0.73	230	16	20	22	--	--	--	--	
12/18/1991	--	165.14	--	--	--	--	--	--	--	--	--	--	--	--	
7/3/1992	--	165.14	18.65	--	146.49	150	36	<0.5	<0.5	1.1	--	--	--	--	
10/5/1992	--	165.14	20.32	--	144.82	270	79	4	1.7	2.9	--	--	--	--	
1/13/1993	--	165.14	13.03	--	152.11	180	59	6	1.8	7.6	--	--	--	--	i
4/23/1993	--	165.14	13.51	--	151.63	8,700	440	96	35	136	--	--	--	--	i

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
MW-5 Cont.															
7/12/1993	--	165.14	18.06	--	147.08	250	57	2.9	2.1	6	<5.0	--	--	--	i
10/21/1993	--	165.14	20.41	--	144.73	210	82	1.5	<0.5	1.4	--	--	--	--	i
1/21/1994	--	165.14	18.86	--	146.28	110	36	1.2	<0.5	0.7	<5.0	--	--	--	i
4/20/1994	--	165.14	17.30	--	147.84	690	230	4.5	1.6	11	21.2	1.3	--	--	i
8/1/1994	--	165.14	17.53	--	147.61	170	44	1.6	0.9	2.7	<5.0	0.9	--	--	i
12/23/1994	--	165.14	11.63	--	153.51	630	180	1.9	0.66	1.9	7.81	1.4	--	--	i
1/26/1995	--	165.14	11.25	--	153.89	160	68	<0.5	<0.5	22	--	5.9	--	--	
6/8/1995	--	165.14	--	--	--	1,700	560	51	55	170	--	--	--	--	c
6/8/1995	--	165.14	16.80	--	148.34	2,000	630	58	61	180	--	6.5	--	--	
8/22/1995	--	165.14	19.02	--	146.12	3,700	1,100	18	27	59	<130	7.3	--	--	d
10/27/1995	--	165.14	20.94	--	144.20	--	--	--	--	--	--	--	--	--	
10/30/1995	--	165.14	--	--	--	6,500	2,200	55	180	270	<250	7.5	--	--	
1/25/1996	--	165.14	--	--	--	540	37	0.66	<0.50	<1.0	<5.0	--	--	--	c
1/25/1996	--	165.14	13.30	--	151.84	590	37	0.7	<0.50	<1.0	<5.0	--	--	--	
4/19/1996	--	165.14	13.63	--	151.51	1,500	470	38	49	210	<50	8.1	--	--	
7/23/1996	--	165.14	17.61	--	147.53	140	4.6	<0.5	<0.5	<0.5	<10	8	--	--	
11/11/1996	--	165.14	18.70	--	146.44	140	40	<1.0	<1.0	<1.0	<10	7.9	--	--	
1/21/1997	--	165.14	11.63	--	153.51	730	300	<5.0	7.8	26	<50	5	--	--	
4/29/1997	--	165.14	16.74	--	148.40	340	530	<5.0	<5.0	<5.0	<50	4.8	--	--	
8/21/1997	--	165.14	18.26	--	146.88	<50	<0.5	<1.0	<1.0	<1.0	<10	4.9	--	--	
11/5/1997	--	165.14	18.84	--	146.30	120	13	<1.0	<1.0	<1.0	<10	4.4	--	--	
2/3/1998	--	165.14	9.49	--	155.65	<50	<0.50	<1.0	<1.0	<1.0	<10	4.3	--	--	
5/28/1998	--	165.14	13.57	--	151.57	4,900	1,500	34	180	311	<10	4.1	--	--	
12/30/1998	--	165.14	14.65	--	150.49	--	--	--	--	--	--	--	--	--	
2/2/1999	--	165.14	12.56	--	152.58	100	<1.0	<1.0	<1.0	<1.0	9.1	--	--	--	
5/10/1999	--	165.14	13.36	--	151.78	--	--	--	--	--	--	--	--	--	
8/24/1999	--	165.14	13.50	--	151.64	--	--	--	--	--	--	--	--	--	
11/3/1999	--	165.14	18.48	--	146.66	--	--	--	--	--	--	--	--	--	
3/1/2000	--	165.14	9.59	--	155.55	<50	<0.5	0.58	<0.5	0.54	2.9	--	--	--	
4/21/2000	--	165.14	13.52	--	151.62	--	--	--	--	--	--	--	--	--	
7/31/2000	--	165.14	14.04	--	151.10	--	--	--	--	--	--	--	--	--	

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE				
MW-5 Cont.															
11/20/2000	--	165.14	15.89	--	149.25	--	--	--	--	--	--	--	--	--	
2/18/2001	--	165.14	11.88	--	153.26	560	161	2.38	6.11	13	5.67	--	--	--	
6/7/2001	--	165.14	15.30	--	149.84	--	--	--	--	--	--	--	--	--	
9/5/2001	--	165.14	19.32	--	145.82	--	--	--	--	--	--	--	--	--	
11/30/2001	--	165.14	17.44	--	147.70	--	--	--	--	--	--	--	--	--	
2/20/2002	--	165.14	13.88	--	151.26	4,200	940	18.7	98.2	176	55.6	--	--	--	
6/20/2002	--	165.14	16.20	--	148.94	--	--	--	--	--	--	--	--	--	
9/11/2002	--	165.14	19.15	--	145.99	--	--	--	--	--	--	--	--	--	
11/12/2002	--	165.14	19.01	--	146.13	390	55	0.89	3.4	3.5	210	--	--	--	
1/29/2003	--	165.14	16.33	--	148.81	7,900	1,400	34	220	350	82	--	--	--	n
5/22/2003	--	165.14	14.35	--	150.79	9,900	2,300	91	400	690	<50	--	--	--	
7/28/2003	--	165.14	18.90	--	146.24	3,200	690	14	81	100	120	--	--	--	p
11/18/2003	--	165.14	--	--	--	--	--	--	--	--	--	--	--	--	Well inaccessible e, q
02/23/2004	P	165.14	12.21	--	152.93	7,500	1,500	100	190	350	100	--	SEQM	6.7	
05/04/2004	P	165.14	17.12	--	148.02	5,900	1,500	57	200	280	42	--	SEQM	6.6	
08/04/2004	P	165.14	19.05	--	146.09	<2,500	<25	<25	<25	<25	390	--	SEQM	6.69	
11/10/2004	P	165.14	16.95	--	148.19	870	80	<5.0	<5.0	<5.0	530	--	SEQM	7.5	
02/15/2005	P	165.14	12.75	--	152.39	1,600	330	8.0	37	67	260	--	SEQM	7.2	
05/16/2005	P	165.14	15.46	--	149.68	<500	<5.0	<5.0	<5.0	<5.0	370	--	SEQM	6.7	
08/17/2005	P	165.14	17.00	--	148.14	7,000	1,000	17	110	130	51	--	SEQM	6.6	
11/18/2005	P	165.14	18.33	--	146.81	1,900	91	<5.0	33	29	340	--	SEQM	7.3	
02/07/2006	P	165.14	10.27	--	154.87	2,100	590	9.6	86	110	200	--	SEQM	6.7	
5/19/2006	P	165.14	13.08	--	152.06	3,200	720	9.7	150	170	44	--	SEQM	6.8	
8/23/2006	P	165.14	17.02	--	148.12	1,400	69	<5.0	20	24	230	--	TAMC	7.11	
11/15/2006	P	165.14	18.30	--	146.84	1,100	24	<2.5	10	8.6	490	0.85	TAMC	6.82	
2/14/2007	P	165.14	13.16	--	151.98	680	110	<2.5	16	11	420	2.54	TAMC	7.24	
5/22/2007	P	165.14	15.42	--	149.72	2,800	660	8.8	74	100	26	1.41	TAMC	7.03	
8/15/2007	P	165.14	18.80	--	146.34	2,800	50	<10	26	29	280	3.81	TAMC	7.14	
11/8/2007	P	165.14	18.55	SHEEN	146.59	3,800	77	<2.5	46	35	270	1.08	TAMC	7.23	t
2/20/2008	P	165.14	12.21	--	152.93	2,500	530	<5.0	75	62	43	2.01	CEL	6.84	
5/7/2008	**P**	**165.14**	**16.91**	**--**	**148.23**	**6,700**	**1,800**	**29**	**270**	**360**	**30**	**2.45**	**CEL**	**6.87**	**t**

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
MW-5															
MW-6															
7/9/1990	--	165.40	--	--	--	--	--	--	--	--	--	--	--	--	
12/21/1990	--	165.40	--	--	--	0.17	2.6	7	4.9	26	--	--	--	--	
3/7/1991	--	165.40	--	--	--	--	--	--	--	--	--	--	--	--	e
4/1/1991	--	165.40	11.79	--	153.61	--	--	--	--	--	--	--	--	--	
6/27/1991	--	165.40	--	--	--	--	--	--	--	--	--	--	--	--	e
9/27/1991	--	165.40	--	--	--	--	--	--	--	--	--	--	--	--	e
12/18/1991	--	165.40	--	--	--	--	1.3	22	--	2.7	--	--	--	--	
7/3/1992	--	165.40	17.77	--	147.63	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	
10/5/1992	--	165.40	19.46	--	145.94	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	
1/13/1993	--	165.40	11.34	--	154.06	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	i
4/23/1993	--	165.40	12.92	--	152.48	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	i
7/12/1993	--	165.40	17.36	--	148.04	<50	<0.5	<0.5	<0.5	0.7	<5.0	--	--	--	i
10/21/1993	--	165.40	19.98	--	145.42	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	i
1/21/1994	--	165.40	18.10	--	147.30	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	i
4/20/1994	--	165.40	18.68	--	146.72	<50	<0.5	<0.5	<0.5	<0.5	17.4	2	--	--	i
8/1/1994	--	165.40	18.90	--	146.50	<50	<0.5	<0.5	<0.5	<0.5	8.66	1.5	--	--	i
12/23/1994	--	165.40	12.94	--	152.46	--	--	--	--	--	--	--	--	--	
1/26/1995	--	165.40	10.46	--	154.94	<50	<0.5	<0.5	<0.5	<1	--	7.3	--	--	
6/8/1995	--	165.40	16.84	--	148.56	--	--	--	--	--	--	--	--	--	
8/22/1995	--	165.40	19.48	--	145.92	<50	<0.50	<0.50	<0.50	<1.0	<5.0	6.7	--	--	d
10/27/1995	--	165.40	20.39	--	145.01	--	--	--	--	--	--	--	--	--	
1/25/1996	--	165.40	12.24	--	153.16	<50	<0.50	<0.50	<0.50	<1.0	9.9	--	--	--	
4/19/1996	--	165.40	13.90	--	151.50	--	--	--	--	--	--	--	--	--	
7/23/1996	--	165.40	17.83	--	147.57	--	--	--	--	--	--	--	--	--	
11/11/1996	--	165.40	18.90	--	146.50	<50	<0.5	<1.0	<1.0	<1.0	<10	7.7	--	--	
1/21/1997	--	165.40	11.97	--	153.43	--	--	--	--	--	--	--	--	--	
4/29/1997	--	165.40	17.04	--	148.36	<50	<0.5	<1.0	<1.0	<1.0	<10	4.5	--	--	
8/21/1997	--	165.40	18.58	--	146.82	--	--	--	--	--	--	--	--	--	
11/5/1997	--	165.40	19.17	--	146.23	70	<0.5	<1.0	<1.0	<1.0	85	4.3	--	--	

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE				
MW-6 Cont.															
2/3/1998	--	165.40	9.87	--	155.53	--	--	--	--	--	--	--	--	--	
5/28/1998	--	165.40	13.38	--	152.02	<50	<0.5	<1.0	<1.0	<1.0	<10	3.7	--	--	
12/30/1998	--	165.40	14.45	--	150.95	--	--	--	--	--	--	--	--	--	
2/2/1999	--	165.40	18.29	--	147.11	--	--	--	--	--	--	--	--	--	
5/10/1999	--	165.40	17.49	--	147.91	--	--	--	--	--	--	--	--	--	
8/24/1999	--	165.40	17.61	--	147.79	--	--	--	--	--	--	--	--	--	
11/3/1999	--	165.40	16.26	--	149.14	--	--	--	--	--	--	--	--	--	
3/1/2000	--	165.40	17.43	--	147.97	--	--	--	--	--	--	--	--	--	
4/21/2000	--	165.40	13.32	--	152.08	--	--	--	--	--	--	--	--	--	
7/31/2000	--	165.40	13.46	--	151.94	--	--	--	--	--	--	--	--	--	
11/20/2000	--	165.40	14.78	--	150.62	--	--	--	--	--	--	--	--	--	
2/18/2001	--	165.40	11.33	--	154.07	--	--	--	--	--	--	--	--	--	
6/7/2001	--	165.40	16.36	--	149.04	--	--	--	--	--	--	--	--	--	
9/5/2001	--	165.40	18.61	--	146.79	--	--	--	--	--	--	--	--	--	
11/30/2001	--	165.40	15.20	--	150.20	--	--	--	--	--	--	--	--	--	
2/20/2002	--	165.40	12.74	--	152.66	--	--	--	--	--	--	--	--	--	
6/20/2002	--	165.40	16.68	--	148.72	--	--	--	--	--	--	--	--	--	
9/11/2002	--	165.40	18.38	--	147.02	--	--	--	--	--	--	--	--	--	
11/12/2002	--	165.40	18.78	--	146.62	--	--	--	--	--	--	--	--	--	
1/29/2003	--	165.40	14.45	--	150.95	--	--	--	--	--	--	--	--	--	n
5/22/2003	--	165.40	14.36	--	151.04	--	--	--	--	--	--	--	--	--	
7/28/2003	--	165.40	18.43	--	146.97	--	--	--	--	--	--	--	--	--	p
11/18/2003	--	165.40	17.48	--	147.92	--	--	--	--	--	--	--	--	--	
02/23/2004	--	165.40	11.54	--	153.86	--	--	--	--	--	--	--	--	--	
05/04/2004	--	165.40	16.58	--	148.82	--	--	--	--	--	--	--	--	--	
08/04/2004	--	165.40	18.12	--	147.28	--	--	--	--	--	--	--	--	--	
11/10/2004	--	165.40	15.75	--	149.65	--	--	--	--	--	--	--	--	--	
02/15/2005	--	165.40	12.50	--	152.90	--	--	--	--	--	--	--	--	--	
05/16/2005	P	165.40	11.51	--	153.89	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	SEQM	7.0	
08/17/2005	--	165.40	16.85	--	148.55	--	--	--	--	--	--	--	--	--	
11/18/2005	--	165.40	--	--	--	--	--	--	--	--	--	--	--	--	e

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE				
MW-6 Cont.															
02/07/2006	P	165.40	9.93	--	155.47	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	SEQM	7.1	
5/19/2006	--	165.40	--	--	--	--	--	--	--	--	--	--	--	--	e
8/23/2006	--	165.40	16.35	--	149.05	--	--	--	--	--	--	--	--	--	
11/15/2006	--	165.40	17.42	--	147.98	--	--	--	--	--	--	--	--	--	
2/14/2007	P	165.40	12.03	--	153.37	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.07	TAMC	7.73	
5/22/2007	--	165.40	15.11	--	150.29	--	--	--	--	--	--	--	--	--	
8/15/2007	--	165.40	18.08	--	147.32	--	--	--	--	--	--	--	--	--	
11/8/2007	--	165.40	17.79	--	147.61	--	--	--	--	--	--	--	--	--	
2/20/2008	P	165.40	11.81	--	153.59	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.29	CEL	7.10	
5/7/2008	--	**165.40**	**16.75**	--	**148.65**	--	--	--	--	--	--	--	--	--	
MW-7															
7/9/1990	--	167.61	--	--	--	--	--	--	--	--	--	--	--	--	
12/21/1990	--	167.61	--	--	--	--	--	--	--	--	--	--	--	--	
3/7/1991	--	167.61	19.04	--	148.57	--	--	0.4	0.3	2.4	--	--	--	--	
4/1/1991	--	167.61	15.18	--	152.43	--	--	--	--	--	--	--	--	--	
6/27/1991	--	167.61	--	--	--	70	17	4	0.8	2.2	--	--	--	--	
9/27/1991	--	167.61	--	--	--	--	0.4	--	--	0.4	--	--	--	--	
12/18/1991	--	167.61	--	--	--	--	0.7	2.9	0.8	3.3	--	--	--	--	
7/3/1992	--	167.61	20.28	--	147.33	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	
10/5/1992	--	167.61	21.56	--	146.05	<50	<0.5	<0.5	<0.5	1.5	--	--	--	--	
1/13/1993	--	167.61	15.41	--	152.20	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	i
4/23/1993	--	167.61	15.84	--	151.77	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	i
7/12/1993	--	167.61	19.84	--	147.77	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	i
10/21/1993	--	167.61	21.61	--	146.00	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	i
1/21/1994	--	167.61	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	c
1/21/1994	--	167.61	20.49	--	147.12	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	i
4/20/1994	--	167.61	20.54	--	147.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.5	--	--	i
8/1/1994	--	167.61	20.99	--	146.62	<50	0.7	<0.5	<0.5	<0.5	<5.0	1.9	--	--	i
12/23/1994	--	167.61	15.00	--	152.61	--	--	--	--	--	--	--	--	--	
1/26/1995	--	167.61	14.69	--	152.92	<50	<0.5	<0.5	<0.5	<1	--	7	--	--	

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE				
MW-7 Cont.															
6/8/1995	--	167.61	19.87	--	147.74	--	--	--	--	--	--	--	--	--	
8/22/1995	--	167.61	21.49	--	146.12	<50	<0.50	<0.50	<0.50	<1.0	<5.0	6.4	--	--	d
10/27/1995	--	167.61	22.53	--	145.08	--	--	--	--	--	--	--	--	--	
1/25/1996	--	167.61	17.21	--	150.40	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	--	
4/19/1996	--	167.61	17.09	--	150.52	--	--	--	--	--	--	--	--	--	
7/23/1996	--	167.61	21.02	--	146.59	--	--	--	--	--	--	--	--	--	
11/11/1996	--	167.61	22.03	--	145.58	<50	<0.5	<1.0	<1.0	<1.0	<10	7.8	--	--	
1/21/1997	--	167.61	15.06	--	152.55	--	--	--	--	--	--	--	--	--	
4/29/1997	--	167.61	20.11	--	147.50	<50	<0.5	<1.0	<1.0	<1.0	<10	4.4	--	--	
8/21/1997	--	167.61	21.59	--	146.02	--	--	--	--	--	--	--	--	--	
11/5/1997	--	167.61	20.05	--	147.56	<50	<0.5	<1.0	<1.0	<1.0	<10	4.4	--	--	
2/3/1998	--	167.61	9.97	--	157.64	--	--	--	--	--	--	--	--	--	
5/28/1998	--	167.61	13.52	--	154.09	<50	<0.5	<1.0	<1.0	<1.0	<10	4.3	--	--	
12/30/1998	--	167.61	18.33	--	149.28	--	--	--	--	--	--	--	--	--	
2/2/1999	--	167.61	12.33	--	155.28	--	--	--	--	--	--	--	--	--	
5/10/1999	--	167.61	13.52	--	154.09	--	--	--	--	--	--	--	--	--	
8/24/1999	--	167.61	14.01	--	153.60	--	--	--	--	--	--	--	--	--	
11/3/1999	--	167.61	19.91	--	147.70	--	--	--	--	--	--	--	--	--	
3/1/2000	--	167.61	19.89	--	147.72	--	--	--	--	--	--	--	--	--	
4/21/2000	--	167.61	17.94	--	149.67	--	--	--	--	--	--	--	--	--	
7/31/2000	--	167.61	17.33	--	150.28	--	--	--	--	--	--	--	--	--	
11/20/2000	--	167.61	18.41	--	149.20	--	--	--	--	--	--	--	--	--	
2/18/2001	--	167.61	15.13	--	152.48	--	--	--	--	--	--	--	--	--	
6/7/2001	--	167.61	18.75	--	148.86	--	--	--	--	--	--	--	--	--	
9/5/2001	--	167.61	20.48	--	147.13	--	--	--	--	--	--	--	--	--	
11/30/2001	--	167.61	20.11	--	147.50	--	--	--	--	--	--	--	--	--	
2/20/2002	--	167.61	18.40	--	149.21	--	--	--	--	--	--	--	--	--	
6/20/2002	--	167.61	18.62	--	148.99	--	--	--	--	--	--	--	--	--	
9/11/2002	--	167.61	20.05	--	147.56	--	--	--	--	--	--	--	--	--	
11/12/2002	--	167.61	21.13	--	146.48	--	--	--	--	--	--	--	--	--	n
1/29/2003	--	167.61	19.10	--	148.51	--	--	--	--	--	--	--	--	--	

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE				
MW-7 Cont.															
5/22/2003	--	167.61	18.83	--	148.78	--	--	--	--	--	--	--	--	--	
7/28/2003	--	167.61	19.88	--	147.73	--	--	--	--	--	--	--	--	--	p
11/18/2003	--	168.08	20.50	--	147.58	--	--	--	--	--	--	--	--	--	
11/18/2003	--	167.61	20.50	--	147.11	--	--	--	--	--	--	--	--	--	s
02/23/2004	--	168.08	15.92	--	152.16	--	--	--	--	--	--	--	--	--	
05/04/2004	--	168.08	18.86	--	149.22	--	--	--	--	--	--	--	--	--	
08/04/2004	--	168.08	19.10	--	148.98	--	--	--	--	--	--	--	--	--	
11/10/2004	--	168.08	20.25	--	147.83	--	--	--	--	--	--	--	--	--	
02/15/2005	--	168.08	16.37	--	151.71	--	--	--	--	--	--	--	--	--	
05/16/2005	--	168.08	--	--	--	--	--	--	--	--	--	--	--	--	e
08/17/2005	--	168.08	19.74	--	148.34	--	--	--	--	--	--	--	--	--	
11/18/2005	--	168.08	20.82	--	147.26	--	--	--	--	--	--	--	--	--	
02/07/2006	P	168.08	14.26	--	153.82	<500	<5.0	<5.0	<5.0	<5.0	270	--	SEQM	7.3	
5/19/2006	--	168.08	16.51	--	151.57	--	--	--	--	--	--	--	--	--	
8/23/2006	--	168.08	20.30	--	147.78	--	--	--	--	--	--	--	--	--	
11/15/2006	--	168.08	20.85	--	147.23	--	--	--	--	--	--	--	--	--	
2/14/2007	P	168.08	16.57	--	151.51	520	<5.0	<5.0	<5.0	<5.0	740	3.08	TAMC	7.30	v
5/22/2007	--	168.08	18.40	--	149.68	--	--	--	--	--	--	--	--	--	
8/15/2007	--	168.08	20.85	--	147.23	--	--	--	--	--	--	--	--	--	
11/8/2007	--	168.08	20.41	--	147.67	--	--	--	--	--	--	--	--	--	
2/20/2008	P	168.08	15.90	--	152.18	<50	<0.50	<0.50	<0.50	<0.50	700	4.34	CEL	7.09	
5/7/2008	**--**	**168.08**	**19.41**	**--**	**148.67**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	
MW-8															
3/7/1991	--	165.74	16.72	--	149.02	2.7	780	450	64	310	--	--	--	--	
4/1/1991	--	165.74	12.54	--	153.20	15,000	3,600	2,600	410	1,900	--	--	--	--	
6/27/1991	--	165.74	--	--	--	12,000	3,400	1,100	240	750	--	--	--	--	
9/27/1991	--	165.74	--	--	--	41	5,700	5,200	1,100	4,300	--	--	--	--	
12/18/1991	--	165.74	--	--	--	3.2	990	150	120	250	--	--	--	--	
7/3/1992	--	165.74	18.78	--	146.96	72,000	19,000	32,000	3,000	15,000	--	--	--	--	
10/5/1992	--	165.74	20.48	--	145.26	--	--	--	--	--	--	--	--	--	

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE				
MW-8 Cont.															
1/13/1993	--	165.74	12.87	--	152.87	--	--	--	--	--	--	--	--	--	
4/23/1993	--	165.74	13.90	--	151.84	--	--	--	--	--	--	--	--	--	t
7/12/1993	--	165.74	18.30	--	147.44	--	--	--	--	--	--	--	--	--	t
10/21/1993	--	165.74	21.91	--	142.88	--	--	--	--	--	--	--	--	--	
10/2/93-12/9/98	--	165.74	--	0.12	--	--	--	--	--	--	--	--	--	--	
1/21/1994	--	165.74	19.12	--	146.62	--	--	--	--	--	--	--	--	--	
4/20/1994	--	165.74	19.28	--	146.46	26,000	1,700	4,100	960	4,000	632	1.1	--	--	i
8/1/1994	--	165.74	--	--	--	--	--	--	--	--	--	--	--	--	
12/23/1994	--	165.74	13.81	--	151.93	--	--	--	--	--	--	--	--	--	
1/26/1995	--	165.74	--	--	--	--	--	--	--	--	--	--	--	--	
6/8/1995	--	165.74	17.82	--	147.92	--	--	--	--	--	--	--	--	--	
8/22/1995	--	165.74	19.41	--	146.33	--	--	--	--	--	--	--	--	--	
10/27/1995	--	165.74	20.47	--	145.27	--	--	--	--	--	--	--	--	--	
1/25/1996	--	165.74	13.35	--	152.39	--	--	--	--	--	--	--	--	--	
4/19/1996	--	165.74	14.40	--	151.34	--	--	--	--	--	--	--	--	--	
7/23/1996	--	165.74	18.35	--	147.39	--	--	--	--	--	--	--	--	--	
11/11/1996	--	165.74	19.41	--	146.33	--	--	--	--	--	--	--	--	--	
1/21/1997	--	165.74	12.29	--	153.45	--	--	--	--	--	--	--	--	--	
4/29/1997	--	165.74	--	--	--	--	--	--	--	--	--	--	--	--	e
8/21/1997	--	165.74	19.61	--	146.13	240,000	1,100	9,300	4,100	31,100	<1000	5.2	--	--	
11/5/1997	--	165.74	19.45	--	146.29	57,000	790	2,700	2,300	15,200	<1000	5	--	--	
2/3/1998	--	165.74	9.33	--	156.41	--	--	--	--	--	--	--	--	--	
2/4/1998	--	165.74	--	--	--	94,000	570	1,500	2,100	15,200	<2500	5.5	--	--	
5/28/1998	--	165.74	--	--	--	--	--	--	--	--	--	--	--	--	e
12/30/1998	--	165.74	15.48	--	150.26	120,000	460	2,300	2,200	15,000	150	--	--	--	
2/2/1999	--	165.74	18.29	--	147.45	82,000	450	2,200	3,700	26,000	<500	--	--	--	
5/10/1999	--	165.74	15.62	--	150.12	28,000	740	1,800	1,100	5,800	<25	--	--	--	
8/24/1999	--	165.74	18.41	--	147.33	75,000	530	1,400	3,300	21,000	150	--	--	--	
11/3/1999	--	165.74	18.71	--	147.03	70,000	600	1,300	3,600	20,500	750	--	--	--	
3/1/2000	--	165.74	19.37	--	146.37	27,000	1,600	1,200	2,600	6,600	120	--	--	--	
4/21/2000	--	165.74	--	--	--	--	--	--	--	--	--	--	--	--	e

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE				
MW-8 Cont.															
7/31/2000	--	165.74	--	--	--	--	--	--	--	--	--	--	--	--	e
11/20/2000	--	165.74	17.42	--	148.32	1,300,000	1,400	1,700	20,000	16,000	5,700	--	--	--	
2/18/2001	--	165.74	--	--	--	--	--	--	--	--	--	--	--	--	e
6/7/2001	--	165.74	--	--	--	--	--	--	--	--	--	--	--	--	e
9/5/2001	--	165.74	21.45	0.04	144.25	--	--	--	--	--	--	--	--	--	j
11/30/2001	--	165.74	18.31	--	147.43	--	--	--	--	--	--	--	--	--	h
12/6/2001	--	165.74	--	--	--	--	--	--	--	--	--	--	--	--	e
2/20/2002	--	165.74	14.02	--	151.72	20,000	163	114	403	3,810	80.4	--	--	--	
6/20/2002	--	165.74	17.56	--	148.18	28,000	466	141	962	5,850	2,520	--	--	--	
9/11/2002	--	165.74	19.45	--	146.29	190,000	1,500	670	4,500	23,000	1,200	--	--	--	
11/12/2002	--	165.74	19.15	--	146.59	420	6.4	2.9	16	110	31	--	--	--	t
1/29/2003	--	165.74	15.02	--	150.72	200,000	810	<500	2,000	11,000	<500	--	--	--	n
5/22/2003	--	165.74	15.07	--	150.67	--	--	--	--	--	--	--	--	--	t
6/24/2003	--	165.74	17.95	--	147.79	43,000	860	300	2,100	9,600	46	--	--	--	
7/28/2003	--	165.74	19.45	--	146.29	62,000	690	230	1,800	15,000	2,100	--	--	--	
8/12/2003	--	165.74	19.40	<0.01	146.34	--	--	--	--	--	--	--	--	--	o,t
9/12/2003	--	165.74	19.34	--	146.40	--	--	--	--	--	--	--	--	--	o
10/3/2003	--	165.74	--	<0.01	--	--	--	--	--	--	--	--	--	--	
11/18/2003	P	165.74	18.80	<0.01	146.94	8,800	500	37	530	930	1,700	--	SEQM	--	o,p
12/31/2003	--	165.74	--	<0.01	--	--	--	--	--	--	--	--	--	--	
2/2/2004	--	165.74	--	<0.01	--	--	--	--	--	--	--	--	--	--	
02/23/2004	P	165.74	12.82	<0.01	152.92	32,000	840	360	1,000	7,100	110	--	SEQM	6.6	t
3/18/2004	--	165.74	--	<0.01	--	--	--	--	--	--	--	--	--	--	
4/13/2004	--	165.74	--	<0.01	--	--	--	--	--	--	--	--	--	--	
05/04/2004	P	165.74	18.87	<0.01	146.87	42,000	570	230	1,700	8,400	2,000	--	SEQM	7.0	t
6/2/2004	--	165.74	--	<0.01	--	--	--	--	--	--	--	--	--	--	
08/04/2004	--	165.74	19.37	0.05	146.41	--	--	--	--	--	--	--	--	--	
09/22/2004	NP	165.74	19.60	--	146.14	--	--	--	--	--	--	--	--	--	
11/10/2004	P	165.74	16.58	--	149.16	11,000	790	61	1,000	830	74	--	SEQM	7.3	t
02/15/2005	P	165.74	12.85	--	152.89	38,000	1,300	390	2,300	7,900	<50	--	SEQM	7.2	
05/16/2005	P	165.74	12.22	--	153.52	31,000	1,000	360	2,500	7,500	<50	--	SEQM	6.5	

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Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
MW-8 Cont.															
08/17/2005	P	165.74	17.80	--	147.94	60,000	540	240	2,500	8,600	<50	--	SEQM	6.7	
11/18/2005	P	165.74	21.02	--	144.72	33,000	340	120	1,400	4,900	140	--	SEQM	6.9	
02/07/2006	P	165.74	10.73	--	155.01	5,700	94	27	260	820	7.5	--	SEQM	6.6	
5/19/2006	P	165.74	13.89	--	151.85	40,000	1,100	320	2,900	6,000	<25	--	SEQM	6.6	t
8/23/2006	P	165.74	18.85	--	146.89	21,000	520	150	1,800	6,300	82	--	TAMC	7.35	
11/15/2006	P	165.74	18.75	--	146.99	3,300	81	<25	130	430	110	0.81	TAMC	6.91	
2/14/2007	P	165.74	13.45	SHEEN	152.29	9,300	320	<25	360	710	82	1.89	TAMC	7.13	t
5/22/2007	P	165.74	15.92	SHEEN	149.82	17,000	370	51	760	1,600	11	1.05	TAMC	6.99	t
8/15/2007	P	165.74	19.11	SHEEN	146.63	17,000	170	44	1,000	2,700	28	3.93	TAMC	7.08	
11/8/2007	P	165.74	18.46	SHEEN	147.28	24,000	150	43	1,100	3,200	27	1.29	TAMC	7.14	t
2/20/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	e
5/7/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**e**
MW-9															
3/7/1991	--	166.20	16.79	--	149.41	7.1	220	4	2.4	2,400	--	--	--	--	
4/1/1991	--	166.20	12.89	--	153.31	12,000	2,000	2,600	360	1,600	--	--	--	--	
6/27/1991	--	166.20	--	--	--	3,600	520	400	85	310	--	--	--	--	
9/27/1991	--	166.20	--	--	--	3.2	720	150	50	180	--	--	--	--	
12/18/1991	--	166.20	--	--	--	--	2.5	1.1	0.3	5.8	--	--	--	--	
7/3/1992	--	166.20	18.89	--	147.31	5,700	17,000	840	230	800	--	--	--	--	
10/5/1992	--	166.20	20.52	--	145.68	1,400	440	17	14	100	--	--	--	--	
1/13/1993	--	166.20	--	--	--	11,000	1,200	1,600	330	1,300	--	--	--	--	c,i
1/13/1993	--	166.20	12.92	--	153.28	11,000	1,200	1,700	340	1,400	--	--	--	--	i
4/23/1993	--	166.20	14.08	--	152.12	24,000	2,800	4,500	730	3,400	--	--	--	--	i
7/12/1993	--	166.20	--	--	--	10,000	1,200	900	310	1,200	--	--	--	--	c
7/12/1993	--	166.20	18.44	--	147.76	13,000	1,400	1,100	360	1,400	20.8	--	--	--	i
10/21/1993	--	166.20	21.81	--	143.50	--	--	--	--	--	--	--	--	--	
11/2/93-4/29/97	--	166.20	--	0.10	--	--	--	--	--	--	--	--	--	--	
1/21/1994	--	166.20	19.28	--	146.92	--	--	--	--	--	--	--	--	--	
4/20/1994	--	166.20	19.72	--	146.48	43,000	2,800	6,800	1,300	7,900	768	1.7	--	--	i
4/20/1994	--	166.20	--	--	--	45,000	2,700	6,800	1,200	8,200	740	--	--	--	c,d

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE				
MW-9 Cont.															
8/1/1994	--	166.20	20.18	--	146.02	--	--	--	--	--	--	--	--	--	
12/23/1994	--	166.20	14.22	--	151.98	--	--	--	--	--	--	--	--	--	
1/26/1995	--	166.20	11.85	--	154.35	--	--	--	--	--	--	--	--	--	
6/8/1995	--	166.20	18.33	--	147.87	--	--	--	--	--	--	--	--	--	
8/22/1995	--	166.20	19.95	--	146.25	--	--	--	--	--	--	--	--	--	
10/27/1995	--	166.20	20.88	--	145.32	--	--	--	--	--	--	--	--	--	
1/25/1996	--	166.20	13.84	--	152.36	--	--	--	--	--	--	--	--	--	
4/19/1996	--	166.20	--	--	--	--	--	--	--	--	--	--	--	--	e
7/23/1996	--	166.20	18.84	--	147.36	--	--	--	--	--	--	--	--	--	
11/11/1996	--	166.20	19.91	--	146.29	--	--	--	--	--	--	--	--	--	
1/21/1997	--	166.20	12.93	--	153.27	--	--	--	--	--	--	--	--	--	
4/29/1997	--	166.20	18.03	0.1	148.17	--	--	--	--	--	--	--	--	--	t
4/30/1997	--	166.20	--	--	--	78,000	1,900	3,600	3,100	20,600	<5000	5.5	--	--	
8/21/1997	--	166.20	19.56	--	146.64	110,000	2,100	3,400	2,300	18,800	<500	5.1	--	--	
11/5/1997	--	166.20	20.59	0.01	145.60	59,000	1,400	1,700	2,200	17,000	<500	4.5	--	--	
2/3/1998	--	166.20	10.56	--	155.64	55,000	490	1,200	1,400	10,200	<1000	4.9	--	--	
5/28/1998	--	166.20	14.21	--	151.99	41,000	250	1,200	1,500	11,400	<250	3.8	--	--	
5/28/1998	--	166.20	--	--	--	53,000	290	830	1,400	10,500	<500	--	--	--	c
12/30/1998	--	166.20	15.61	--	150.59	83,000	860	1,300	2,400	21,000	180	--	--	--	
2/2/1999	--	166.20	12.33	--	153.87	75,000	530	960	1,900	17,000	<50	--	--	--	
5/10/1999	--	166.20	15.67	--	150.53	22,000	600	1,500	1,100	4,400	72	--	--	--	
8/24/1999	--	166.20	19.10	--	147.10	85,000	850	1,300	1,700	20,000	<250	--	--	--	
11/3/1999	--	166.20	19.58	--	146.62	72,000	700	780	1,900	19,000	<5.0	--	--	--	
3/1/2000	--	166.20	13.19	--	153.01	34,000	78	490	1,100	8,200	63	--	--	--	
4/21/2000	--	166.20	14.29	--	151.91	55,000	260	920	1,500	16,000	<5.0	--	--	--	
7/31/2000	--	166.20	15.01	--	151.19	1,200,000	1,500	6,300	15,000	120,000	1,600	--	--	--	
11/20/2000	--	166.20	18.23	--	147.97	320,000	3,500	19,000	5,000	40,000	3,900	--	--	--	
2/18/2001	--	166.20	13.14	--	153.06	32,000	290	417	1,180	10,400	121	--	--	--	
6/7/2001	--	166.20	17.41	--	148.79	96,000	421	704	2,330	17,300	223	--	--	--	
9/5/2001	--	166.20	20.56	--	145.64	39,000	445	323	1,240	8,940	310	--	--	--	
11/30/2001	--	166.20	17.42	--	148.78	60,000	310	586	1,890	14,200	285	--	--	--	

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Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
MW-9 Cont.															
2/20/2002	--	166.20	13.87	--	152.33	14,000	64	122	897	2,650	293	--	--	--	
6/20/2002	--	166.20	18.22	--	147.98	29,000	307	168	1,100	5,670	208	--	--	--	
9/11/2002	--	166.20	20.27	--	145.93	230,000	1,400	680	3,600	23,000	<2500	--	--	--	
11/12/2002	--	166.20	19.40	--	146.80	840	5.8	3.6	28	160	21	--	--	--	t
1/29/2003	--	166.20	14.30	0.1	151.80	--	--	--	--	--	--	--	--	--	j,n
5/22/2003	--	166.20	15.16	--	151.04	23,000	260	<50	1,000	2,900	<50	--	--	--	t
6/24/2003	--	166.20	--	--	--	--	--	--	--	--	--	--	--	--	e
7/28/2003	--	166.20	19.55	<0.01	146.65	1,500,000	<500	<500	9,800	79,000	<500	--	--	--	
8/12/2003	--	166.20	19.60	<0.01	146.60	--	--	--	--	--	--	--	--	--	o,t
9/12/2003	--	166.20	19.60	<0.01	146.60	--	--	--	--	--	--	--	--	--	o,t
11/18/2003	P	166.20	18.98	<0.01	147.22	19,000	250	18	690	2,400	45	--	SEQM	6.8	o,p
12/31/2003	--	166.20	--	<0.01	--	--	--	--	--	--	--	--	--	--	
2/2/2004	--	166.20	--	<0.01	--	--	--	--	--	--	--	--	--	--	
02/23/2004	P	166.20	13.91	<0.01	152.29	91,000	<250	440	2,200	13,000	<250	--	SEQM	6.8	t
3/18/2004	--	166.20	--	<0.01	--	--	--	--	--	--	--	--	--	--	
4/13/2004	--	166.20	--	<0.01	--	--	--	--	--	--	--	--	--	--	
05/04/2004	P	166.20	18.11	<0.01	148.09	39,000	230	44	1,100	4,200	<25	--	SEQM	6.9	t
6/2/2004	--	166.20	--	<0.01	--	--	--	--	--	--	--	--	--	--	
08/04/2004	--	166.20	18.90	0.03	147.32	--	--	--	--	--	--	--	--	--	
09/22/2004	NP	166.20	19.69	--	146.51	--	--	--	--	--	--	--	--	--	
11/10/2004	NP	166.20	16.95	--	149.25	31,000	300	<50	1,100	3,800	<50	--	SEQM	7.3	t
02/15/2005	P	166.20	12.95	--	153.25	19,000	200	<50	720	2,000	<50	--	SEQM	7.3	t
05/16/2005	P	166.20	12.53	--	153.67	17,000	99	15	770	2,500	<10	--	SEQM	6.7	
08/17/2005	P	166.20	18.03	--	148.17	28,000	160	26	1,000	2,700	<12	--	SEQM	6.8	
11/18/2005	P	166.20	19.04	--	147.16	12,000	98	<5.0	410	510	19	--	SEQM	7.1	
02/07/2006	P	166.20	10.95	SHEEN	155.25	18,000	110	8.7	770	1,500	<5.0	--	SEQM	6.9	t
5/19/2006	--	166.20	--	--	--	--	--	--	--	--	--	--	--	--	e
8/23/2006	P	166.20	18.91	--	147.29	28,000	84	<50	1,600	6,200	<50	--	TAMC	7.3	
11/15/2006	P	166.20	18.60	--	147.60	8,200	44	<25	190	370	26	0.92	TAMC	6.88	
2/14/2007	P	166.20	13.30	--	152.90	20,000	64	<25	720	2,000	<25	0.87	TAMC	7.17	t
5/22/2007	P	166.20	16.14	SHEEN	150.06	16,000	80	<25	460	1,200	<25	0.81	TAMC	7.08	t

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
MW-9 Cont.															
8/15/2007	P	166.20	19.31	SHEEN	146.89	5,900	27	<2.5	59	170	27	2.57	TAMC	6.98	
11/8/2007	P	166.20	18.70	--	147.50	6,100	29	<5.0	98	250	52	1.24	TAMC	7.47	
2/20/2008	--	166.20	12.79	0.03	153.43	--	--	--	--	--	--	--	--	--	b, j
5/7/2008	**--**	**166.20**	**17.68**	**0.03**	**148.54**	--	--	--	--	--	--	--	--	--	**b, j**
MW-10															
3/7/1991	--	167.01	18.09	--	148.92	1.6	120	190	32	230	--	--	--	--	
4/1/1991	--	167.01	13.92	--	153.09	--	--	--	--	--	--	--	--	--	
6/27/1991	--	167.01	--	--	--	12,000	7,300	500	150	300	--	--	--	--	
9/27/1991	--	167.01	--	--	--	57	12,000	7,200	1,400	4,600	--	--	--	--	
12/18/1991	--	167.01	--	--	--	5.3	2,500	120	36	79	--	--	--	--	
7/3/1992	--	167.01	19.92	--	147.09	8,600	5,100	1,300	180	690	--	--	--	--	
10/5/1992	--	167.01	21.92	--	145.09	--	--	--	--	--	--	--	--	--	
1/13/1993	--	167.01	14.43	--	152.58	--	--	--	--	--	--	--	--	--	
4/23/1993	--	167.01	15.26	--	151.75	--	--	--	--	--	--	--	--	--	
7/12/1993	--	167.01	19.78	--	147.23	--	--	--	--	--	--	--	--	--	
10/21/1993	--	167.01	22.90	--	144.11	--	--	--	--	--	--	--	--	--	
1/21/1994	--	167.01	20.25	--	146.76	--	--	--	--	--	--	--	--	--	
4/20/1994	--	167.01	20.74	--	146.27	100,000	12,000	24,000	2,400	14,000	1,577	1	--	--	d,i
8/1/1994	--	167.01	22.00	--	145.01	--	--	--	--	--	--	--	--	--	
12/23/1994	--	167.01	16.08	--	150.93	--	--	--	--	--	--	--	--	--	
1/26/1995	--	167.01	13.68	--	153.33	--	--	--	--	--	--	--	--	--	
6/8/1995	--	167.01	19.08	--	147.93	--	--	--	--	--	--	--	--	--	
8/22/1995	--	167.01	20.73	--	146.28	--	--	--	--	--	--	--	--	--	
10/27/1995	--	167.01	21.69	--	145.32	--	--	--	--	--	--	--	--	--	
1/25/1996	--	167.01	15.05	--	151.96	--	--	--	--	--	--	--	--	--	
4/19/1996	--	167.01	16.26	--	150.75	--	--	--	--	--	--	--	--	--	
7/23/1996	--	167.01	20.18	--	146.83	--	--	--	--	--	--	--	--	--	
9/4/1996	--	167.01	--	0.76	--	--	--	--	--	--	--	--	--	--	
11/11/1996	--	167.01	21.20	--	145.81	--	--	--	--	--	--	--	--	--	
1/21/1997	--	167.01	13.66	--	153.35	--	--	--	--	--	--	--	--	--	

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Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
MW-10 Cont.															
4/29/1997	--	167.01	18.71	--	148.30	--	--	--	--	--	--	--	--	--	
4/30/1997	--	167.01	--	--	--	170,000	9,700	38,000	4,700	30,500	<5000	5.6	--	--	
8/21/1997	--	167.01	20.19	--	146.82	170,000	9,500	35,000	4,300	27,100	<5000	5.3	--	--	
11/5/1997	--	167.01	20.52	--	146.49	80,000	3,800	12,000	2,700	15,700	<500	4.4	--	--	
12/2/1997	--	167.01	--	0.03	--	--	--	--	--	--	--	--	--	--	
2/3/1998	--	167.01	10.62	--	156.39	--	--	--	--	--	--	--	--	--	
2/4/1998	--	167.01	--	--	--	72,000	500	1,300	1,700	12,000	<1000	5.1	--	--	
5/28/1998	--	167.01	15.46	--	151.55	220,000	3,200	24,000	5,200	43,000	<1000	4.8	--	--	
12/30/1998	--	167.01	16.65	--	150.36	110,000	3,500	14,000	5,800	50,000	<50	--	--	--	
2/2/1999	--	167.01	14.58	--	152.43	74,000	1,000	2,800	1,000	26,000	860	--	--	--	
5/10/1999	--	167.01	15.72	--	151.29	81,000	2,800	2,800	3,000	17,000	220	--	--	--	
8/24/1999	--	167.01	19.85	--	147.16	54,000	3,500	3,800	1,500	9,100	<250	--	--	--	
11/3/1999	--	167.01	20.00	--	147.01	30,000	3,000	3,500	1,200	5,000	31	--	--	--	
3/1/2000	--	167.01	14.62	--	152.39	62,000	320	1,200	1,100	26,000	4,400	--	--	--	
4/21/2000	--	167.01	15.46	--	151.55	88,000	2,700	7,400	3,700	35,000	2,400	--	--	--	
7/31/2000	--	167.01	--	--	--	--	--	--	--	--	--	--	--	--	e
11/20/2000	--	167.01	18.74	--	148.27	78,000	3,800	5,500	2,800	13,000	450	--	--	--	
2/18/2001	--	167.01	14.10	--	152.91	39,000	1,050	1,160	1,550	14,700	4,180	--	--	--	
6/7/2001	--	167.01	18.78	--	148.23	76,000	2,460	2,840	3,330	20,700	635	--	--	--	
9/5/2001	--	167.01	21.40	0.01	145.60	25,000	2,510	2,070	1,090	4,540	189	--	--	--	
11/30/2001	--	167.01	18.50	--	148.51	100,000	2,480	5,720	3,890	22,800	325	--	--	--	
2/20/2002	--	167.01	14.39	--	152.62	49,000	2,170	3,070	1,960	12,300	1,090	--	--	--	
6/20/2002	--	167.01	18.80	--	148.21	44,000	2,040	3,050	1,690	8,430	224	--	--	--	
9/11/2002	--	167.01	20.52	--	146.49	28,000	1,200	2,700	1,400	6,800	<250	--	--	--	
11/12/2002	--	167.01	20.37	0.07	146.57	--	--	--	--	--	--	--	--	--	j
1/29/2003	--	167.01	16.33	0.03	150.65	--	--	--	--	--	--	--	--	--	j,n
5/22/2003	--	167.01	16.32	--	150.69	13,000	2,100	850	630	1,600	300	--	--	--	t
6/24/2003	--	167.01	18.73	0.04	148.24	--	--	--	--	--	--	--	--	--	o
7/28/2003	--	167.01	20.39	0.04	146.58	--	--	--	--	--	--	--	--	--	j
8/12/2003	--	167.01	20.43	<0.01	146.58	--	--	--	--	--	--	--	--	--	o,t
9/12/2003	--	167.01	20.41	--	146.60	--	--	--	--	--	--	--	--	--	o

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Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
MW-10 Cont.															
10/3/2003	--	167.01	--	<0.01	--	--	--	--	--	--	--	--	--	--	
11/18/2003	P	167.01	19.55	<0.01	147.46	9,900	2,200	530	320	860	<50	--	SEQM	6.8	o,p
12/31/2003	--	167.01	--	<0.01	--	--	--	--	--	--	--	--	--	--	
2/2/2004	--	167.01	--	<0.01	--	--	--	--	--	--	--	--	--	--	
02/23/2004	P	167.01	15.45	<0.01	151.56	46,000	1,900	2,000	1,800	9,000	180	--	SEQM	6.7	t
3/18/2004	--	167.01	--	<0.01	--	--	--	--	--	--	--	--	--	--	
4/13/2004	--	167.01	--	<0.01	--	--	--	--	--	--	--	--	--	--	
05/04/2004	P	167.01	18.81	<0.01	148.20	35,000	3,100	3,600	1,400	5,600	<25	--	SEQM	7.1	t
6/2/2004	--	167.01	--	<0.01	--	--	--	--	--	--	--	--	--	--	
7/2/2004	--	167.01	--	<0.01	--	--	--	--	--	--	--	--	--	--	
08/04/2004	--	167.01	18.90	--	148.11	--	--	--	--	--	--	--	--	--	
09/22/2004	NP	167.01	20.60	--	146.41	--	--	--	--	--	--	--	--	--	
11/10/2004	P	167.01	17.95	--	149.06	9,800	470	91	450	1,700	230	--	SEQM	7.3	t
01/13/2005	--	167.01	12.21	--	154.80	--	--	--	--	--	--	--	--	--	
02/15/2005	P	167.01	14.19	--	152.82	30,000	510	330	1,800	7,200	77	--	SEQM	7.2	
05/16/2005	P	167.01	13.85	--	153.16	37,000	540	730	2,100	9,200	<50	--	SEQM	6.7	
08/17/2005	P	167.01	19.01	--	148.00	15,000	1,100	420	1,200	4,100	<50	--	SEQM	6.7	
11/18/2005	P	167.01	19.95	--	147.06	12,000	1,200	240	550	1,300	16	--	SEQM	6.8	
02/07/2006	P	167.01	12.28	SHEEN	154.73	22,000	340	580	1,300	4,500	73	--	SEQM	6.8	t
5/19/2006	P	167.01	15.12	--	151.89	40,000	690	430	2,600	4,900	<25	--	SEQM	6.9	t
8/23/2006	P	167.01	20.00	--	147.01	13,000	1,500	540	1,200	3,000	<10	--	TAMC	6.97	
11/15/2006	P	167.01	19.84	--	147.17	3,800	700	22	67	160	54	0.65	TAMC	6.78	
2/14/2007	P	167.01	14.94	SHEEN	152.07	37,000	350	120	2,400	8,100	120	2.12	TAMC	7.05	t
5/22/2007	P	167.01	17.17	SHEEN	149.84	13,000	810	130	750	2,200	15	0.06	TAMC	7.10	t
8/15/2007	P	167.01	20.30	SHEEN	146.71	4,400	550	38	160	310	<10	3.09	TAMC	7.09	
11/8/2007	P	167.01	19.58	SHEEN	147.43	13,000	970	130	480	1,600	6.0	1.47	TAMC	7.95	t
2/20/2008	--	167.01	14.27	0.05	152.78	--	--	--	--	--	--	--	--	--	b, j
5/7/2008	**P**	**167.01**	**18.61**	**--**	**148.40**	**16,000**	**970**	**150**	**770**	**2,000**	**<20**	**2.18**	**CEL**	**6.98**	**t**
QC-2															
10/5/1992	--	168.01	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	f

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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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE				
QC-2 Cont.															
1/13/1993	--	168.01	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	f,i
4/23/1993	--	168.01	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	f,i
7/12/1993	--	168.01	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	f
10/21/1993	--	168.01	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	f
1/21/1994	--	168.01	--	--	--	<50	<0.5	2.1	<0.5	2.1	--	--	--	--	f
4/20/1994	--	168.01	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	f
12/23/1994	--	168.01	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	f
1/26/1995	--	168.01	--	--	--	<50	<0.5	<0.5	<0.5	<1	--	--	--	--	f
6/8/1995	--	168.01	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	--	--	--	f
8/22/1995	--	168.01	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	--	d,f
10/30/1995	--	168.01	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	--	f
1/25/1996	--	168.01	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	--	f
4/19/1996	--	168.01	--	--	--	<50	<0.5	<1	<1	<1	<10	--	--	--	f
RW-1															
7/9/1990	--	168.01	--	--	--	--	--	--	--	--	--	--	--	--	
12/21/1990	--	168.01	--	--	--	--	--	--	--	--	--	--	--	--	
3/7/1991	--	168.01	17.62	--	150.39	--	--	--	--	--	--	--	--	--	t
4/1/1991	--	168.01	14.40	--	153.61	--	--	--	--	--	--	--	--	--	
6/27/1991	--	168.01	--	--	--	--	--	--	--	--	--	--	--	--	
9/27/1991	--	168.01	--	--	--	--	--	--	--	--	--	--	--	--	
12/18/1991	--	168.01	--	--	--	--	--	--	--	--	--	--	--	--	
7/3/1992	--	168.01	20.66	--	147.35	--	--	--	--	--	--	--	--	--	t
10/5/1992	--	168.01	23.34	--	144.67	--	--	--	--	--	--	--	--	--	
1/13/1993	--	168.01	16.59	--	151.42	--	--	--	--	--	--	--	--	--	
4/23/1993	--	168.01	16.17	--	151.84	--	--	--	--	--	--	--	--	--	
7/12/1993	--	168.01	20.18	--	147.83	--	--	--	--	--	--	--	--	--	
10/21/1993	--	168.01	25.70	--	142.31	--	--	--	--	--	--	--	--	--	
1/21/1994	--	168.01	21.24	--	146.77	--	--	--	--	--	--	--	--	--	
4/20/1994	--	168.01	32.20	--	135.81	--	--	--	--	--	--	--	--	--	
8/1/1994	--	168.01	21.70	--	146.31	29,000	580	950	300	7,800	1,200	1.1	--	--	d

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						GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
RW-1 Cont.															
12/23/1994	--	168.01	16.02	--	151.99	1,300	25	8.6	1.4	69	616	1.8	--	--	i
1/26/1995	--	168.01	13.78	--	154.23	<50	<0.5	<0.5	<0.5	<1	--	--	--	--	
1/26/1995	--	168.01	--	--	--	<50	<0.5	<0.5	<0.5	<1	--	--	--	--	c
6/8/1995	--	168.01	20.05	--	147.96	1,300	130	<1.0	<1.0	36	--	--	--	--	
8/22/1995	--	168.01	21.74	--	146.27	3,300	230	13	4.9	280	<25	6.6	--	--	d
8/22/1995	--	168.01	--	--	--	2,800	210	9.3	4.3	250	<25	--	--	--	c
10/27/1995	--	168.01	32.00	--	136.01	--	--	--	--	--	--	--	--	--	
10/30/1995	--	168.01	--	--	--	240	1.6	<1.0	<1.0	<2.0	630	--	--	--	c
10/30/1995	--	168.01	--	--	--	230	1.4	<1.0	<1.0	<2.0	650	6.9	--	--	
1/25/1996	--	168.01	15.41	--	152.60	15,000	3,400	930	330	2,500	5,300	--	--	--	
4/19/1996	--	168.01	--	--	--	33,000	5,600	3,200	1,700	8,800	15,000	--	--	--	c
4/19/1996	--	168.01	16.83	--	151.18	35,000	5,500	3,300	1,700	9,400	14,000	7.6	--	--	
7/23/1996	--	168.01	--	--	--	47,000	3,700	2,500	930	5,300	35,000	--	--	--	c
7/23/1996	--	168.01	20.76	--	147.25	46,000	3,600	2,300	900	5,100	36,000	7.4	--	--	
11/11/1996	--	168.01	--	--	--	31,000	2,900	1,000	860	4,600	22,000	--	--	--	c
11/11/1996	--	168.01	21.73	--	146.28	34,000	3,000	1,200	880	4,600	22,000	8.3	--	--	
1/21/1997	--	168.01	14.20	--	153.81	260	40	16	2.7	34	1,500	6.1	--	--	
1/21/1997	--	168.01	--	--	--	270	42	17	2.7	36	1,500	--	--	--	c
4/29/1997	--	168.01	19.15	--	148.86	32,000	3,100	590	1,300	6,000	46,000	5.3	--	--	
8/21/1997	--	168.01	20.67	--	147.34	7,600	730	58	370	1,780	9,500	4.7	--	--	
11/5/1997	--	168.01	21.01	--	147.00	39,000	2,300	86	1,300	3,840	56,000	4.5	--	--	
2/3/1998	--	168.01	10.68	--	157.33	3,400	31	11	29	161	3,200	5.1	--	--	
5/28/1998	--	168.01	15.55	--	152.46	2,000	90	15	60	305	2,700	4.3	--	--	
12/30/1998	--	168.01	17.35	--	150.66	--	--	--	--	--	--	--	--	--	
2/2/1999	--	168.01	14.58	--	153.43	82,000	2,300	120	2,000	3,200	51000/78000	--	--	--	g
5/10/1999	--	168.01	16.00	--	152.01	15,000	620	88	340	660	61,000	--	--	--	
8/24/1999	--	168.01	20.00	--	148.01	52,000	1,400	170	2,200	2,900	37,000	--	--	--	
11/3/1999	--	168.01	20.39	--	147.62	17,000	2,500	86	1,500	970	54,000	--	--	--	
3/1/2000	--	168.01	12.97	--	155.04	17,000	580	78	790	1,100	13,000	--	--	--	
4/21/2000	--	168.01	16.02	--	151.99	31,000	2,100	100	1,400	1,100	39,000	--	--	--	
7/31/2000	--	168.01	21.89	--	146.12	47,000	1,300	170	2,700	2,300	30,000	--	--	--	

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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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
RW-1 Cont.															
11/20/2000	--	168.01	19.15	--	148.86	--	--	--	--	--	--	--	--	--	h
2/18/2001	--	168.01	15.35	--	152.66	14,000	589	89	600	712	13,000	--	--	--	
6/7/2001	--	168.01	19.09	--	148.92	28,000	1,140	68.2	504	530	19,100	--	--	--	
9/5/2001	--	168.01	22.06	0.02	145.93	--	--	--	--	--	--	--	--	--	j
11/30/2001	--	168.01	19.53	--	148.48	20,000	405	39.4	545	740	8,260	--	--	--	
2/20/2002	--	168.01	15.99	--	152.02	13,000	469	29	434	655	7,240	--	--	--	
6/20/2002	--	168.01	19.31	--	148.70	--	--	--	--	--	--	--	--	--	j,l
9/11/2002	--	168.01	21.07	0.03	146.91	--	--	--	--	--	--	--	--	--	j
11/12/2002	--	168.01	20.92	0.02	147.07	--	--	--	--	--	--	--	--	--	j
1/29/2003	--	168.01	16.31	0.04	151.66	--	--	--	--	--	--	--	--	--	j,n
5/22/2003	--	168.01	16.68	--	151.33	--	--	--	--	--	--	--	--	--	j,t
6/24/2003	--	168.01	19.76	0.07	148.18	--	--	--	--	--	--	--	--	--	o
7/28/2003	--	168.01	21.04	0.04	146.93	--	--	--	--	--	--	--	--	--	j
8/12/2003	--	168.01	21.41	<0.01	146.60	--	--	--	--	--	--	--	--	--	o,t
9/12/2003	--	168.01	21.10	0.07	146.84	--	--	--	--	--	--	--	--	--	o
10/3/2003	--	168.01	--	0.03	--	--	--	--	--	--	--	--	--	--	
11/18/2003	P	168.01	20.10	<0.01	147.91	12,000	770	<50	320	250	6,100	--	SEQM	6.6	o,p
12/31/2003	--	168.01	--	<0.01	--	--	--	--	--	--	--	--	--	--	
02/23/2004	--	168.01	14.35	0.01	153.67	--	--	--	--	--	--	--	--	--	
3/18/2004	--	168.01	--	0.09	--	--	--	--	--	--	--	--	--	--	
4/13/2004	--	168.01	--	0.02	--	--	--	--	--	--	--	--	--	--	
05/04/2004	--	168.01	19.58	0.02	148.45	--	--	--	--	--	--	--	--	--	
6/2/2004	--	168.01	--	0.05	--	--	--	--	--	--	--	--	--	--	
7/2/2004	--	168.01	--	0.11	--	--	--	--	--	--	--	--	--	--	
08/04/2004	--	168.01	22.05	0.05	146.00	--	--	--	--	--	--	--	--	--	
09/22/2004	NP	168.01	21.28	0.06	146.78	--	--	--	--	--	--	--	--	--	
10/26/2004	--	168.01	--	0.01	--	--	--	--	--	--	--	--	--	--	
11/10/2004	--	168.01	18.56	0.02	149.47	--	--	--	--	--	--	--	--	--	
12/27/2004	--	168.01	--	0.03	--	--	--	--	--	--	--	--	--	--	
01/13/2005	--	168.01	12.51	0.01	155.51	--	--	--	--	--	--	--	--	--	
02/15/2005	--	168.01	15.24	0.03	152.79	--	--	--	--	--	--	--	--	--	

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

Station #11132, 3201 35th 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)						DO (mg/L)	Lab	pH	Comments
						GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE				
RW-1 Cont.															
03/07/2005	--	168.01	11.90	0.02	156.13	--	--	--	--	--	--	--	--	--	
4/29/2005	--	168.01	--	0.03	--	--	--	--	--	--	--	--	--	--	
05/16/2005	--	168.01	14.39	0.02	153.64	--	--	--	--	--	--	--	--	--	j
6/21/2005	--	168.01	--	0.03	--	--	--	--	--	--	--	--	--	--	
7/7/2005	--	168.01	--	0.06	--	--	--	--	--	--	--	--	--	--	
08/17/2005	--	168.01	19.91	0.03	148.12	--	--	--	--	--	--	--	--	--	j
9/6/2005	--	168.01	--	0.03	--	--	--	--	--	--	--	--	--	--	
10/4/2005	--	168.01	--	0.07	--	--	--	--	--	--	--	--	--	--	
11/18/2005	--	168.01	20.36	0.07	147.71	--	--	--	--	--	--	--	--	--	b, j
12/30/2005	--	168.01	--	0.04	--	--	--	--	--	--	--	--	--	--	
1/24/2006	--	168.01	--	0.01	--	--	--	--	--	--	--	--	--	--	
02/07/2006	--	168.01	12.87	0.01	155.15	--	--	--	--	--	--	--	--	--	j
3/30/2006	--	168.01	--	0.02	--	--	--	--	--	--	--	--	--	--	
5/19/2006	--	168.01	15.87	0.04	152.17	--	--	--	--	--	--	--	--	--	b
8/23/2006	--	168.01	20.50	0.07	147.56	--	--	--	--	--	--	--	--	--	b, j
11/15/2006	--	168.01	20.52	0.07	147.54	--	--	--	--	--	--	--	--	--	b, j
2/14/2007	--	168.01	15.44	0.04	152.60	--	--	--	--	--	--	--	--	--	b, j
5/22/2007	--	168.01	17.78	SHEEN	150.23	--	--	--	--	--	--	--	--	--	j, l
8/15/2007	--	168.01	20.80	0.02	147.23	--	--	--	--	--	--	--	--	--	b, j
11/8/2007	--	168.01	20.32	0.01	147.70	--	--	--	--	--	--	--	--	--	b, j
2/20/2008	--	168.01	14.55	0.02	153.48	--	--	--	--	--	--	--	--	--	b, j
5/7/2008	--	**168.01**	--	--	--	--	--	--	--	--	--	--	--	--	**e**

SYMBOLS AND ABBREVIATIONS:
-- = Not analyzed/applicable/measured/available
< = Not detected at or above specified laboratory reporting limit
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 measured 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
TOC = Top of casing measured in ft MSL
TPH-g = Total petroleum hydrocarbons as gasoline
µg/L = Micrograms per liter
SEQ/SEQM= Sequoia Analytical/Sequoia Analytical Morgan Hill (Laboratories)
SPH = Separate phase hydrocarbons

FOOTNOTES:
a = Casing elevations surveyed to the nearest 0.01 ft MSL.
b = GWE adjusted assuming a specific gravity of 0.75 for free product (FP).
c = Blind duplicate.
d = A copy of the documentation for this data is included in Appendix C of Alisto report 10-024-10-001.
e = Well inaccessible.
f = Travel blank.
g = EPA Methods 8020/8260 used.
h = Unable to sample.
i = A copy of the documentation for this data can be found in Blaine Tech Services report 010607-M-3. MTBE data for the January 13, 1993 and April 23, 1993 sampling events has been destroyed. No chromatograms could be located for MTBE data from wells MW-5, MW-6, and MW-7, sampled on October 21, 1993.
j = Well not sampled due to presence of SPH and nature of the product.
k = Could not purge and sample; waste drum full.
l = Value represents the depth to product. Unable to determine depth to water, product disabled the interface probe.
m = Discrete p[ak @ C6-7.
n = TPH-g, BTEX, and MTBE analyzed by EPA method 8260 B beginning on 1st quarter 2003 aampling event (1/29/03).
o = Groundwater samples are not collected during FP bailing event.
p = Well not included in the monthly FP bailing program.
q = Well not sampled in November 2003 due to the presence of a pile of gravel dumped over the well box.
r = This sample was analyzed beyond the EPA recommended holding time. The results may still be useful for their intended purpose.
s = MW-7 TOC elevation raised +0.47 ft during well repair on January 20, 2004.
t = Sheen in well.
u = Calib. verif. is within method limits but outside contract limits.
v = GRO result partly due to individual peak(s) in quantitation range.

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

Values for DO and pH were obtained through 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 #11132, 3201 35th Ave, Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-1									
5/19/2006	<6,000	<400	86	<10	<10	<10	<10	<10	
MW-2									
1/29/2003	<4000	<2000	820	<50	<50	<50	<50	<50	
5/22/2003	<10000	<2000	1,000	<50	<50	<50	--	--	
7/28/2003	<20000	<4000	1,700	<100	<100	<100	<100	<100	a
11/18/2003	<5,000	<1,000	500	<25	<25	<25	--	--	
02/23/2004	<25,000	<5,000	790	<120	<120	<120	<120	<120	
05/04/2004	<50,000	<10,000	780	<250	<250	<250	<250	<250	
08/04/2004	<50,000	<10,000	430	<250	<250	<250	<250	<250	
11/10/2004	<5,000	<1,000	310	<25	<25	<25	<25	<25	
02/15/2005	<20,000	<4,000	690	<100	<100	<100	<100	<100	
05/16/2005	<50,000	<10,000	560	<250	<250	<250	<250	<250	
08/17/2005	<20,000	<4,000	480	<100	<100	<100	<100	<100	
11/18/2005	<20,000	<4,000	340	<100	<100	<100	<100	<100	b
02/07/2006	<60,000	<4,000	440	<100	<100	<100	160	<100	
5/19/2006	<60,000	<4,000	430	<100	<100	<100	<100	<100	b
8/23/2006	<60,000	<4,000	480	<100	<100	<100	<100	<100	
11/15/2006	<60,000	<4,000	400	<100	<100	<100	<100	<100	
2/14/2007	<60,000	<4,000	810	<100	<100	<100	<100	<100	
5/22/2007	<150,000	<10,000	1,000	<250	<250	<250	<250	<250	
8/15/2007	<30,000	2,400	260	<50	<50	<50	<50	<50	b
11/8/2007	<30,000	2,800	240	<50	<50	<50	<50	<50	
MW-3									
1/29/2003	<40	<20	0.76	<50	<50	<50	<50	<50	
02/23/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
02/15/2005	<100	<20	1.7	<0.50	<0.50	<0.50	<0.50	<0.50	
02/07/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
2/14/2007	<300	<20	3.8	<0.50	<0.50	<0.50	<0.50	<0.50	u
2/20/2008	<100	<10	2.3	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-4									

Table 2. Summary of Fuel Additives Analytical Data

Station #11132, 3201 35th 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.									
1/29/2003	<40	<20	66	<0.50	<0.50	<0.50	<0.50	<0.50	
02/23/2004	<100	<20	65	<0.50	<0.50	<0.50	<0.50	<0.50	
02/15/2005	<100	<20	62	<0.50	<0.50	<0.50	<0.50	<0.50	
02/07/2006	<300	<20	29	<0.50	<0.50	<0.50	<0.50	<0.50	
2/14/2007	<300	<20	61	<0.50	<0.50	<0.50	<0.50	<0.50	
2/20/2008	<100	<10	36	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-5									
1/29/2003	<400	<200	82	<5.0	<5.0	<5.0	<5.0	<5.0	
5/22/2003	<10000	<2000	<50	<50	<50	<50	--	--	
7/28/2003	<2000	<400	120	<10	<10	<10	<10	<10	
11/18/2003	--	--	--	--	--	--	--	--	Well inaccessible
02/23/2004	<5,000	<1,000	100	<25	<25	<25	38	<25	
05/04/2004	<5,000	<1,000	42	<25	<25	<25	<25	<25	
08/04/2004	<5,000	<1,000	390	<25	<25	<25	<25	<25	
11/10/2004	<1,000	<200	530	<5.0	<5.0	5.5	<5.0	<5.0	
02/15/2005	<1,000	<200	260	<5.0	<5.0	<5.0	<5.0	<5.0	
05/16/2005	<1,000	<200	370	<5.0	<5.0	<5.0	<5.0	<5.0	
08/17/2005	<1,000	<200	51	<5.0	<5.0	<5.0	<5.0	<5.0	
11/18/2005	<1,000	<200	340	<5.0	<5.0	<5.0	<5.0	<5.0	b
02/07/2006	<3,000	<200	200	<5.0	<5.0	<5.0	<5.0	<5.0	
5/19/2006	<3,000	<200	44	<5.0	<5.0	<5.0	<5.0	<5.0	b
8/23/2006	<3,000	<200	230	<5.0	<5.0	<5.0	<5.0	<5.0	
11/15/2006	<1,500	<100	490	<2.5	<2.5	4.2	<2.5	<2.5	
2/14/2007	<1,500	<100	420	<2.5	<2.5	3.6	<2.5	<2.5	
5/22/2007	<1,500	<100	26	<2.5	<2.5	<2.5	<2.5	<2.5	
8/15/2007	<6,000	<400	280	<10	<10	<10	<10	<10	
11/8/2007	<1,500	310	270	<2.5	<2.5	<2.5	<2.5	<2.5	
2/20/2008	<1,000	<100	43	<5.0	<5.0	<5.0	<5.0	<5.0	
5/7/2008	**<6,000**	**<200**	**30**	**<10**	**<10**	**<10**	**<10**	**<10**	
MW-6									

Table 2. Summary of Fuel Additives Analytical Data

Station #11132, 3201 35th Ave, Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-6 Cont.									
05/16/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
02/07/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
2/14/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
2/20/2008	<100	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-7									
02/07/2006	<3,000	<200	270	<5.0	<5.0	<5.0	<5.0	<5.0	
2/14/2007	<3,000	<200	740	<5.0	<5.0	9.6	<5.0	<5.0	
2/20/2008	<100	13	700	<0.50	<0.50	12	0.60	<0.50	
MW-8									
1/29/2003	<4000	<2000	<500	<50	<50	<50	<50	<50	
5/22/2003	<5000	<1000	--	<25	<25	<25	--	--	
7/28/2003	<20000	<4000	2,100	<100	<100	<100	<100	<100	
11/18/2003	<2,000	<400	1,700	<10	<10	20	--	--	a,b
02/23/2004	<10,000	<2,000	110	<50	<50	<50	<50	<50	
05/04/2004	<5,000	<1,000	2,000	<25	<25	33	<25	<25	
11/10/2004	<5,000	<1,000	74	<25	<25	<25	<25	<25	
02/15/2005	<10,000	<2,000	<50	<50	<50	<50	<50	<50	
05/16/2005	<10,000	<2,000	<50	<50	<50	<50	<50	<50	
08/17/2005	<10,000	<2,000	<50	<50	<50	<50	<50	<50	
11/18/2005	<10,000	<2,000	140	<50	<50	<50	<50	<50	b
02/07/2006	<3,000	<200	7.5	<5.0	<5.0	<5.0	<5.0	<5.0	
5/19/2006	<15,000	<1,000	<25	<25	<25	<25	<25	<25	b
8/23/2006	<15,000	<1,000	82	<25	<25	<25	<25	<25	
11/15/2006	<15,000	<1,000	110	<25	<25	<25	<25	<25	
2/14/2007	<15,000	<1,000	82	<25	<25	<25	<25	<25	
5/22/2007	<6,000	<400	11	<10	<10	<10	<10	<10	
8/15/2007	<6,000	<400	28	<10	<10	<10	<10	<10	
11/8/2007	<15,000	<1,000	27	<25	<25	<25	<25	<25	
MW-9									
5/22/2003	<10000	<2000	<50	<50	<50	<50	--	--	

Table 2. Summary of Fuel Additives Analytical Data

Station #11132, 3201 35th 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.									
7/28/2003	<100000	<20000	<500	<500	<500	<500	<500	<500	
11/18/2003	<2,000	<400	45	<10	<10	<10	--	--	a,b
02/23/2004	<50,000	<10,000	<250	<250	<250	<250	<250	<250	
05/04/2004	<5,000	<1,000	<25	<25	<25	<25	<25	<25	
11/10/2004	<10,000	<2,000	<50	<50	<50	<50	<50	<50	
02/15/2005	<10,000	<2,000	<50	<50	<50	<50	<50	<50	
05/16/2005	<2,000	<400	<10	<10	<10	<10	<10	<10	
08/17/2005	<2,500	<500	<12	<12	<12	<12	<12	<12	
11/18/2005	<1,000	<200	19	<5.0	<5.0	<5.0	<5.0	<5.0	b
02/07/2006	<3,000	<200	<5.0	<5.0	<5.0	5.4	<5.0	<5.0	
8/23/2006	<30,000	<2,000	<50	<50	<50	<50	<50	<50	
11/15/2006	<15,000	<1,000	26	<25	<25	<25	<25	<25	
2/14/2007	<15,000	<1,000	<25	<25	<25	<25	<25	<25	
5/22/2007	<15,000	<1,000	<25	<25	<25	<25	<25	<25	
8/15/2007	<1,500	<100	27	<2.5	<2.5	<2.5	<2.5	<2.5	b
11/8/2007	<3,000	<200	52	<5.0	<5.0	<5.0	<5.0	<5.0	
MW-10									
5/22/2003	<10000	<2000	300	<50	<50	<50	--	--	
11/18/2003	<10,000	<2,000	<50	<50	<50	<50	--	--	b
02/23/2004	<20,000	<4,000	180	<100	<100	<100	<100	<100	
05/04/2004	<5,000	<1,000	<25	<25	<25	<25	<25	<25	
11/10/2004	<5,000	<1,000	230	<25	<25	<25	<25	<25	b
02/15/2005	<10,000	<2,000	77	<50	<50	<50	<50	<50	
05/16/2005	<10,000	<2,000	<50	<50	<50	<50	<50	<50	
08/17/2005	<10,000	<2,000	<50	<50	<50	<50	<50	<50	
11/18/2005	<2,500	<500	16	<12	<12	<12	<12	<12	b
02/07/2006	<15,000	<1,000	73	<25	<25	<25	<25	<25	
5/19/2006	<15,000	<1,000	<25	<25	<25	<25	<25	<25	b
8/23/2006	<6,000	<400	<10	<10	<10	<10	<10	<10	
11/15/2006	<6,000	<400	54	<10	<10	<10	<10	<10	
2/14/2007	<6,000	<400	120	<10	<10	<10	<10	<25	

Table 2. Summary of Fuel Additives Analytical Data

Station #11132, 3201 35th Ave, Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-10 Cont.									
5/22/2007	<6,000	<400	15	<10	<10	<10	<10	<10	
8/15/2007	<6,000	<400	<10	<10	<10	<10	<10	<10	
11/8/2007	<3,000	<200	6.0	<5.0	<5.0	<5.0	<5.0	<5.0	
5/7/2008	**<12,000**	**<400**	**<20**	**<20**	**<20**	**<20**	**<20**	**<20**	
RW-1									
11/18/2003	<10,000	11,000	6,100	<50	<50	160	--	--	a,b

SYMBOLS AND ABBREVIATIONS:
-- = Not analyzed/applicable/measured/available
< = Not detected at or above specified laboratory reporting limit
1,2-DCA = 1,2-Dichloroethane
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
µg/L = Micrograms per Liter

FOOTNOTES:
a = The result for TBA was reported with a possible high bias due to the continuing calibration verification falling outside acceptance criteria
b = The continuing calibration verification 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.

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 #11132, 3201 35th Ave, Oakland, CA

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
5/19/2006	South	0.003 to 0.005
8/23/2006	Southwest	0.01
11/15/2006	South	0.004
2/14/2007	Southeast	0.01
5/22/2007	South	0.005
8/15/2007	South-Southwest	0.008
11/8/2007	Southwest	0.006
2/20/2008	Southeast	0.008
5/7/2008	**South-Southwest**	**0.003**

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 4
Free Product Removal
Former BP Service Station #11132
3201 35th Avenue, Oakland, CA

WELL ID	DATE OF MONITORING	PRODUCT THICKNESS (feet)	PRODUCT REMOVED (gallons)	CUMULATIVE PRODUCT REMOVED (gallons)
MW-1	7/9/1990	0.22	2.000	2.000
MW-1	12/21/1990	0.58	2.000	4.000
MW-1	3/7/1991	0.00	--	4.000
MW-1	6/27/1991	0.18	2.000	6.000
MW-1	9/27/1991	0.27	2.000	8.000
MW-1	12/18/1991	0.28	2.000	10.000
MW-1	4/1/1991	0.15	2.000	12.000
MW-1	7/3/1992	0.27	2.000	14.000
MW-1	10/5/1992	0.24	2.000	16.000
MW-1	1/13/1993	0.24	2.000	18.000
MW-1	4/23/1993	0.42	2.000	20.000
MW-1	7/12/1993	0.49	--	20.000
MW-1	10/21/1993	1.09	2.000	22.000
MW-1	1/21/1994	0.76	--	22.000
MW-1	4/20/1994	1.80	2.000	24.000
MW-1	8/1/1994	0.35	--	24.000
MW-1	1/26/1995	1.10	3.000	27.000
MW-1	6/8/95-6/28/95	1.25	0.700	27.700
MW-1	8/22/1995	0.85	0.150	27.850
MW-1	10/30/95-12/23/95	0.69	0.110	27.960
MW-1	1/25/96-2/16/95	1.40	1.080	29.040
MW-1	4/19/1996	1.22	0.750	29.790
MW-1	7/23/1996	0.89	0.000	29.790
MW-1	9/4/1996	--	0.350	30.140
MW-1	11/11/1996	0.89	0.980	31.120
MW-1	1/21/1997	0.90	0.200	31.320
MW-1	4/29/1997	0.85	0.250	31.570
MW-1	8/21/1997	--	0.150	31.720
MW-1	11/2/97-12/9/97	0.87	2.030	33.750
MW-1	2/3/1998	0.32	0.250	34.000
MW-1	2/4/1998	--	--	34.000
MW-1	5/28/1998	0.17	--	34.000
MW-1	12/30/1998	0.08	0.020	34.020
MW-1	2/2/1999	0.03	0.010	34.030
MW-1	5/10/1999	0.03	0.010	34.040
MW-1	8/24/1999	0.06	0.010	34.050
MW-1	11/3/1999	0.36	0.050	34.100
MW-1	3/1/2000	0.23	*	34.100
MW-1	4/21/2000	0.33	0.070	34.170
MW-1	7/31/2000	0.53	0.130	34.300
MW-1	11/20/2000	0.37	0.500	34.800
MW-1	2/18/2001	0.13	0.050	34.850
MW-1	2/26/2001	0.15	0.150	35.000
MW-1	6/7/2001	0.00	--	35.000
MW-1	9/5/2001	0.35	--	35.000
MW-1	11/30/2001	0.41	0.260	35.260
MW-1	12/6/2001	0.27	0.040	35.300
MW-1	2/20/2002	0.15	0.020	35.320
MW-1	6/20/2002	0.34	0.070	35.390
MW-1	9/11/2002	0.40	0.060	35.450
MW-1	11/12/2002	0.37	0.060	35.510
MW-1	1/29/2003	0.30	0.320	35.830

Table 4
Free Product Removal
Former BP Service Station #11132
3201 35th Avenue, Oakland, CA

WELL ID	DATE OF MONITORING	PRODUCT THICKNESS (feet)	PRODUCT REMOVED (gallons)	CUMULATIVE PRODUCT REMOVED (gallons)
MW-1	5/22/2003	0.20	0.140	35.970
MW-1	6/24/2003	0.35	0.070	36.040
MW-1	7/28/2003	0.35	0.080	36.050
MW-1	8/12/2003	0.23	0.040	36.090
MW-1	9/12/2003	0.24	0.040	36.130
MW-1	10/3/2003	0.23	0.040	36.170
MW-1	11/18/2003	0.25	0.040	36.210
MW-1	12/31/2003	0.15	0.020	36.230
MW-1	2/2/2004	0.15	0.020	36.250
MW-1	2/23/2004	0.09	0.030	36.280
MW-1	3/18/2004	0.09	0.010	36.290
MW-1	4/13/2004	0.24	0.040	36.330
MW-1	5/4/2004	0.16	0.030	36.360
MW-1	6/2/2004	0.08	0.010	36.370
MW-1	7/2/2004	0.28	0.040	36.410
MW-1	8/4/2004	0.10	0.080	36.490
MW-1	9/22/2004	0.20	0.030	36.520
MW-1	10/26/2004	0.12	0.020	36.540
MW-1	11/10/2004	0.14	0.020	36.560
MW-1	12/27/2004	0.08	0.010	36.570
MW-1	1/13/2005	0.03	0.005	36.575
MW-1	2/15/2005	0.04	0.006	36.581
MW-1	3/7/2005	0.01	0.007	36.588
MW-1	4/29/2005	0.01	0.002	36.589
MW-1	5/16/2005	0.02	0.003	36.592
MW-1	6/21/2005	0.01	0.002	36.594
MW-1	7/7/2005	0.18	0.029	36.623
MW-1	8/17/2005	0.08	0.013	36.636
MW-1	9/6/2005	0.02	0.003	36.639
MW-1	10/4/2005	0.12	0.020	36.659
MW-1	9/6/2005	0.06	0.010	36.669
MW-1	12/30/2005	0.03	0.005	36.674
MW-1	1/24/2006	0.00	0.000	36.674
MW-1	2/7/2006	0.01	0.002	36.676
MW-1	3/30/2006	0.00	0.000	36.676
MW-1	4/21/2006	0.00	0.000	36.676
MW-1	5/19/2006	<0.01 (SHEEN)	0.000	36.676
MW-1	6/22/2006	0.04	0.006	36.682
MW-1	7/31/2006	0.04	0.006	36.688
MW-1	8/23/2006	0.14	0.022	36.710
MW-1	9/28/2006	0.35	0.056	36.766
MW-1	11/15/2006	0.18	--	36.766
MW-1	2/14/2007	0.17	*	36.766
MW-1	3/14/2007	0.04	****	36.766
MW-1	4/10/2007	0.15	****	36.766
MW-1	5/22/2007	0.01	****	36.766
MW-1	6/26/2007	0.05	****	36.766
MW-1	7/19/2007	0.00	--	36.766
MW-1	8/15/2007	0.01	2.0	38.766
MW-1	9/18/2007	0.10	2.0	40.766
MW-1	10/17/2007	0.01	4.0	44.766
MW-1	11/8/2007	0.01	3.0	47.766

Table 4
Free Product Removal
Former BP Service Station #11132
3201 35th Avenue, Oakland, CA

WELL ID	DATE OF MONITORING	PRODUCT THICKNESS (feet)	PRODUCT REMOVED (gallons)	CUMULATIVE PRODUCT REMOVED (gallons)
MW-1	12/12/2007	0.01	1.5	49.266
MW-1	1/14/2008	0.01	3.0	52.266
MW-1	2/27/2008	--	2.0	54.266
MW-1	**4/1/2008**	**0.01**	**5.0**	**59.266**
MW-1	**5/7/2008**	**0.02**	*****	**59.266**
MW-1	**5/20/2008**	**0.00**	**1.0**	**60.266**
MW-1	**6/18/2008**	**0.00**	**4.5**	**64.766**
MW-2	**4/1/2008**	**0.01**	**1.5**	**1.500**
MW-2	**5/7/2008**	**0.04**	*****	**1.500**
MW-2	**5/20/2008**	**0.00**	**1.0**	**2.500**
MW-2	**6/18/2008**	**0.00**	**2.5**	**5.000**
MW-8	11/02/93-12/09/98	0.12	1.620	1.620
MW-8	9/5/2001	0.04	--	1.660
MW-8	8/12/2003	<0.01 (SHEEN)	--	1.660
MW-8	10/3/2003	<0.01 (SHEEN)	--	1.660
MW-8	11/18/2003	<0.01 (SHEEN)	--	1.660
MW-8	12/31/2003	<0.01 (SHEEN)	--	1.660
MW-8	2/2/2004	<0.01 (SHEEN)	--	1.660
MW-8	2/23/2004	<0.01 (SHEEN)	--	1.660
MW-8	3/18/2004	<0.01 (SHEEN)	--	1.660
MW-8	4/13/2004	<0.01 (SHEEN)	--	1.660
MW-8	5/4/2004	<0.01 (SHEEN)	--	1.660
MW-8	6/2/2004	<0.01 (SHEEN)	--	1.660
MW-8	7/2/2004	--	--	1.660
MW-8	8/4/2004	0.05	0.110	1.770
MW-8	9/22/2004	--	--	1.770
MW-8	10/26/2004	--	--	1.770
MW-8	11/10/2004	--	--	1.770
MW-8	12/26/2004	--	--	1.770
MW-8	1/13/2005	--	--	1.770
MW-8	2/15/2005	--	--	1.770
MW-8	3/7/2005	--	--	1.770
MW-8	4/29/2005	--	--	1.770
MW-8	5/16/2005	--	--	1.770
MW-8	6/21/2005	--	--	1.770
MW-8	7/7/2005	--	--	1.770
MW-8	8/17/2005	--	--	1.770
MW-8	9/6/2005	--	--	1.770
MW-8	1/24/2006	--	--	1.770
MW-8	2/7/2006	--	--	1.770
MW-8	3/30/2006	--	--	1.770
MW-8	4/21/2006	--	--	1.770
MW-8	5/19/2006	<0.01 (Sheen)	--	1.770
MW-8	6/22/2006	--	--	1.770
MW-8	7/31/2006	--	--	1.770
MW-8	8/23/2006	--	--	1.770
MW-8	9/28/2006	--	--	1.770
MW-8	11/15/2006	<0.01 (Sheen)	--	1.770
MW-8	2/14/2007	<0.01 (Sheen)	--	1.770
MW-8	5/22/2007	<0.01 (Sheen)	--	1.770
MW-8	6/26/2007	--	--	1.770

Table 4
Free Product Removal
Former BP Service Station #11132
3201 35th Avenue, Oakland, CA

WELL ID	DATE OF MONITORING	PRODUCT THICKNESS (feet)	PRODUCT REMOVED (gallons)	CUMULATIVE PRODUCT REMOVED (gallons)
MW-8	7/19/2007	--	--	1.770
MW-8	8/15/2007	<0.01 (Sheen)	--	1.770
MW-8	9/18/2007	--	--	1.770
MW-8	10/17/2007	--	--	1.770
MW-8	11/8/2007	--	--	1.770
MW-8	12/12/2007	--	--	1.770
MW-8	1/14/2008	NM	NM	1.770
MW-8	2/27/2008	NM	NM	1.770
MW-8	**4/1/2008**	**NM**	**NM**	**1.770**
MW-8	**5/7/2008**	**NM**	**NM**	**1.770**
MW-8	**5/20/2008**	**0.00**	**0.000**	**1.770**
MW-8	**6/18/2008**	**0.00**	**0.000**	**1.770**
MW-9	11/2/93-4/29/97	0.10	<0.1	0.880
MW-9	11/5/1997	0.01	<0.1	0.880
MW-9	1/29/2003	0.10	0.190	1.070
MW-9	6/24/2003	NM	NM	1.070
MW-9	7/28/2003	<0.01 (SHEEN)	--	1.070
MW-9	8/12/2003	<0.01 (SHEEN)	--	1.070
MW-9	9/12/2003	<0.01 (SHEEN)	--	1.070
MW-9	10/3/2003	0.01	0.002	1.072
MW-9	11/18/2003	<0.01 (SHEEN)	--	1.072
MW-9	12/31/2003	<0.01 (SHEEN)	--	1.072
MW-9	2/2/2004	<0.01 (SHEEN)	--	1.072
MW-9	2/23/2004	<0.01 (SHEEN)	--	1.072
MW-9	3/18/2004	<0.01 (SHEEN)	--	1.072
MW-9	4/13/2004	<0.01 (SHEEN)	--	1.072
MW-9	5/4/2004	<0.01 (SHEEN)	--	1.072
MW-9	6/2/2004	<0.01 (SHEEN)	--	1.072
MW-9	7/2/2004	--	--	1.072
MW-9	8/4/2004	0.03	0.053	1.125
MW-9	9/22/2004	--	--	1.125
MW-9	10/26/2004	--	--	1.125
MW-9	11/10/2004	--	--	1.125
MW-9	12/27/2004	--	--	1.125
MW-9	1/13/2005	--	--	1.125
MW-9	2/15/2005	--	--	1.125
MW-9	3/7/2005	--	--	1.125
MW-9	4/29/2005	--	--	1.125
MW-9	5/16/2005	--	--	1.125
MW-9	6/21/2005	--	--	1.125
MW-9	7/7/2005	--	--	1.125
MW-9	8/17/2005	--	--	1.125
MW-9	9/6/2005	--	--	1.125
MW-9	1/24/2006	--	--	1.125
MW-9	2/7/2006	SHEEN	--	1.125
MW-9	3/30/2006	--	--	1.125
MW-9	4/21/2006	--	--	1.125
MW-9	5/19/2006	NM	--	1.125
MW-9	6/22/2006	--	--	1.125
MW-9	7/31/2006	--	--	1.120
MW-9	8/23/2006	--	--	1.120

Table 4
Free Product Removal
Former BP Service Station #11132
3201 35th Avenue, Oakland, CA

WELL ID	DATE OF MONITORING	PRODUCT THICKNESS (feet)	PRODUCT REMOVED (gallons)	CUMULATIVE PRODUCT REMOVED (gallons)
MW-9	9/28/2006	--	--	1.120
MW-9	11/15/2006	<0.01 (Sheen)	--	1.120
MW-9	2/14/2007	<0.01 (Sheen)	--	1.120
MW-9	5/22/2007	<0.01 (Sheen)	--	1.120
MW-9	6/26/2007	--	--	1.120
MW-9	7/19/2007	--	--	1.120
MW-9	8/15/2007	<0.01 (Sheen)	--	1.120
MW-9	9/18/2007	--	--	1.120
MW-9	10/17/2007	--	--	1.120
MW-9	11/8/2007	--	--	1.120
MW-9	12/12/2007	--	--	1.120
MW-9	1/14/2008	--	--	1.120
MW-9	2/27/2008	--	--	1.120
MW-9	**4/1/2008**	**0.00**	**0.000**	**1.120**
MW-9	**5/7/2008**	**0.03**	*****	**1.120**
MW-9	**5/20/2008**	**0.00**	**0.000**	**1.120**
MW-9	**6/18/2008**	**0.00**	**0.000**	**1.120**
MW-10	9/7/93-7/23/96	--	10.520	10.520
MW-10	9/4/1996	0.76	0.100	10.620
MW-10	11/11/1996	--	0.200	10.820
MW-10	1/21/1997	--	<0.03	10.850
MW-10	4/29/1997	--	0.040	10.890
MW-10	4/29/1997	--	0.040	10.930
MW-10	12/2/1997	0.03	<0.1	10.930
MW-10	2/3/1998	--	<0.1	10.930
MW-10	9/5/2001	0.01	--	10.930
MW-10	11/12/2002	0.07	0.010	10.940
MW-10	1/29/2003	0.03	0.030	10.970
MW-10	6/24/2003	0.04	0.010	10.980
MW-10	7/28/2003	0.04	0.020	11.000
MW-10	8/12/2003	<0.01 (SHEEN)	--	11.000
MW-10	10/3/2003	<0.01 (SHEEN)	--	11.000
MW-10	11/18/2003	<0.01 (SHEEN)	--	11.000
MW-10	12/31/2003	<0.01 (SHEEN)	--	11.000
MW-10	2/2/2004	<0.01 (SHEEN)	--	11.000
MW-10	2/23/2004	<0.01 (SHEEN)	--	11.000
MW-10	3/18/2004	<0.01 (SHEEN)	--	11.000
MW-10	4/13/2004	<0.01 (SHEEN)	--	11.000
MW-10	5/4/2004	<0.01 (SHEEN)	--	11.000
MW-10	6/2/2004	<0.01 (SHEEN)	--	11.000
MW-10	7/2/2004	<0.01 (SHEEN)	--	11.000
MW-10	8/4/2004	0.08	0.110	11.110
MW-10	9/22/2004	--	--	11.110
MW-10	10/26/2004	--	--	11.110
MW-10	11/10/2004	--	--	11.110
MW-10	12/27/2004	--	--	11.110
MW-10	1/13/2005	<0.01 (SHEEN)	--	11.110
MW-10	2/15/2005	--	--	11.110
MW-10	3/7/2005	--	--	11.110
MW-10	4/29/2005	--	--	11.110
MW-10	5/16/2005	--	--	11.110
MW-10	6/21/2005	--	--	11.110

Table 4
Free Product Removal
Former BP Service Station #11132
3201 35th Avenue, Oakland, CA

WELL ID	DATE OF MONITORING	PRODUCT THICKNESS (feet)	PRODUCT REMOVED (gallons)	CUMULATIVE PRODUCT REMOVED (gallons)
MW-10	7/7/2005	--	--	11.110
MW-10	8/17/2005	--	--	11.110
MW-10	9/6/2005	--	--	11.110
MW-10	1/24/2006	--	--	11.110
MW-10	2/7/2006	SHEEN	--	11.110
MW-10	3/30/2006	--	--	11.110
MW-10	4/21/2006	--	--	11.110
MW-10	5/19/2006	<0.01 (SHEEN)	--	11.110
MW-10	6/22/2006	--	--	11.110
MW-10	7/31/2006	--	--	11.110
MW-10	8/23/2006	--	--	11.110
MW-10	9/28/2006	--	--	11.110
MW-10	11/15/2006	<0.01 (Sheen)	--	11.110
MW-10	2/14/2007	<0.01 (Sheen)	--	11.110
MW-10	5/22/2007	<0.01 (Sheen)	--	11.110
MW-10	6/26/2007	<0.01 (Sheen)	--	11.110
MW-10	7/19/2007	--	--	11.110
MW-10	8/15/2007	<0.01 (Sheen)	--	11.110
MW-10	9/18/2007	--	--	11.110
MW-10	10/17/2007	--	--	11.110
MW-10	11/8/2007	--	--	11.110
MW-10	12/12/2007	--	--	11.110
MW-10	1/14/2008	--	--	11.110
MW-10	2/27/2008	--	--	11.110
MW-10	**4/1/2008**	**0.00**	**0.000**	**11.110**
MW-10	**5/7/2008**	**0.00**	**0.000**	**11.110**
MW-10	**5/20/2008**	**0.00**	**0.000**	**11.110**
MW-10	**6/18/2008**	**0.00**	**0.000**	**11.110**
RW-1	9/5/2001	0.02	--	0.000
RW-1	6/20/2002	**	--	0.000
RW-1	9/11/2002	0.03	0.040	0.040
RW-1	11/12/2002	0.02	0.030	0.070
RW-1	1/29/2003	0.04	0.070	0.140
RW-1	6/24/2003	0.07	0.040	0.180
RW-1	7/28/2003	0.04	0.020	0.200
RW-1	8/12/2003	<0.01 (SHEEN)	--	0.200
RW-1	9/12/2003	0.07	0.100	0.300
RW-1	10/3/2003	0.03	0.040	0.340
RW-1	11/18/2003	<0.01 (SHEEN)	--	0.340
RW-1	12/31/2003	<0.01 (SHEEN)	--	0.340
RW-1	2/23/2004	0.01	0.005	0.345
RW-1	3/18/2004	0.09	0.120	0.465
RW-1	4/13/2004	0.02	0.030	0.495
RW-1	5/4/2004	0.02	0.030	0.525
RW-1	6/2/2004	0.05	0.020	0.545
RW-1	7/2/2004	0.11	0.162	0.707
RW-1	8/4/2004	0.05	0.159	0.865
RW-1	9/22/2004	0.06	0.088	0.953
RW-1	10/26/2004	0.01	0.010	0.963
RW-1	11/10/2004	0.02	0.030	0.993
RW-1	12/27/2004	0.03	0.010	1.003
RW-1	1/13/2005	0.01	0.004	1.007

Table 4
Free Product Removal
Former BP Service Station #11132
3201 35th Avenue, Oakland, CA

WELL ID	DATE OF MONITORING	PRODUCT THICKNESS (feet)	PRODUCT REMOVED (gallons)	CUMULATIVE PRODUCT REMOVED (gallons)
RW-1	2/15/2005	0.03	0.044	1.051
RW-1	3/7/2005	0.02	0.029	1.080
RW-1	4/29/2005	0.03	0.044	1.124
RW-1	5/16/2005	0.02	0.029	1.154
RW-1	6/21/2005	0.03	0.013	1.167
RW-1	7/7/2005	0.06	0.092	1.259
RW-1	8/17/2005	0.03	0.044	1.304
RW-1	9/6/2005	0.03	0.044	1.348
RW-1	10/4/2005	0.07	0.100	1.448
RW-1	11/18/2005	0.07	0.010	1.458
RW-1	12/30/2005	0.04	0.006	1.464
RW-1	1/24/2006	0.01	0.015	1.479
RW-1	2/7/2006	0.01	0.015	1.494
RW-1	3/30/2006	0.02	0.030	1.524
RW-1	4/21/2006	0.00	0.000	1.524
RW-1	5/19/2006	0.04	0.058	1.582
RW-1	6/22/2006	0.03	0.044	1.626
RW-1	7/31/2006	0.12	0.176	1.802
RW-1	8/23/2006	0.07	0.103	1.905
RW-1	9/28/2006	0.07	0.103	2.008
RW-1	11/15/2006	0.07	--	2.008
RW-1	2/14/2007	0.04	*	2.008
RW-1	3/14/2007	0.05	****	2.008
RW-1	4/10/2007	0.10	****	2.008
RW-1	5/22/2007	**	****	2.008
RW-1	6/26/2007	0.05	****	2.008
RW-1	7/19/2007	<0.01 (Sheen)	--	2.008
RW-1	8/15/2007	0.02	2.0	4.008
RW-1	9/18/2007	0.03	2.0	6.008
RW-1	10/17/2007	0.01	4.0	10.008
RW-1	11/8/2007	0.01	2.5	12.508
RW-1	12/12/2007	0.01	2.5	15.008
RW-1	1/14/2008	0.01	4.0	19.008
RW-1	2/27/2008	--	1.0	20.008
RW-1	**4/1/2008**	**0.01**	**1.5**	**21.508**
RW-1	**5/7/2008**	**NM**	**NM**	**21.508**
RW-1	**5/20/2008**	**0.00**	**2.0**	**23.508**
RW-1	**6/18/2008**	**0.00**	**3.0**	**26.508**
		Free Product Removed this Quarter =		**22.000**
			Total Free Product =	**110.274**

NM = Unable to gauge free product thickness or remove product because the well was inaccessible.

* No hazardous waste drum on-site or drum was full, therefore no product was removed.

** Indeterminate thickness of product. The nature of product is unknown, very viscous.

*** Data prior to 1998 is incomplete, and amounts removed are estimates based on quarter reports from the previous consultants.

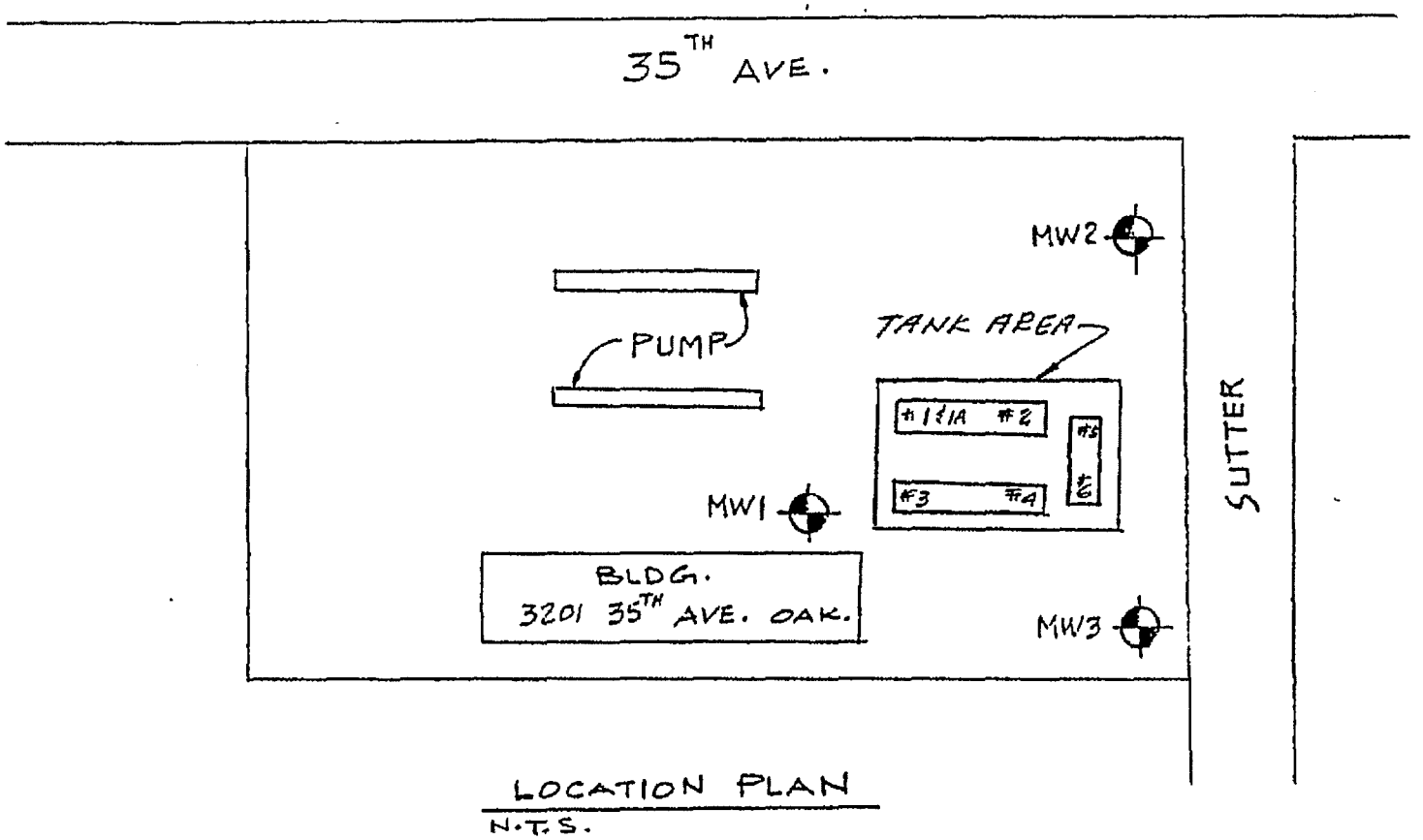
**** Absorbent socks used to collect product. Unknown amount of product recovered.

The data within this table collected prior to June 2006 was provided to BAI by RM and their previous consultants. BAI has not verified the accuracy of this information.

APPENDIX A

Historical Soil and Ground-Water Data

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
535 Main Street
Martinez, Ca. 94553
(415) 372-5444



LOCATION PLAN
N.T.S.

MW (MONITORING WELL)

Source: KEI, September 10, 1986

Figure C-1

ENVIRONMENTAL RESEARCH GROUP, INC.

117 N. First Ann Arbor, Michigan 48104 (313) 662-3104

April 7, 1986

KEI Engineers
535 Main Street
Martinez, CA 94553

Attention: Mardo Kaprilieian

Report #7535 P.O. #Contract

Site Location: Mobil, Oakland, 35th

RE: Seven (7) soil samples submitted on April 2, 1986, for rush total hydrocarbon response analysis.

Procedure: The samples are analyzed for total hydrocarbon response (gasoline) by following the method described in Attachment 2, Analytical Procedures for Fuel Leak Investigations. The samples are concentrated on a Tekmar LSC-2 automatic sample concentrator prior to injection into a gas chromatograph fitted with a flame ionization detector. Quantitation is performed, as total hydrocarbon response, against known concentrations of heptane-isooctane (55/45). The limit of detection for this method of analysis is one part per million (mg/kg), unless indicated.

The results are displayed in the table below.

ERG #	CLIENT ID#	CONCENTRATION (mg/kg)
7535-1	1	8
7535-2	1A	16
7535-3	2	3.1
7535-4	3	210
7535-5	4	ND (1)
7535-6	5	ND (5)
7535-7	6	5.7

ND = None Detected. The limits of detection are in ( ).

Submitted by:

Robert B. Flay

Robert B. Flay
Manager, Organics Department

RBF:clp
040886t

Source: KEI, April 21, 1986 Table C-1

KEI-86-045
September 10, 1986

TABLE - 1

Results of Groundwater Analysis

Parameter	MW #1	MW #2	MW #3
Total Fuel Hydrocarbons (ppm)	4.4	26.0	<0.05
Benzene (ppm)	0.8	3.8	<0.001
Toluene (ppm)	0.52	1.0	<0.001
Xylene (ppm)	0.35	1.7	<0.001
Depth (feet)	22.0	20.0	21.2
Free Product (inches)	0.0	0.0	0.0
Odor	ND	ND	ND
Sheen	ND	ND	ND

Results of Soil Analysis

Total Fuel Hydrocarbons (ppm)	12.0	5.7/2.0	<1.0
Depth (feet)	26.0	16.0/26.0	16.0
Odor	ND	ND	ND

ND = None Detected

Source: KEI, September 10, 1986

TABLE 1

Results of the Groundwater Analyses

In Parts Per Million (ppm)

Date	Parameter	Well #1	Well #2	Well #3
8/18/86	Total Dissolved Hydrocarbons	4.4	26.0	<0.05
	Benzene	0.8	3.8	<0.001
	Toluene	0.52	1.0	<0.001
	Xylene	0.35	1.7	<0.001
12/23/86	Total Dissolved Hydrocarbons	86.0	6.2	0.25
	Benzene	28.0	3.6	0.0087
	Toluene	30.0	1.3	0.007
	Xylene	11.0	0.39	0.023

Monitoring Wells

Date	Well #	DTW (feet)	PT (inches)	Odor	Sheen
10/28/86	1	23.0	<0.25	Yes	----
	2	21.0	0.0	Yes	No
	3	20.0	0.0	Yes	No
11/26/86	1	22.92	<0.1	Yes	----
	2	21.58	0.0	Yes	No
	3	20.25	0.0	Yes	No
12/23/86	1	21.83	0.0	Yes	Yes
	2	20.5	0.0	No	No
	3	19.25	0.0	No	No

DTW - Depth to Water
PT - Product Thickness

Source: KEI, February 5, 1987

TABLE 1

GROUNDWATER MONITORING DATA

Date	Well No.	DTW (ft)	Odor	Sheen	Gallons Pumped
4/25/87	MW-1	20.813	Moderate	No	35
	MW-2	19.375	Slight	No	35
	MW-3	17.760	No	No	40
3/17/87	MW-1	18.0	Moderate	No	30
	MW-2	16.583	Slight	No	30
	MW-3	15.563	No	No	30
2/11/87	MW-1	19.750	Moderate	Yes	31
	MW-2	17.542	Slight	No	30
	MW-3	16.167	No	No	31

DTW = Depth to water

Source: KEI, May 20, 1987

TABLE 1

GROUNDWATER MONITORING DATA

Date	Well No.	DTW (ft)	Odor	Product Thickness	Sheen	Gallons Pumped
6/20/87	MW-1	22.33	Slight	0	Yes	40
	MW-2	21.60	Slight	0	No	35
	MW-3	19.708	No	0	No	35
7/20/87	MW-1	22.875	Strong	0.25	---	40
	MW-2	21.583	Moderate	0	No	35
	MW-3	20.270	No	0	No	35
9/10/87	MW-1	23.333	Strong	1.25	---	40
	MW-2	21.917	Slight	0	No	35
	MW-3	20.667	No	0	No	35

DTW = Depth to water

Source: KEI, September 28, 1987

TABLE 1

GROUNDWATER MONITORING DATA

Date	Well No.	DTW (ft)	Product Thickness	Odor	Sheen	Gallons Pumped
10/17/87	MW-1	23.583	0.25	Strong	Yes	80
	MW-2	22.688	0	Faint	No	65
	MW-3	21.33	0	None	No	65
11/18/87	MW-1	23.250	0	Strong	Yes	45
	MW-2	21.438	0	Faint	No	35
	MW-3	20.50	0	None	No	30
12/19/87	MW-1	19.729	0	Strong	Yes	45
	MW-2	16.833	0	Faint	No	35
	MW-3	16.750	0	None	No	30

Source: KEI, January 8, 1988

KEI-P86-0405.QR5
March 16, 1989

TABLE 1

SUMMARY OF MONITORING DATA

Date	Well No.	Water Depth (feet)	Product Thickness	Sheen	Water Bailed (gallons)
2/15/89	MW-1	19.60	.5"	---	45
	MW-2	18.16	.5"	---	30
	MW-3	16.54	0	Trace	30
1/17/89	MW-1	19.71	1.25"	---	22
	MW-2	18.20	Trace	---	14
	MW-3	16.79	0	None	0
12/21/88	MW-1	22.15	3"	---	25
	MW-2	22.38	0.38"	---	15
	MW-3	19.05	0	None	0

Source: KEI, March 16, 1989

TABLE 2

RESULTS OF GROUNDWATER ANALYSES
(Concentrations are in Parts Per Million)

Date	Parameter	MW-1	MW-2	MW-3
12/22/87	TPH	69.00	9.50	<0.050
	Benzene	28.00	0.360	0.00085
	Toluene	27.00	0.990	0.0016
	Xylene	12.00	6.00	0.0058
9/10/87	TPH	210.00	13.00	<0.050
and	Benzene	6.80	0.170	<0.0005
9/22/87	Toluene	11.00	0.065	<0.0005
	Xylene	12.00	0.740	<0.0005
4/25/87	TPH	13.00	1.50	<0.050
	Benzene	1.80	0.120	<0.0005
	Toluene	0.730	0.0078	<0.0005
	Xylene	1.300	0.150	<0.0005
12/23/86	TPH	86.00	6.2	0.25
	Benzene	28.00	3.6	0.0087
	Toluene	30.00	1.3	0.007
	Xylene	11.00	0.39	0.023
8/18/86	TPH	4.4	26.0	<0.050
	Benzene	0.8	3.8	<0.001
	Toluene	0.52	1.0	<0.001
	Xylene	0.35	1.7	<0.001

Source: KEI, January 8, 1988

KEI-P86-0405.QR5
March 16, 1989

TABLE 2

SUMMARY OF LABORATORY ANALYSES

(All results in ppb)

Date	Sample Well #	Depth (feet)	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
2/15/89	MW-1	20.00	Not sampled due to presence of free product				
	MW-2	18.33	9,200	110	290	1,400	8.5
	MW-3	18.00	<50	<0.5	<0.5	<0.5	<0.5

Source: KEI, March 16, 1986

Source: Alton, February 28, 1990

Figure C-2

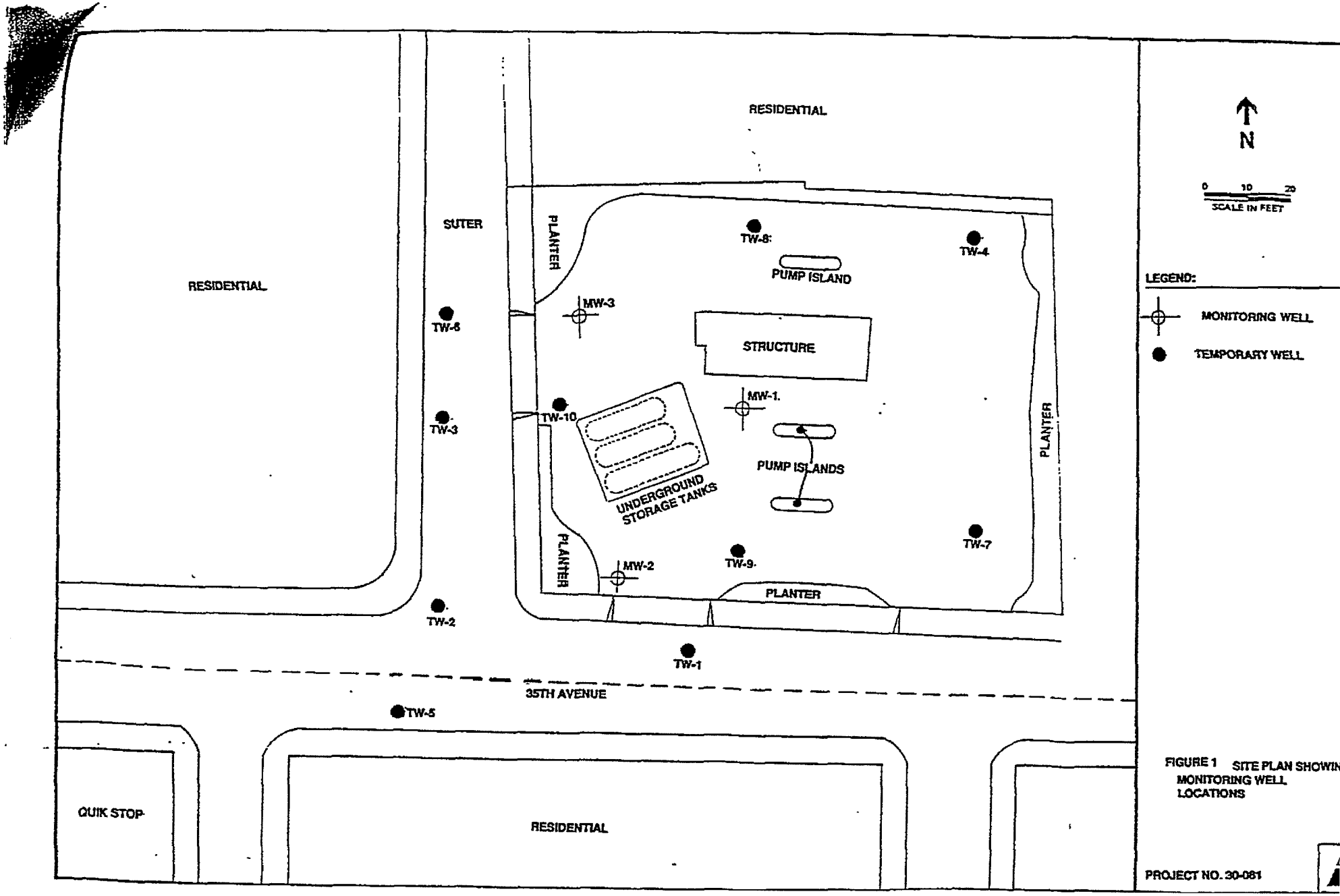


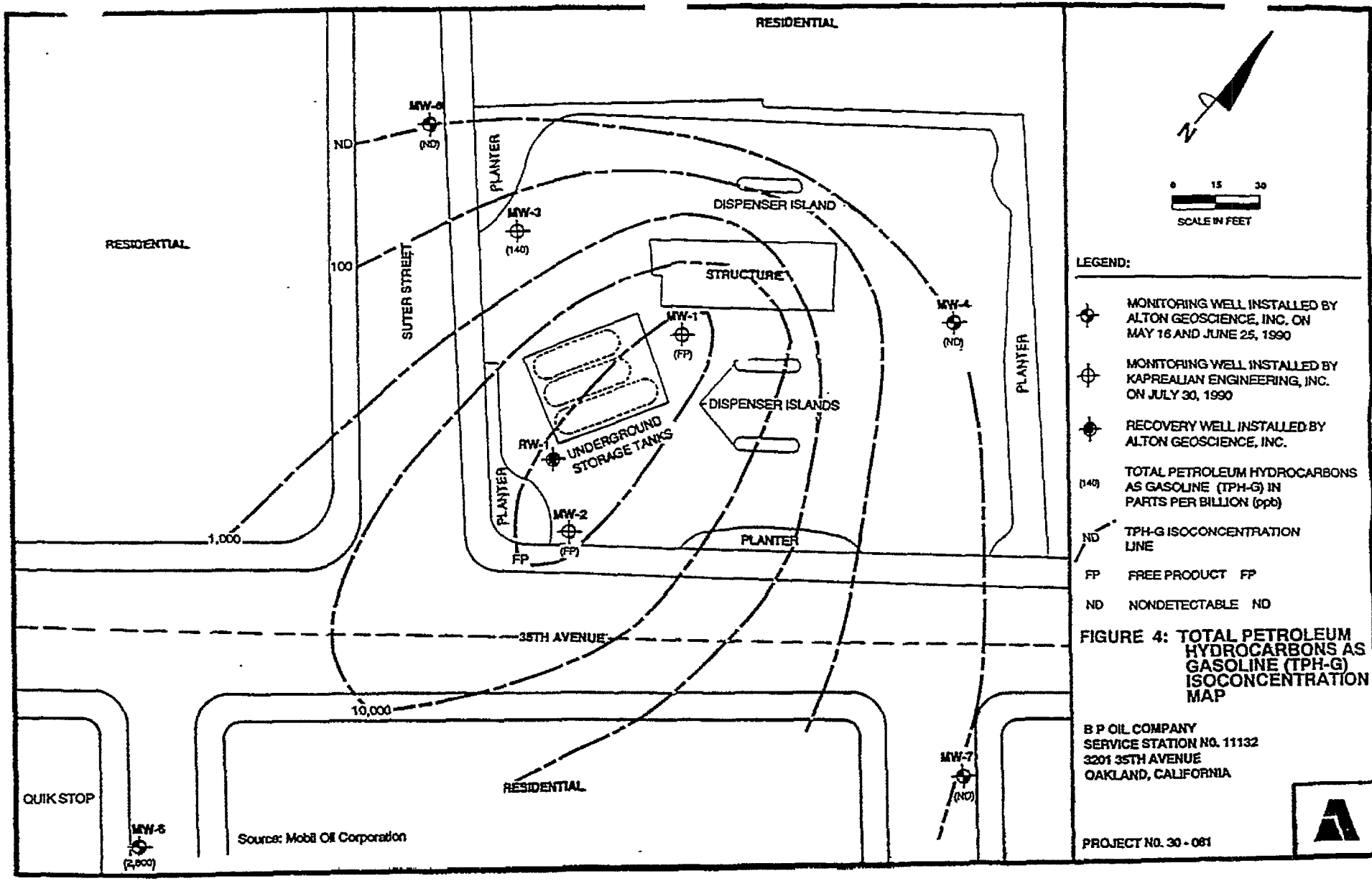
TABLE 1

RESULTS OF ANALYSIS
GROUND WATER SAMPLES

Well	TPH (ppm)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Total Xylenes (ppb)
MW-1	FP	---	---	---	---
MW-2	14	580	1300	460	2300
MW-3	0.5	20	30	24	35
TW-1	7.4	230	180	690	1200
TW-2	FP	---	---	---	---
TW-3	22	2400	2800	530	4000
TW-4	ND <0.1	ND <0.3	ND <0.3	ND <0.3	0.7
TW-5	240	1100	5100	5600	28000
TW-6	20	56	910	590	3700
TW-7	ND <0.1	ND <0.3	0.4	0.7	4.3
TW-8	ND <0.1	0.3	0.6	1.1	7.9
TW-9	41	2100	5700	120	6900
TW-10	50	1900	7300	1400	8000

ND = Non-Detected
FP = Free Product
ppm = parts per million
ppb = parts per billion
MW = Monitoring Well
TW = Temporary Well

Source: Alton, February 28, 1990 Table C-5



Source: Alton, September 4, 1990

Figure C-3

TABLE 2

RESULTS OF
LABORATORY ANALYSIS OF SOIL SAMPLES
June - July 1990

11132

Boring	Sample Depth (ft)	TPH-G	B	T	E	X
		(Concentrations in Parts Per Million)				
		June 1990				
MW-4	5.0	ND	ND	ND	ND	ND
MW-4	10.0	ND	ND	ND	ND	ND
MW-4	15.0	ND	ND	ND	ND	ND
MW-4	20.0	ND	ND	ND	ND	ND
MW-4	25.0	ND	ND	ND	ND	ND
RW-1	5.0	ND	ND	ND	ND	ND
RW-1	10.0	ND	ND	ND	ND	ND
RW-1	15.0	22	0.72	1.6	0.58	2.2
RW-1	20.0	41	ND	18.0	8.0	40.0
RW-1	25.0	50	1.4	3.3	1.0	5.4
		July 1990				
MW-5	5.0	ND	ND	ND	ND	ND
MW-5	10.0	9.3	ND	0.019	ND	0.11
MW-5	15.0	14	0.16	0.037	0.29	0.42
MW-5	20.0	190	1.8	11	2.5	17
MW-5	25.0	770	4.8	44	13	94
MW-6	15.0	ND	ND	ND	ND	ND
MW-6	20.0	ND	ND	ND	ND	ND
MW-7	15.0	ND	ND	ND	ND	ND

Notes:

TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes
ND = Not Detected at Method Detection Limit (refer to Appendix D, Official Laboratory Reports)

Source: Alton, September 4, 1990 Table C-6

TABLE 3

RESULTS OF LABORATORY ANALYSIS OF GROUND WATER SAMPLES July 1990

Monitoring Well	TPH-G	B	T	E	X
	(Concentrations in Parts per Billion)				
MW-1	--	--	--	--	--
MW-2	--	--	--	--	--
MW-3	140	5.3	4.6	2.0	3.8
MW-4	ND	ND	ND	ND	ND
MW-5	280	200	210	46	290
MW-6	ND	ND	ND	ND	ND
MW-7	ND	ND	ND	ND	ND

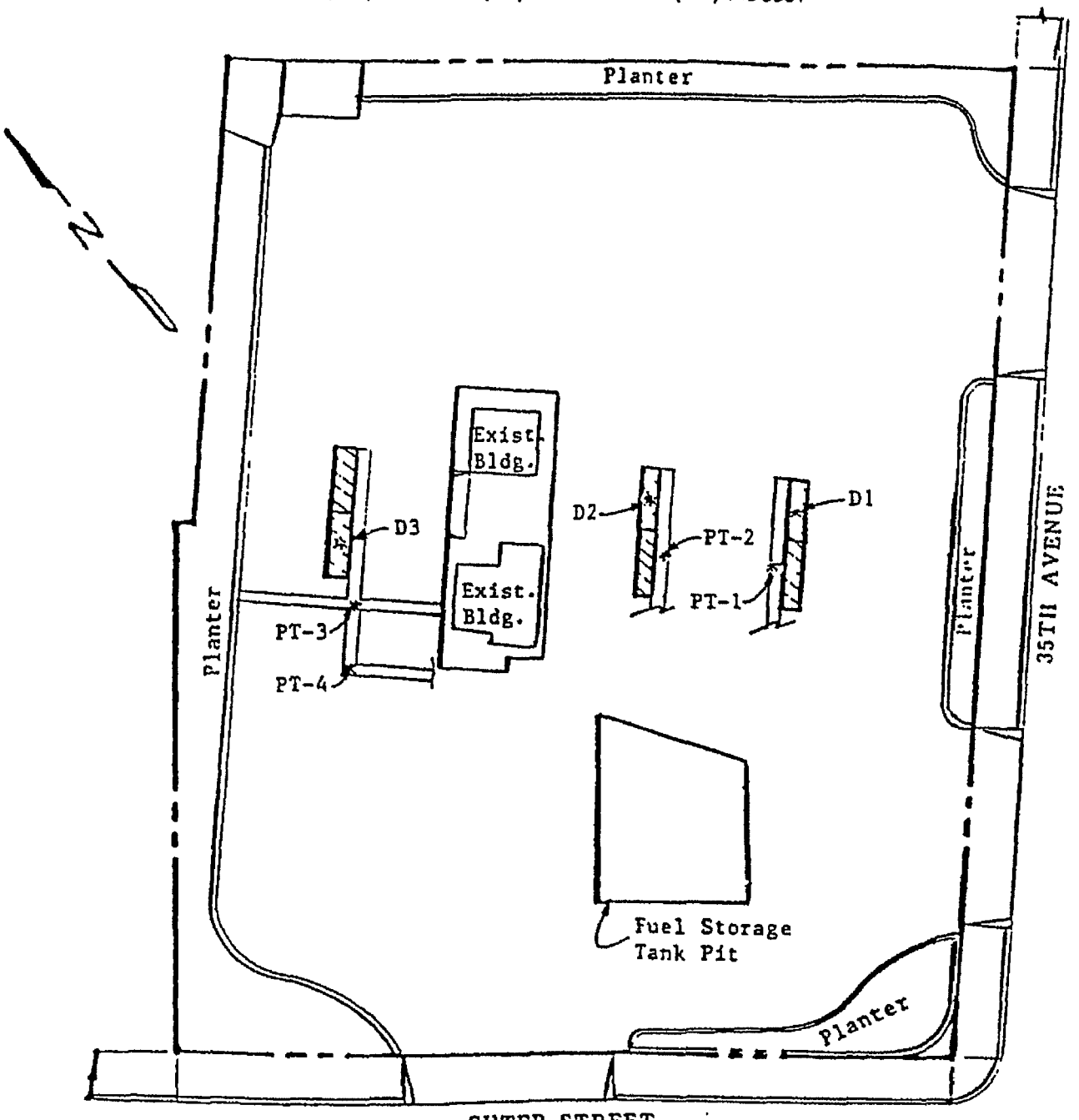
Notes:

TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes
ND = Not Detected at Method Detection Limit (refer to Appendix D, Official Laboratory Reports)
-- = No sample collected due to the presence of free floating product

Source: Alton, September 4, 1990

Table C-7

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
PO BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX (707) 746-5581



SITE PLAN

LEGEND

* Sample Point Location

0 30 60
Approx. scale feet

Source: KEI, October 11, 1990a

BP Service Station
3201 35th Avenue
Oakland, CA

Figure C-4

TABLE 1

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on August 21 & 24, 1990)

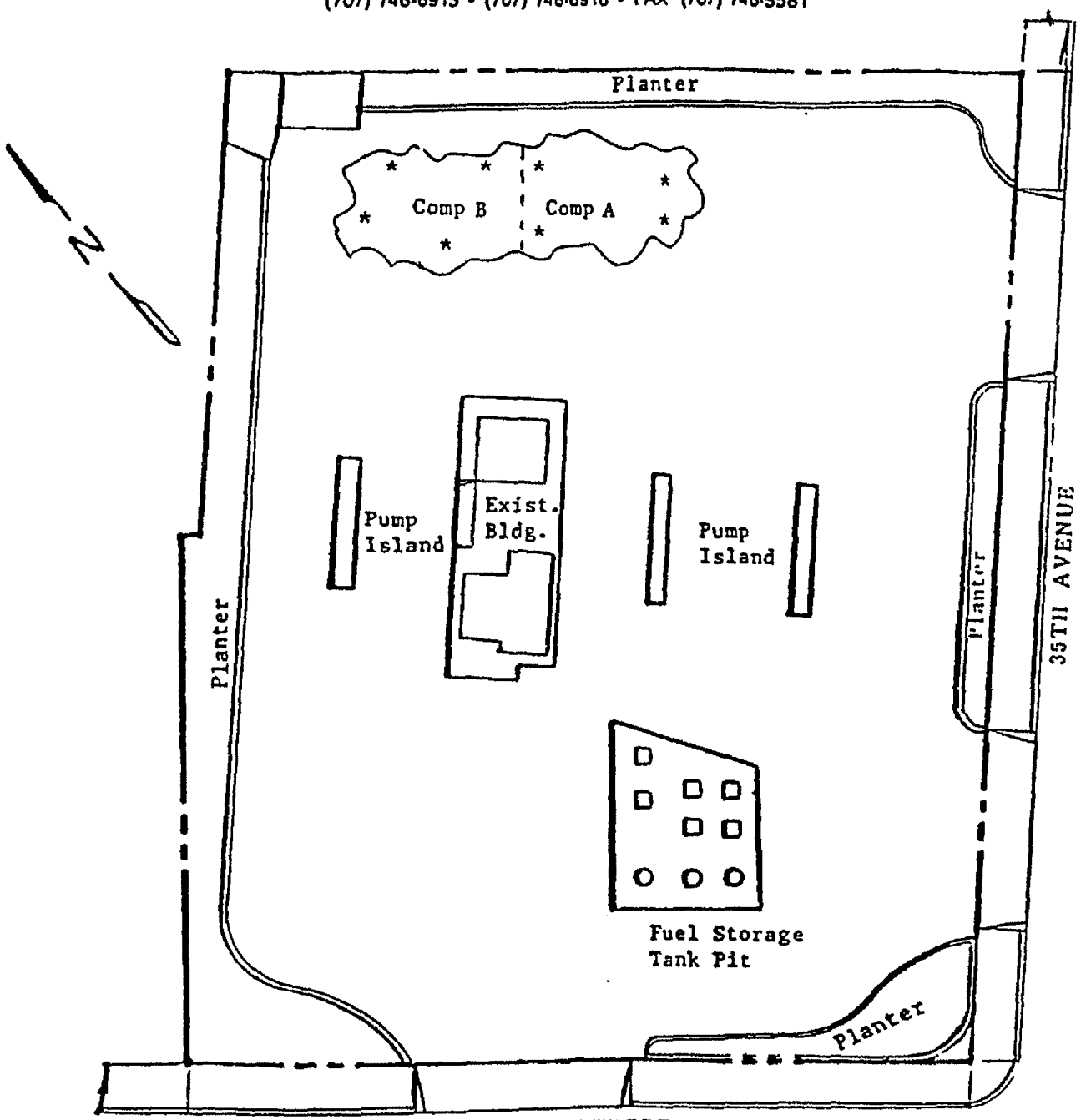
Sample	Depth (feet)	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene	Organic Lead
D1	4.5	ND	ND	ND	ND	ND	ND
D2	3.0	ND	ND	ND	ND	ND	ND
D3	7.0	ND	ND	ND	ND	ND	ND
PT-1	3.0	ND	ND	ND	ND	ND	0.55
PT-2	3.0	ND	ND	ND	ND	ND	ND
PT-3	4.0	21	0.0099	0.062	0.038	0.060	ND
PT-4	3.0	ND	ND	ND	ND	ND	ND
Detection Limits		1.0	0.0050	0.0050	0.0050	0.0050	0.050

ND = Non-detectable.

Results in parts per million (ppm), unless otherwise indicated.

Source: KEI, October 11, 1990a

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P.O BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX (707) 746-5581



SITE PLAN
Figure 1

LEGEND

* Sample Point Location

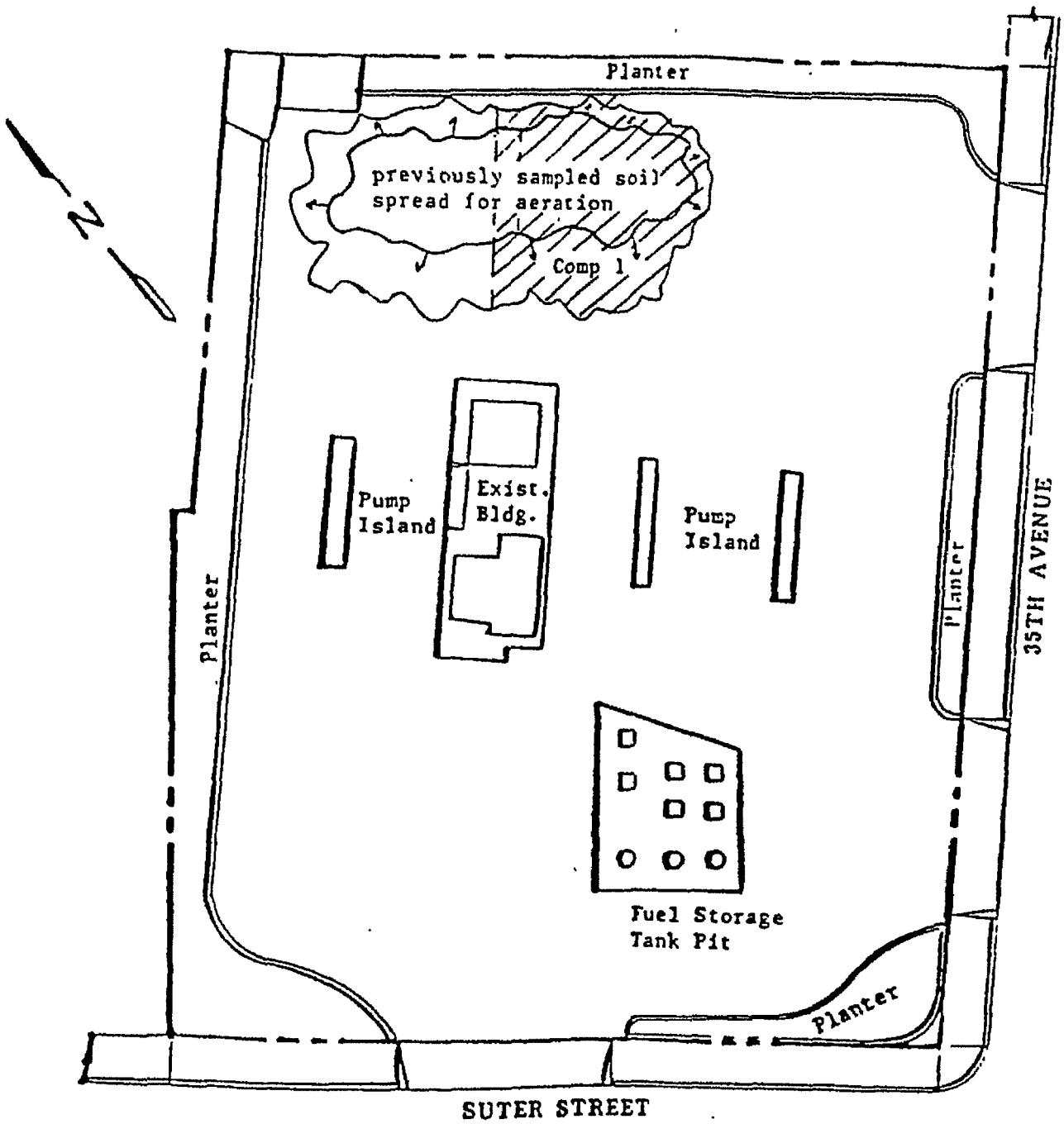
0 30 60
Approx. scale feet

BP Service Station
3201 35th Avenue
Oakland, CA

Source: KEI, October 11, 1990b

Figure C-5

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P.O. BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX (707) 746-5581



SITE PLAN
Figure 2

LEGEND

* Sample Point Location

0 30 60
Approx. scale feet

BP Service Station
3201 35th Avenue
Oakland, CA
Figure C-6

Source: KEI, October 11, 1990b

TABLE 1

SUMMARY OF LABORATORY ANALYSES

(Collected on August 21 & 31, 1990)

Sample	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethylbenzene
Comp A*	8.0	ND	0.019	0.14	0.014
Comp B	240	0.060	0.70	9.5	0.68
Comp 1	6.1	ND	ND	0.019	0.0060
Detection Limits	1.0	0.0050	0.0050	0.0050	0.0050

* Organic lead was non-detectable.

ND = Non-detectable.

Results in parts per million (ppm), unless otherwise indicated.

Source: KEI, October 11, 1990b

TABLE 2

1132

RESULTS OF
LABORATORY ANALYSIS OF SOIL SAMPLES
March 1991

Boring	Sample Depth (ft)	TPH-G	B	T	E	X
		(Concentrations in Parts Per Million)				
SB-8	10.5-11.0	ND<1	ND<0.003	0.004	ND<0.003	ND<0.003
	20.5-21.0	390	1.8	16	6.7	37
	25.5-26.0	ND<1	0.013	0.028	0.009	0.05
SB-9	10.5-11.0	ND<1	ND<0.003	0.004	ND<0.003	0.006
	20.5-21.0	120	1.7	7.1	1.7	11
	25.5-26.0	130	0.47	3.9	1.6	12
SB-10	10.5-11.0	ND<1	ND<0.003	0.007	ND<0.003	0.017
	20.5-21.0	73	0.49	3.3	1.3	6.9
	25.5-26.0	1	0.41	0.009	0.007	0.019

Notes:

TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes
ND = Not Detected at Method Detection Limit shown

Source: Alton, AUgust 21, 1991 Table C-10

TABLE 3

RESULTS OF
LABORATORY ANALYSIS OF GROUND WATER SAMPLES
April 1990

Monitoring Well	TPH-G	B	T	E	X
	(Concentrations in Parts per Billion)				
MW-1	*	*	*	*	*
MW-2	*	*	*	*	*
MW-3	400	69	22	6.1	57
MW-4	ND<50	2.2	3.8	1.5	2.8
MW-5	ND<50	17	0.9	0.7	1.6
MW-6	**	**	**	**	**
MW-7	ND<50	ND<0.3	0.4	0.3	2.4
MW-8	2700	780	450	64	310
MW-9	7100	220	4	2.4	2400
MW-10	1600	120	190	32	230
RW-1	***	***	***	***	***

Notes:

TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes
ND = Not Detected at Method Detection Limit
* = No sample collected due to the presence of free product
** = No sample collected due to the presence of an abandoned vehicle located over the well
*** = The recovery well was not sampled due to the presence of an oily substance

Source: Alton, August 21, 1991

TABLE 2 - PRODUCT REMOVAL STATUS

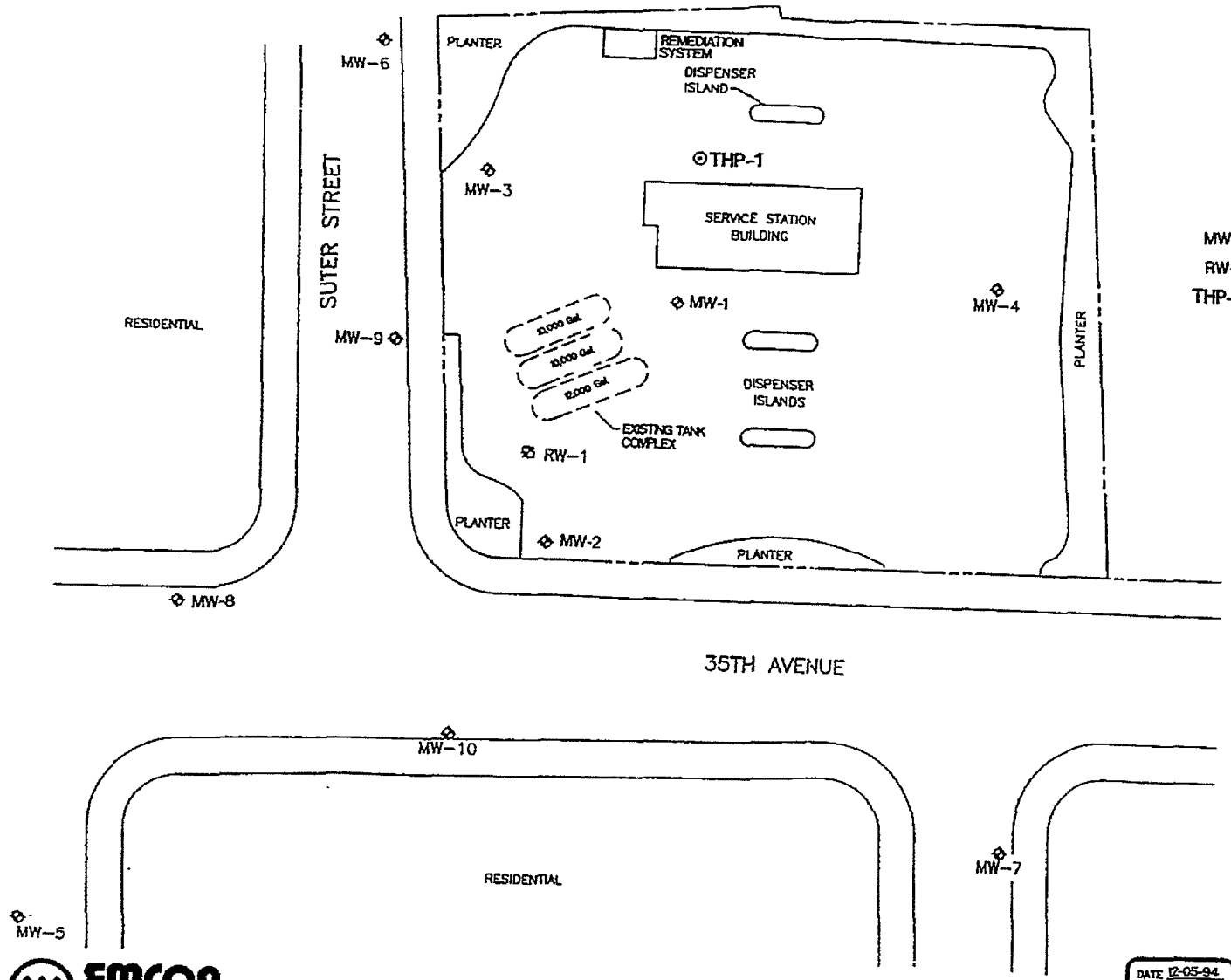
BP OIL COMPANY SERVICE STATION NO. 11132
3201 35TH STREET, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-024

WELL ID	DATE	PRODUCT REMOVED (Gallons)	PRODUCT REMOVED CUMULATIVE (Gallons)
MW-2	09/29/93	0.10	0.10
	10/05/93	0.10	0.20
	10/14/93	0.10	0.30
	10/20/93	0.25	0.55
	11/02/93	0.10	0.65
	12/07/93	0.05	0.70
	12/17/93	<0.01	0.70
	12/23/93	0.3	1.00
	01/12/94	0.05	1.05
	02/02/94	0.01	1.06
	02/11/94	0.01	1.07
	03/18/94	<0.01	1.07
MW-8	11/02/93	0.25	0.25
	11/10/93	0.10	0.35
	11/16/93	0.10	0.45
	11/23/93	0.10	0.55
	11/30/93	0.10	0.65
	12/17/93	<0.01	0.65
	12/23/93	<0.01	0.65
	01/12/94	0.01	0.66
	02/02/94	0.05	0.71
	02/11/94	0.08	0.79
	02/18/94	<0.01	0.79
	03/18/94	0.01	0.80
	04/27/94	<0.01	0.80
MW-9	11/02/93	0.10	0.10
	11/10/93	0.10	0.20
	11/16/93	0.10	0.30
	12/23/93	<0.01	0.30
	01/12/94	0.01	0.31
	01/20/93	0.05	0.36
	02/02/94	0.05	0.41
	02/11/94	0.01	0.42
	02/18/94	<0.01	0.42
	03/18/94	0.10	0.52
MW-10	09/07/93	0.10	0.10
	09/14/93	0.10	0.20
	09/29/93	0.10	0.30
	10/05/93	1.00	1.00
	10/14/93	2.10	4.00
	10/20/93	1.00	5.00
	10/27/93	1.00	6.00
	11/02/93	0.30	6.30
	11/10/93	0.20	6.50
	11/16/93	0.10	6.60
	11/23/93	0.10	6.70
	11/30/93	0.30	7.00
	12/07/93	0.20	7.20
	12/17/93	0.30	7.50
	12/23/93	0.01	7.50
	01/04/94	0.01	7.51
	01/12/94	0.01	7.52
	01/20/94	0.20	7.72
	02/02/94	0.01	7.73
	02/11/94	0.01	7.74
	02/18/94	0.20	7.9

Source: Alisto, May 25, 1994

Table C-13



EMCON Northwest, Inc.

SOURCE: ALISTO (JANUARY 10, 1994)

DATE 12-05-94
DWN. MLP
REV.
APPR.
PROJECT NO.
0952-044.03

Figure A-1
TOSCO #11132
3201 35TH STREET
OAKLAND, CALIFORNIA
SITE PLAN

Table A-1

Site Number 11132
3201 - 35th 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
THP1-S-4-4.5*	4-4.5	11/22/94	*nd*	*nd*	120	*nd*	*nd*	*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.
* = THP1 is referred to as HP1 on the lab report (see Attachment D).

Table 1
Soil Analytical Results

Former BP Service Station #11132
3201 35th Avenue
Oakland, California

Sample ID	Sample Depth (feet bgs)	Date Sampled	GRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	Ethanol (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Lead (mg/kg)
UB-1-32.0	30.0	7/22/04	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.10	ND<0.020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-1-32.5	30.5	7/22/04	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.10	ND<0.020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-3-30.0	30.0	7/22/04	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.10	ND<0.020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-3-30.5	30.5	7/22/04	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.10	ND<0.020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-4-30.0	30.0	7/21/04	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	0.0056	ND<0.10	ND<0.020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-4-30.5	30.5	7/21/04	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	0.018	ND<0.10	ND<0.020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-6-30.0	30.0	7/21/04	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.10	ND<0.020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-6-30.5	30.5	7/21/04	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.10	ND<0.020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-7-5	5	04/19/04	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	0.0055	0.0075	ND<0.20	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-7-15	15	04/19/04	6.9	ND<0.025	ND<0.025	0.067	0.62	ND<0.025	ND<0.20	ND<0.10	ND<0.025	ND<0.025	ND<0.025	ND<0.025	ND<0.025	NA
UB-7-25	25	04/19/04	19	ND<2.0	ND<2.0	ND<2.0	4.2	ND<2.0	ND<80	ND<40	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	NA
UB-7-35	35	04/19/04	ND<1.0	ND<0.025	ND<0.025	ND<0.025	ND<0.025	0.036	ND<1.0	0.76	ND<0.025	ND<0.025	ND<0.025	ND<0.025	ND<0.025	NA
UB-7-41	41	04/19/04	ND<1.0	0.0093	ND<0.0050	ND<0.0050	0.013	0.20	ND<0.20	0.56	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-9-5	5	04/19/04	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.20	ND<0.10	ND<0 0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-9-15	15	04/19/04	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0 0050	ND<0.20	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-9-25	25	04/19/04	22	ND<5.0	ND<5.0	ND<5.0	20	ND<5.0	ND<200	ND<100	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	NA
UB-9-35	35	04/19/04	ND<1.0	0.17	0.014	0.031	0.020	0.061	ND<0.20	0.14	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-9-42	42	04/19/04	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	0.011	ND<0.0050	ND<0.20	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-10-5	5	04/20/04	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	0.0058	ND<0.20	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-10-15	15	04/20/04	72	ND<2.0	ND<2.0	ND<2.0	3.0	ND<2.0	ND<80	ND<40	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	NA
UB-10-25	25	04/20/04	820	ND<5.0	ND<5.0	5.7	37	ND<5.0	ND<200	ND<100	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	7.9
UB-10-35	35	04/20/04	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	0.0061	0.016	ND<0.20	0.85	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-10-37	37	04/20/04	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	0.0099	0.0062	ND<0.20	0.24	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-11-5	5	04/20/04	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	0.0083	ND<0.20	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-11-15	15	04/20/04	64	ND<2.0	ND<2.0	2.6	13	ND<2.0	ND<80	ND<40	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	NA
UB-11-25	25	04/20/04	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	0.0093	ND<0.20	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-11-35	35	04/20/04	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	0.054	ND<0.20	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-11-37	37	04/20/04	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	0.034	ND<0.20	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-12-5	5	04/19/04	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.20	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-12-10	10	04/19/04	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	0.0072	ND<0.0050	ND<0.20	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-12-15	15	04/19/04	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.20	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA
UB-12-24.5	24.5	04/19/04	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.20	ND<0 10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA

Table 1
Soil Analytical Results

Former BP Service Station #11132
3201 35th Avenue
Oakland, California

Notes

GRO	= Gasoline Range Organics (C4-C12) analyzed by EPA Method 8015B
BTEX	= Benzene, toluene, ethylbenzene, and total xylenes, EPA Method 8260B
MTBE	= Methyl tert-butyl ether by EPA Method 8260B
TBA	= Tert butyl alcohol, by EPA Method 8260B
DIPE	= Di-isopropyl ether, by EPA Method 8260B
ETBE	= Ethyl tert-butyl ether, by EPA Method 8260B
TAME	= Tert-Amyl methyl ether, by EPA Method 8260B
1,2-DCA	= 1,2-Dichloroethane, by EPA Method 8260B
EDB	= 1,2-Dibromoethane, by EPA Method 8260B
ND<	= Not detected at or above laboratory reporting limits
NA	= Not analyzed
bgs	= Below ground surface
mg/kg	= milligrams per kilogram

Table 2
Boring Groundwater Grab Sample Analytical Results

Former BP Service Station #11132
3201 35th Avenue
Oakland, California

Sample ID	Date Sampled	GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Ethanol (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
UB-1-48	07/23/04	ND<50	ND<0.50	ND<0.50	ND<0.50	**0.81**	ND<0.50	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
UB-2-48	07/22/04	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
UB-3-48	07/22/04	ND<50	ND<0.50	ND<0.50	ND<0.50	**1.0**	ND<0.50	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
UB-4	07/21/04	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0 50
UB-5	07/21/04	**190**	**9.5**	ND<0.50	**6.7**	**8.1**	**75**	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
UB-6	07/21/04	**260**	**9.1**	**1.2**	**21**	**8.3**	**1.2**	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
UB-7	04/19/04	**32,000**	**7,300**	**960**	**1,300**	**4,000**	**28,000**	ND<100,000	ND<20,000	ND<1,000	ND<1,000	ND<1,000	ND<500	ND<500
UB-9	04/19/04	**25,000**	**11,000**	**1,500**	**1,200**	**2,400**	**2,700**	ND<100,000	ND<20,000	ND<1,000	ND<1,000	ND<1,000	ND<500	ND<500
UB-10	04/20/04	**31,000**	**3,700**	**2,400**	**1,000**	**4,000**	**35,000**	ND<200,000	ND<40,000	ND<2,000	ND<2,000	ND<2,000	ND<1,000	ND<1,000
UB-11	04/20/04	**1,200**	ND<50	ND<50	ND<50	**51**	**2,400**	ND<10,000	ND<2,000	ND<100	ND<100	ND<100	ND<50	ND<50
UB-12	04/19/04	**120**	**5.9**	ND<0.50	**0.99**	**2.1**	**0.77**	ND<100	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<0.50	ND<0.50

Table 2
Boring Groundwater Grab Sample Analytical Results

Former BP Service Station #11132
3201 35th Avenue
Oakland, California

Notes

GRO	= Gasoline Range Organics (C4-C12) analyzed by EPA Method 8260B (samples UB-1 through UB-6) and by EPA Method 8015B (samples UB-7 through UB-12)
BTEX	= Benzene, toluene, ethylbenzene, and total xylenes, EPA Method 8260B
MTBE	= Methyl tert-butyl ether by EPA Method 8260B
TBA	= Tert butyl alcohol, by EPA Method 8260B
DIPE	= Di-isopropyl ether, by EPA Method 8260B
ETBE	= Ethyl tert-butyl ether, by EPA Method 8260B
TAME	= Tert-Amyl methyl ether, by EPA Method 8260B
1,2-DCA	= 1,2-Dichloroethane, by EPA Method 8260B
EDB	= 1,2-Dibromoethane, by EPA Method 8260B
ND<	= Not detected at or above specified laboratory reporting limit
µg/L	= micrograms per liter

APPENDIX B

Soil Boring and Well Construction Logs

DRILL RIG	Hollow Stem	SURFACE ELEVATION	----	LOGGED BY	JCW
DEPTH TO GROUNDWATER	As Noted	BORING DIAMETER	8"	DATE DRILLED	7/30/86

DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE	DEPTH (FEET)	SAMPLER	UNCONFINED COMPRESSIVE STRENGTH (KSF)	WATER CONTENT (%)	DRY DENSITY (PCF)	PENETRATION RESISTANCE (BLOWS/FT.)
ASPHALT AND BASE ROCK									
SILTY CLAY (FILL)	dark brown	firm	CL						
SILTY SAND (old trench backfill)	gray to tan	loose	SM						
SILTY CLAY with rock fragments	tan to light brown	fine to stiff	CL	5					
Large angular cobbles									
SANDY CLAY, grading to clayey sand and gravel	tan to light brown	very stiff	CL-SC	10					
No product odor				15					
				20					

EXPLORATORY BORING LOG

MOBIL OIL CORPORATION
35TH AVENUE, OAKLAND

PROJECT NO.	DATE	BORING NO.
H182-20	8/86	MW-1

DRILL RIG Hollow Stem	SURFACE ELEVATION ----	LOGGED BY JCW
DEPTH TO GROUNDWATER As Noted	BORING DIAMETER 8"	DATE DRILLED 7/30/86

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	UNCONFINED COMPRESSIVE STRENGTH (KSF)	WATER CONTENT (%)	DRY DENSITY (PCF)	PENETRATION RESISTANCE (BLOWS/FT.)
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
SANDY CLAY, grading to clayey sand and gravel (contd)			CL-SC						
SILTY CLAY, with some occasional sand and fine gravel No product odor			CL	25 30 35 40					

EXPLORATORY BORING LOG

MOBIL OIL CORPORATION
35TH AVENUE, OAKLAND

PROJECT NO.	DATE	BORING NO.
H182-20	8/86	MW-1

DRILL RIG Hollow Stem	SURFACE ELEVATION ----	LOGGED BY JCW
DEPTH TO GROUNDWATER As Noted	BORING DIAMETER 8"	DATE DRILLED 7/30/86

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	UNCONFINED COMPRESSIVE STRENGTH (KSF)	WATER CONTENT (%)	DRY DENSITY (PCF)	PENETRATION RESISTANCE (BLOWS/FT.)
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
SILTY CLAY, with some occasional sand and fine gravel (Contd)			CL						
				45					
TOTAL DEPTH = 45.0 feet									

EXPLORATORY BORING LOG

MOBIL OIL CORPORATION
35TH AVENUE, OAKLAND

PROJECT NO.	DATE	BORING NO.
H182-20	8/86	MW-1

MOBIL OIL CORPORATION

OAKLAND, CALIFORNIA

MW-1

Well completed to 45.0 feet in depth with 2-inch Class 160 PVC casing, flush-threaded joints. Screen (.020-inch slot) set from 10.0 to 45.0 feet. 6 X 12 Monterey sand placed from 4.5 to 45.0 feet and concrete seal placed from 0 to 4.5 feet.

DRILL RIG Hollow Stem	SURFACE ELEVATION -----	LOGGED BY JCW
DEPTH TO GROUNDWATER As Noted	BORING DIAMETER 8"	DATE DRILLED 7/31/86

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	UNCONFINED COMPRESSIVE STRENGTH (KSF)	WATER CONTENT (%)	DRY DENSITY (PCF)	PENETRATION RESISTANCE (BLOWS/FT.)
DESCRIPTION AND REMARKS	COLOR	CONSIST	SOIL TYPE						
ASPHALT AND BASE ROCK									
SILTY CLAY with rock fragments, dry	dark gray	stiff	CL						
Decreasing rock fragments (very faint "old" product odor)	blue-green			5					
				10					
Large angular gravel, damp No product odor			GL-GC						
				15					
SILTY CLAY; damp	tan to light brown	stiff	CL						
				20					

EXPLORATORY BORING LOG

MOBIL OIL CORPORATION
35TH AVENUE, OAKLAND

PROJECT NO.	DATE	BORING NO.
H182-20	8/86.	MW-2

DRILL RIG Hollow Stem	SURFACE ELEVATION ----	LOGGED BY JCW
DEPTH TO GROUNDWATER As Noted	BORING DIAMETER 8"	DATE DRILLED 7/31/86

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	UNCONFINED COMPRESSIVE STRENGTH (KSF)	WATER CONTENT (%)	DRY DENSITY (PCF)	PENETRATION RESISTANCE (BLOWS/FT.)
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
SILTY CLAY (CONTD)	tan to light brown	stiff	CL						
SILTY CLAY with some fine sand and gravel (faint odor in sample above water table)	motld blue-gray to brown	stiff	CL-SC	25			▽		
				30					
				35					
TOTAL DEPTH = 35.0 feet									

EXPLORATORY BORING LOG

MOBIL OIL CORPORATION
35TH AVENUE, OAKLAND

PROJECT NO.	DATE	BORING NO.
H182-20	8/86	MW-2

MOBIL OIL CORPORATION

OAKLAND, CALIFORNIA

MW-2

Well completed to 35.0 feet in depth with 2-inch Class 160 PVC casing, flush-threaded joints. Screen (.020-inch slot) set from 10.0 to 35.0 feet. No. 3 Monterey sand placed from 4.5 to 35.0 feet, bentonite pellets placed from 4.0 to 4.5 feet, and concrete seal placed from 0 to 4.5 feet.

DRILL RIG Hollow Stem	SURFACE ELEVATION -----	LOGGED BY JCW
DEPTH TO GROUNDWATER As Noted	BORING DIAMETER 8"	DATE DRILLED 7/31/86

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	UNCONFINED COMPRESSIVE STRENGTH (KSF)	WATER CONTENT (%)	DRY DENSITY (PCF)	PENETRATION RESISTANCE (BLOWS/FT.)
DESCRIPTION AND REMARKS	COLOR	CONSIST	SOIL TYPE						
ASPHALT AND BASE ROCK									
SILTY CLAY with rock fragments	tan	stiff	CL						
Large angular cobbles		dense	CL-GC	5					
SILTY CLAY, damp	tan to light brown	stiff	CL						
Trace of gravel; moisture in fissures (No product odor)			CL-GC	10, 15, 20			▽		

EXPLORATORY BORING LOG

MOBIL OIL CORPORATION
35TH AVENUE, OAKLAND

PROJECT NO.	DATE	BORING NO.
H182-20	8/86	MW-3

DRILL RIG Hollow Stem	SURFACE ELEVATION -----	LOGGED BY JCW
DEPTH TO GROUNDWATER As Noted	BORING DIAMETER 8"	DATE DRILLED 7/31/86

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	UNCONFINED COMPRESSIVE STRENGTH (KSF)	WATER CONTENT (%)	DRY DENSITY (PCF)	PENETRATION RESISTANCE (BLOWS/FT.)
DESCRIPTION AND REMARKS	COLOR	CONSIST	SOIL TYPE						
SILTY CLAY (CONTD) with a trace of gravel	tan to light brown	stiff	CL						
No product odor							▽		
				25					
Increasing gravel		medium dense	CL-GC						
Decreasing gravel		hard	CL	30					
Gravelly, increasing toward total depth			CL-GC						
				35					
TOTAL DEPTH = 35.0 feet									

EXPLORATORY BORING LOG

MOBIL OIL CORPORATION
35TH AVENUE, OAKLAND

PROJECT NO.	DATE	BORING NO.
H182-20	8/86	MW-3

MOBIL OIL CORPORATION

OAKLAND, CALIFORNIA

MW-3

Well completed to 35.0 feet in depth with 2-inch Class 160 PVC casing, flush-threaded joints. Screen (.020-inch slot) set from 10.0 to 35.0 feet. No. 3 Monterey sand placed from 5.5 to 35.0 feet, bentonite pellets placed from 5.0 to 5.5 feet, and concrete seal placed from 0 to 5.0 feet.

ALTON GEOSCIENCE, Inc.
LOG OF EXPLORATORY BORING

PROJECT NO. 30-081 DATE DRILLED 1/29/90
CLIENT BP OIL COMPANY
LOCATION 3201 35TH AVENUE, OAKLAND, CA
LOGGED BY M. TAYLOR APPROVED BY

BORING NO.
WELL NO. MW-4

FIELD SKETCH OF BORING LOCATION

TOP OF CASING ELEVATION 170.34

DRILLING METHOD HOLLOW-STEM AUGER HOLE DIAM. 8"
SAMPLER TYPE MODIFIED SPLIT SPOON
CASING DATA SEE MONITORING WELL CONSTRUCTION DETAIL
DRILLER WEST HAZMAT

WATER LEVEL 26.87
DATE July 9, 1990
TIME

BLOWS PER FOOT (ft)	CGI (PPM)	SAMPLE	DEPTH	WELL CONSTRUCTION OR BORING CLOSURE	USCS	PROFILE	DESCRIPTION
			0	Christy Box			ASPHALT
			2	Portland Cement			
			4		CL		SILTY CLAY; greenish brown; damp, high plasticity stiff
3,4,6	0		6	Bentonite Pellets			
			8				
10,28, 35	0		10	2" sch. 40 PVC Casing	CL		SILTY CLAY; gravelly, greenish brown with rust stain residue, dry to damp, low to medium plasticity , hard
			12				
			14		CL		SILTY CLAY; gravelly, brown, dry to damp, low to medium plasticity hard
10,17, 28	0		16	2" sch. 40 PVC .020 Slot			
			18		CL		SILTY CLAY; gravelly, brown rust residue, dry to damp, low plasticity, hard
14,28, 35	0		20				
			22				
			24	Sand #3 Lonestar	CL		SILTY CLAY; gravelly, brown, moist medium plasticity, hard
7,15, 26	0		26				⋈
			28				
			30				
11, 17, 25	0		32		CL		SILTY CLAY; very gravelly, brown wet, medium plasticity
			34				

ALTON GEOSCIENCE, Inc.
LOG OF EXPLORATORY BORING

PROJECT NO. 30-081 DATE DRILLED 1/29/90
CLIENT BP OIL COMPANY
LOCATION 3201 35TH AVENUE, OAKLAND, CA
LOGGED BY M. TAYLOR APPROVED BY

BORING NO.
WELL NO.
MW-4

FIELD SKETCH OF BORING LOCATION

TOP OF CASING ELEVATION

DRILLING METHOD HOLLOW-STEM AUGER HOLE DIAM. 8"
SAMPLER TYPE MODIFIED SPLIT SPOON
CASING DATA SEE MONITORING WELL CONSTRUCTION DETAIL
DRILLER WEST HAZMAT

WATER LEVEL
DATE
TIME

BLOWS PER FOOT (ft)	CGI (PPM)	SAMPLE	DEPTH	WELL CONSTRUCTION OR BORING CLOSURE	USCS	PROFILE	DESCRIPTION
8,18, 34	0		36	2" sch. 40 PVC .020 Slot	CL		SILTY CLAY; gravelly, brown, dry to damp
			38				
			40				SILTY CLAY; gravelly, brown, moist, medium plasticity
15, 28, 38	0		42	End Cap			
			44				
			46				
			48				
			50				

ALTON GEOSCIENCE, Inc.
LOG OF EXPLORATORY BORING

PROJECT NO. 30-081 DATE DRILLED 2/1/90
CLIENT BP OIL COMPANY
LOCATION 3201 35TH AVENUE, OAKLAND, CA
LOGGED BY M. TAYLOR APPROVED BY

BORING NO.
WELL NO. MW-5

FIELD SKETCH OF BORING LOCATION

TOP OF CASING ELEVATION 165.14

DRILLING METHOD HOLLOW-STEM AUGER HOLE DIAM. 8"
SAMPLER TYPE MODIFIED SPLIT SPOON
CASING DATA SEE MONITORING WELL CONSTRUCTION DETAIL
DRILLER WEST HAZMAT

WATER LEVEL 24.75
DATE July 9, 1990
TIME

BLOWS PER FOOT(N)	CGI (PPM)	SAMPLE	DEPTH	WELL CONSTRUCTION OR BORING CLOSURE	USCS	PROFILE	DESCRIPTION
			0	Christy Box			ASPHALT
			2	Portland Cement			
			4		CL		SANDY CLAY; gravelly, brown, damp, low plasticity hard
13,23, 35	0		6	Bentonite Pellets			
			8				
			10		CL		SILTY CLAY; gravelly, greenish brown, damp, low plasticity, gas odor present hard
11,25, 39	0		12	2" sch. 40 PVC Casing			
			14		CL		SILTY CLAY; gravelly, greenish brown, moist medium plasticity, gas odor hard
8,11, 21	0		16	2" sch. 40 PVC .020 Slot			
			18		CL		SILTY CLAY; sandy and gravel, greenish brown, moist medium plasticity, gas odor hard
8,23, 33	0		20				
			22				
			24	Sand #3 Lonestar			⧖
4,7,13	0		26		CL		SILTY CLAY; gravelly, reddish brown, moist to saturated medium plasticity very stiff
			28				
4,5,8	0		30		CL		SILTY CLAY; with fine sand, tan, damp to medium high plasticity, stiff
			32				
14,17, 22	0		34	End Cap	CL		SILTY CLAY; gravelly, reddish brown moist high plasticity, hard

ALTON GEOSCIENCE, Inc.
LOG OF EXPLORATORY BORING

PROJECT NO. 30-081 DATE DRILLED 2/1/90
CLIENT BP OIL COMPANY
LOCATION 3201 35TH AVENUE, OAKLAND, CA
LOGGED BY M. TAYLOR APPROVED BY

BORING NO.
WELL NO. MW-6

FIELD SKETCH OF BORING LOCATION

TOP OF CASING ELEVATION 165.38

DRILLING METHOD HOLLOW-STEM AUGER HOLE DIAM. 8"
SAMPLER TYPE MODIFIED SPLIT SPOON
CASING DATA SEE MONITORING WELL CONSTRUCTION DETAIL
DRILLER WEST HAZMAT

WATER LEVEL 24.75
DATE July 9, 1990
TIME

BLOWS PER FOOT(N)	OGI (PPM)	SAMPLE	DEPTH	WELL CONSTRUCTION OR BORING CLOSURE	USCS	PROFILE	DESCRIPTION
			0	Christy Box			ASPHALT
			2	Portland Cement			
			4		CH		SILTY CLAY; gravelly, redish brown, damp, high plasticity , very stiff
10,12, 15	0		6	Bentonite Pellets			
			8		CH		SILTY CLAY; gravelly, reddish brown moist, high plasticity, hard
8,15, 23	0		10				
			12	2" sch. 40 PVC Casing			
			14		CH		SILTY CLAY; gravelly, brown, moist medium high plasticity, very stiff
5,12, 18	0		16	2" sch. 40 PVC .020 Slot			
			18		CH		SILTY CLAY; gravelly, brown, moist to saturated very stiff
11,15, 15	0		20				
			22				
			24	Sand #3 Lonestar			
23-30, 50/4"	0		26				NO RECOVERY; large cobble or rock obstruction
			28				
6,13,17	0		30				NO RECOVERY; same
			32				drilled to 35' w/o sample recovery
21,29, 35	0		34	End Cap	CL		SILTY CLAY; gravelly saturated moist, brown, hard

ALTON GEOSCIENCE, Inc.
LOG OF EXPLORATORY BORING

PROJECT NO. 30-081 DATE DRILLED 2/1/9
CLIENT BP OIL COMPANY
LOCATION 3201 35TH AVENUE, OAKLAND, CA
LOGGED BY M. TAYLOR APPROVED BY

BORING NO.
WELL NO. MW-7

FIELD SKETCH OF BORING LOCATION

TOP OF CASING ELEVATION 167.61

DRILLING METHOD HOLLOW-STEM AUGER HOLE DIAM. 8"
SAMPLER TYPE MODIFIED SPLIT
CASING DATA SEE MONITORING WELL CONSTRUCTION DETAIL
DRILLER WEST HAZMAT

WATER LEVEL 27.29
DATE JULY 9, 1990

BLOWS PER FOOT(ft)	OGI (PPM)	SAMPLE	DEPTH	WELL CONSTRUCTION OR BORING CLOSURE	USCS	PROFILE	DESCRIPTION
			0	Christy Box			ASPHALT
			2	Portland Cement			
			4		CH		SILTY CLAY; brown, damp, high plasticity , very stiff
14,14, 15	0		6	Bentonite Pellets			
			8				
			10		CL		SILTY CLAY; gravelly, reddish brown damp medium plasticity, hard
11,27, 39	0		12	2" sch. 40 PVC Casing			
			14		CL		SILTY CLAY; gravelly, reddish brown, damp, hard
15,21, 29	0		16	2" sch. 40 PVC .020 Slot			
			18				
36,15, 50/5"	0		20		CL		SILTY CLAY; gravelly, brown, moist medium plasticity, hard
			22				
			24	Sand #3 Lonestar	CL		SILTY CLAY; gravelly, brown, moist medium plasticity, hard
8,15,21	0		26				▽
			28				
5,8,12	0		30		CL		SILTY CLAY; gravelly, brown, saturated medium plasticity, very stiff
			32				
4,7,10	0		34		CH		SILTY CLAY; tannish brown, moist high plasticity, very stiff

ALTON GEOSCIENCE, Inc.
LOG OF EXPLORATORY BORING

PROJECT NO. 30-081-01 DATE DRILLED 2-25-91
CLIENT BP Oil Company
LOCATION 3201 35th Ave, Oakland
LOGGED BY M. Taylor APPROVED BY M. Hopwood

BORING NO. SB-8
WELL NO. MW-8

FIELD SKETCH OF BORING LOCATION

TOP OF CASING ELEVATION 165.74'

DRILLING METHOD Hollow stem auger HOLE DIAM. 8"
SAMPLER TYPE Modified split spoon
CASING DATA See well construction details
DRILLER Soils Exploration Services, Inc.

BLOWS PER FOOT(N)	CGI (PPM)	SAMPLE	DEPTH	WELL CONSTRUCTION OR BORING CLOSURE	USCS	PROFILE	DESCRIPTION
							WATER LEVEL
							DATE
							TIME
			0	Christy Box			10" Concrete
5,13,25			6	2" sch.-40 PVC Casing	GM		GRAVELLY SILT: green, damp, hard, low plasticity
7,14,11			10		ML		SANDY SILT: greenish brown, damp, very stiff, low plasticity, gravelly
5,14,16			16				SILTY CLAY: brownish green, damp, very stiff, low to medium plasticity, with fine sand
2,6,10			20		CL		Same, becomes moist, stiff, medium plasticity, with medium sand
5,9,12			26	2" sch. 40 PVC 0.020" Slot			Same, becomes brown, moist to wet, very stiff, medium plasticity ▽ 27'
3,9,14			30				Same, becomes brownish green, wet, with medium sand and gravel
			34				

ALTON GEOSCIENCE, Inc.
LOG OF EXPLORATORY BORING

PROJECT NO. 30-081-01 DATE DRILLED 2/25/91
CLIENT BP Oil Company
LOCATION 3201 35th Ave., Oakland
LOGGED BY M. Taylor APPROVED BY M. Hopwood

BORING NO. SB-8
WELL NO. MW-8

FIELD SKETCH OF BORING LOCATION

TOP OF CASING ELEVATION 165.74'

DRILLING METHOD Hollow stem auger HOLE DIAM. 8"
SAMPLER TYPE Modified split spoon
CASING DATA See well construction detail
DRILLER Soils Explorations Services, Inc.

BLOWS PER FOOT(ft)	CGI (PPM)	SAMPLE	DEPTH	WELL CONSTRUCTION OR BORING CLOSURE	USCS	PROFILE	DESCRIPTION
							WATER LEVEL / DATE / TIME
7,11,14			36				SILTY CLAY: brown, wet, very stiff, medium to high plasticity, with medium sand and gravel
			38		CL		
11,20, 20			40	End Cap			Same, becomes moist to wet, hard, medium plasticity
			42				BORING TERMINATED AT 41.5 FEET BELOW GRADE
			44				
			46				
			48				
			50				
			52				
			54				
			56				
			58				
			60				

Portland Cement
Sand #3 Lonestar
Bentonite Pellets
Sample
Driven interval
Water level encountered during drilling

ALTON GEOSCIENCE, Inc.
LOG OF EXPLORATORY BORING

PROJECT NO. 30-081-01 DATE DRILLED 2-26-91
CLIENT BP Oil Company
LOCATION 3201 35th Ave, Oakland
LOGGED BY M. Taylor APPROVED BY M. Hopwood

BORING NO. SB-9
WELL NO. MW-9

FIELD SKETCH OF BORING LOCATION

TOP OF CASING ELEVATION 166.20

DRILLING METHOD Hollow stem auger HOLE DIAM. 8"
SAMPLER TYPE Modified split spoon
CASING DATA See well construction details
DRILLER Soils Exploration Services, Inc.

BLOWS PER FOOT(ft)	CGI (PPM)	SAMPLE	DEPTH	WELL CONSTRUCTION OR BORING CLOSURE	USCS	PROFILE	DESCRIPTION
							WATER LEVEL / DATE / TIME
			0	Christy Box			6" Asphalt (street)
6,11,14			6		ML		SANDY SILT: reddish brown, damp, very stiff, low plasticity, with gravel
			8	2" sch. 40 PVC Casing			
4,5,13			10				Same, becomes brown, no gravel
			14				
5,12,14			16				SILTY CLAY: brown with green streaks, moist, very stiff, medium plasticity
2,6,9			20		CL		Same, becomes moist to wet, stiff
			24	2" sch. 40 PVC 0.020" Slot			Same, becomes brown, wet to saturated, very stiff
5,8,10			26				▽ 26'
3,5,10			30				Same, becomes saturated, stiff, with fine to medium sand
			34	End Cap			

ALTON GEOSCIENCE, Inc.
LOG OF EXPLORATORY BORING

PROJECT NO. 30-081-01 DATE DRILLED 2/26/91
CLIENT BP Oil Company
LOCATION 3201 35th Ave., Oakland
LOGGED BY M. Taylor APPROVED BY M. Hopwood

BORING NO. SB-9
WELL NO. MW-9

FIELD SKETCH OF BORING LOCATION

TOP OF CASING ELEVATION 166.20'

DRILLING METHOD Hollow stem auger HOLE DIAM. 8"
SAMPLER TYPE Modified split spoon
CASING DATA See well construction detail
DRILLER Soils Explorations Services, Inc.

BLOWS PER FOOT (ft)	OGII (PPM)	SAMPLE	DEPTH	WELL CONSTRUCTION OR BORING CLOSURE	USCS	PROFILE				
							WATER LEVEL			
							DATE			
							TIME			
							DESCRIPTION			
6,12,17			36		CL		SILTY CLAY: reddish brown, saturated to wet, very stiff, medium plasticity			
							BORING TERMINATED AT 36.5 FEET BELOW GRADE			
			38							
			40							
			42							
			44							
			46							
			48							
			50							
			52							
			54							
			56							
			58							
			60							

Portland Cement
Sand #3 Lonestar
Bentonite Pellets
Sample
Driven interval
Water level encountered during drilling

ALTON GEOSCIENCE, Inc.
LOG OF EXPLORATORY BORING

PROJECT NO. 30-081-01 DATE DRILLED 2-27-91
CLIENT BP Oil Company
LOCATION 3201 35th Ave, Oakland
LOGGED BY M. Taylor APPROVED BY M. Hopwood

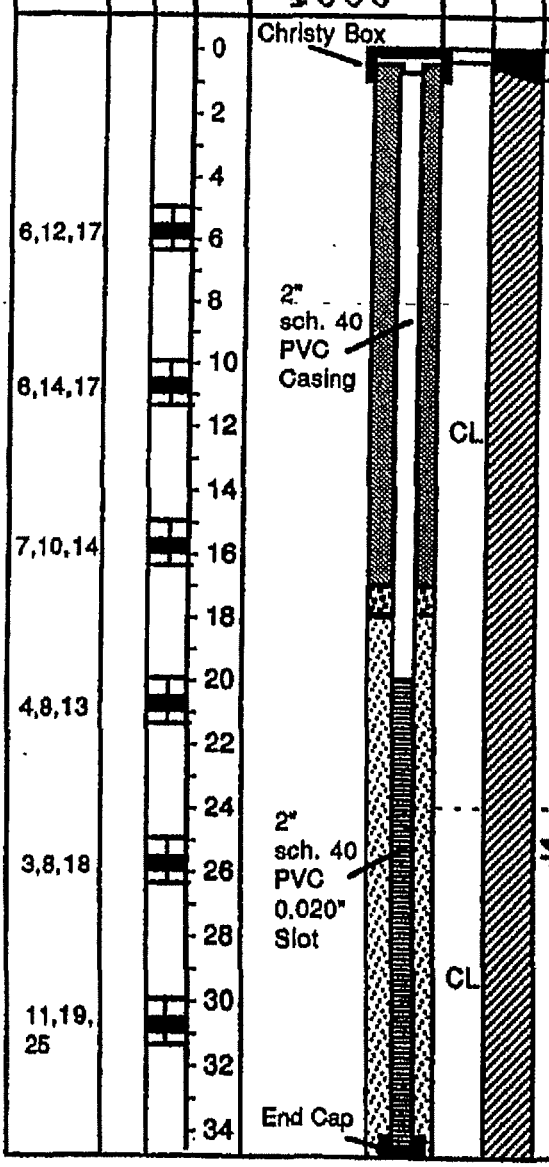
BORING NO. SB-10
WELL NO. MW-10

FIELD SKETCH OF BORING LOCATION

TOP OF CASING ELEVATION 167.01'

DRILLING METHOD Hollow stem auger HOLE DIAM. 8"
SAMPLER TYPE Modified split spoon
CASING DATA See well construction details
DRILLER Soils Exploration Services, Inc.

WATER LEVEL			
DATE			
TIME			



DESCRIPTION

10" Concrete

SILTY CLAY: tan, damp, very stiff, low plasticity, with gravel

Same, becomes tan to brown

Same, becomes brown with green streaks, moist, medium plasticity, with gravel

Same, becomes moist to wet, with fine sand and gravel

▽ 25'

SANDY CLAY: brownish white, wet to saturated, very stiff, low to medium plasticity, with slight gravel

Same, becomes brown, wet, hard, medium plasticity, with slight gravel

ALTON GEOSCIENCE, Inc.
LOG OF EXPLORATORY BORING

PROJECT NO. 30-081-01 DATE DRILLED 2/27/91
CLIENT BP Oil Company
LOCATION 3201 35th Ave., Oakland
LOGGED BY M. Taylor APPROVED BY M. Hopwood

BORING NO. SB-10
WELL NO. MW-10

FIELD SKETCH OF BORING LOCATION

TOP OF CASING ELEVATION 167.01'

DRILLING METHOD Hollow stem auger HOLE DIAM. 8"
SAMPLER TYPE Modified split spoon
CASING DATA See well construction detail
DRILLER Soils Explorations Services, Inc.

BLOWS PER FOOT (ft)	CGI (PPM)	SAMPLE	DEPTH	WELL CONSTRUCTION OR BORING CLOSURE	USCS	PROFILE	WATER LEVEL			
							DATE			
							TIME			
							DESCRIPTION			
7,8,11			36		CL		SILTY CLAY: brown, wet, very stiff, medium plasticity, with some fine sand			
							BORING TERMINATED AT 36.5 FEET BELOW GRADE			
			38							
			40							
			42							
			44							
			46							
			48							
			50							
			52							
			54							
			56							
			58							
			60							

Portland Cement
Sand #3 Lonestar
Bentonite Pellets
Sample
Driven Interval
Water level encountered during drilling

ALTON GEOSCIENCE, Inc.
LOG OF EXPLORATORY BORING

PROJECT NO. 30-081 DATE DRILLED 1/29/90
CLIENT BP OIL COMPANY
LOCATION 3201 35TH AVENUE, OAKLAND, CA
LOGGED BY M. TAYLOR APPROVED BY

BORING NO.
WELL NO. RW-1

FIELD SKETCH OF BORING LOCATION

TOP OF CASING ELEVATION 168.01

DRILLING METHOD HOLLOW-STEM AUGER HOLE DIAM. 12"
SAMPLER TYPE
CASING DATA SEE MONITORING WELL CONSTRUCTION DETAIL
DRILLER WEST HAZMAT

WATER LEVEL 27.93
DATE July 9, 1990
TIME

BLOWS PER FOOT(ft)	CGI (PPM)	SAMPLE	DEPTH	WELL CONSTRUCTION OR BORING CLOSURE	USCS	PROFILE	DESCRIPTION
			0	Christy Box			ASPHALT
			2	Portland Cement			SILTY CLAY; gravels, brown, damp, backfill
			4		CL		SILTY CLAY; gravelly, greenish brown, dry to damp, low plasticity, odor present
9,19, 33	0		6	Bentonite Pellets			
			8		CL		SILTY CLAY; gravelly, greenish brown, dry to damp, medium plasticity, odor present
16,33, 40	0		10				
			12	6" sch. 40 PVC Casing			
			14		CL		SILTY CLAY; gravelly, brown, damp, medium odor present
15,36, 43	0		16	6" sch. 40 PVC .020 Slot			
			18				
11,16, 25	0		20		CL		SILTY CLAY; gravelly, brown, damp, medium plasticity, odor present
			22				
			24	Sand #3 Lonestar			
6,7, 16	0		26		CL		SILTY CLAY; sandy gravelly, greenish brown, medium plasticity
			28				
6,13, 17	0		30		CL		SILTY CLAY; gravelly, sandy (fine) brown, saturated very stiff
			32				
			34				

ALTON GEOSCIENCE, Inc.
LOG OF EXPLORATORY BORING

PROJECT NO. 30-081 DATE DRILLED 1/29/90
CLIENT BP OIL COMPANY
LOCATION 3201 35TH AVENUE, OAKLAND, CA
LOGGED BY M. TAYLOR APPROVED BY

BORING NO.
WELL NO. RW-1

FIELD SKETCH OF BORING LOCATION

TOP OF CASING ELEVATION

DRILLING METHOD HOLLOW-STEM AUGER HOLE DIAM. 10"
SAMPLER TYPE MODIFIED SPLIT SPOON
CASING DATA SEE MONITORING WELL CONSTRUCTION DETAIL
DRILLER WEST HAZMAT

WATER LEVEL
DATE
TIME

BLOWS PER FOOT(ft)	OGI (PPM)	SAMPLE	DEPTH	WELL CONSTRUCTION OR BORING CLOSURE	USCS	PROFILE	DESCRIPTION
6, 16, 29	0		36	2" sch. 40 PVC .020 Slot	CL		SILTY CLAY; gravelly, sandy (fine) brown, saturated, medium high plasticity, hard
			38				
6, 15, 28			40	End Cap			SAME

URS

1333 Broadway, Suite 800
Oakland, California 94612

LOG OF BORING

Borehole ID: UB-1

Total Depth: 48 ft. bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP #11132 Soil and Water Investigation	**Drilling Company:** Gregg Drilling & Testing
Site Location: 3201 35th Avenue, Oakland, CA	**Driller:** Dustin Tidwell
Project Manager: Leonard Niles	**Type of Drilling Rig:** CPT
RG: Leonard Niles	**Drilling Method:** Direct Push
Geologist: Kevin Uno	**Sampling Method:** Groundwater Grab
Job Number: 38486822.0013001	**Date(s) Drilled:** 7/22/04
BORING INFORMATION	
Groundwater Depth (ft bgs): Unknown, <48 ft. bgs.	**Boring Location:** 78 ft S of SW corner of Mangels Ave. and 35th Ave.
Air Knife or Hand Auger Depth: 5.0 feet bgs	**Boring Diameter:** 2-inch
Coordinates: Latitude Longtitude	**Boring Type:** Exploratory

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID/ Comments
0							
2		Air knife to 5 ft. bgs					
4							
6		Boring not lithologically logged. Purpose of boring was to collect depth discrete soil samples and groundwater grab sample. See boring UB-2 for lithology.					Borehole grouted to grade with Portland neat cement.
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID
32		SILTY CLAY: brown, trace rounded coarse sand. Medium stiff, moist.		CL			UB-1-32.0 UB-1-32.5
34							
36							
38							
40							
42							
44							
46							UB-1-48: Groundwater grab sample at 48 ft. bgs.
48							

URS

1333 Broadway, Suite 800
Oakland, California 94612

LOG OF BORING

Borehole ID: UB-2

Total Depth: 48ft. bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP #11132 Soil and Water Investigation	**Drilling Company:** Gregg Drilling & Testing
Site Location: 3201 35th Avenue, Oakland, CA	**Driller:** Dustin Tidwell
Project Manager: Leonard Niles	**Type of Drilling Rig:** CPT
RG: Leonard Niles	**Drilling Method:** Direct Push
Geologist: Kevin Uno	**Sampling Method:** Groundwater Grab
Job Number: 38486822.0013001	**Date(s) Drilled:** 7/22/04

BORING INFORMATION

Groundwater Depth (ft bgs): Unknown, <48 ft. bgs	**Boring Location:** 155 ft S of SW corner of Mangels Ave. and 35th Ave.
Air Knife or Hand Auger Depth: 5.0 feet bgs	**Boring Diameter:** 2-inch
Coordinates: **Latitude** **Longtitude**	**Boring Type:** Exploratory

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID/ Comments
0		Note: Lithology is interpreted from CPT logs. Soil not visually observed.					Borehole grouted to grade with Portland neat cement
2		Air knife to 5 ft. bgs					
4							
		CLAYEY SILT		ML			
6		SILT					
		CLAYEY SILT					
8		STIFF FINE GRAINED: -undifferentiated					
10		SILTY CLAY		CL			
		CLAYEY SILT		ML			
12							
		SILTY CLAY		CL			
		SILT		ML			
14		CLAYEY SILT					

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID
16		STIFF FINE GRAINED					
18		SILTY CLAY		CL			
		CLAY					
20		STIFF FINE GRAINED					
22		SILTY CLAY					
		CLAYEY SILT		ML			
		SILTY CLAY		CL			
24		CLAY					
		CLAYEY SILT		ML			
		STIFF FINE GRAINED					
26		CLAYEY SILT					
		CLAY		CL			
		CLAYEY SILT		ML			
		SILT					
28		CLAYEY SILT					
		SILTY CLAY		CL			
		STIFF FINE GRAINED					
30		CLAY					
		SILTY CLAY					
32		CLAYEY SILT		ML			
		SILT					
		SAND: Cemented.		SM			
34		SANDY SILT		ML			
		STIFF FINE GRAINED					
36							

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID
38		SILTY CLAY		CL			
		CLAYEY SILT		ML			
		STIFF FINE GRAINED					
40		SILTY CLAY		CL			
		CLAYEY SILT		ML			
42		SILT					
		CLAYEY SILT					
		STIFF FINE GRAINED					
44		CLAYEY SILT					
		STIFF FINE GRAINED					
		SILTY CLAY		CL			
46		STIFF FINE GRAINED					
		SAND: Cemented.		SM			
		CLAYEY SILT		ML			
48		SILT: Bottom of boring: 48 ft.bgs					UB-2-48: Groundwater grab sample at 48 ft. bgs.

URS

1333 Broadway, Suite 800
Oakland, California 94612

LOG OF BORING

Borehole ID: UB-3

Total Depth: 48 ft. bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP #11132 Soil and Water Investigation	**Drilling Company:** Gregg Drilling & Testing
Site Location: 3201 35th Avenue, Oakland, CA	**Driller:** Dustin Tidwell
Project Manager: Leonard Niles	**Type of Drilling Rig:** CPT
RG: Leonard Niles	**Drilling Method:** Direct Push
Geologist: Kevin Uno	**Sampling Method:** Groundwater Grab
Job Number: 38486822.0013001	**Date(s) Drilled:** 7/22/04

BORING INFORMATION

Groundwater Depth (ft bgs): Unknown, <48 ft. bgs	**Boring Location:** 182 ft S of SW corner of Mangels and 35th Ave.
Air Knife or Hand Auger Depth: 5.0 feet bgs	**Boring Diameter:** 2-inch
Coordinates: **Latitude** **Longtitude**	**Boring Type:** Exploratory

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID/ Comments
0							Borehole grouted to grade with Portland neat cement
2		Air knife to 5 ft. bgs					
4							
6		Boring not lithologically logged. Purpose of boring was to collect depth discrete soil samples and groundwater grab sample. See boring UB-2 for lithology.					
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID
32				CL			UB-3-30.0 UB-3-30.5
34							
36							
38							
40							
42							
44							
46							UB-3-48: Groundwater grab sample at 50 ft. bgs.
48							

URS

1333 Broadway, Suite 800
Oakland, California 94612

LOG OF BORING

Borehole ID: UB-4

Total Depth: 50 ft. bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP #11132 Soil and Water Investigation	**Drilling Company:** Gregg Drilling & Testing
Site Location: 3201 35th Avenue, Oakland, CA	**Driller:** Dustin Tidwell
Project Manager: Leonard Niles	**Type of Drilling Rig:** CPT
RG: Leonard Niles	**Drilling Method:** Direct Push
Geologist: Kevin Uno	**Sampling Method:** Groundwater Grab
Job Number: 38486822.0013001	**Date(s) Drilled:** 7/21/04

BORING INFORMATION	
Groundwater Depth (ft bgs): Unknown, < 50ft. bgs	**Boring Location:** 135 ft E of E corner of School St. and 35th Ave.
Air Knife or Hand Auger Depth: 5.0 feet bgs	**Boring Diameter:** 2-inch
Coordinates: **Latitude** **Longtitude**	**Boring Type:** Exploratory

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID/ Comments
0							
2							Borehole grouted to grade with Portland neat cement
4		Air knife to 5 ft. bgs					
6		Boring not lithologically logged. Purpose of boring was to collect depth discrete soil samples and groundwater grab sample. See boring UB-5 for lithology.					
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID
32				CL			UB-4-30.0 UB-4-30.5
34							
36							
38							
40							
42							
44							
46							
48							
50							UB-4: Groundwater grab sample at 50 ft. bgs.

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LOG OF BORING

Borehole ID: UB-5

Total Depth: 50 ft. bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP #11132 Soil and Water Investigation	**Drilling Company:** Gregg Drilling & Testing
Site Location: 3201 35th Avenue, Oakland, CA	**Driller:** Dustin Tidwell
Project Manager: Leonard Niles	**Type of Drilling Rig:** CPT
RG: Leonard Niles	**Drilling Method:** Direct Push
Geologist: Kevin Uno	**Sampling Method:** Cone Pentrometer Testing
Job Number: 38486822.0013001	**Date(s) Drilled:** 7/22/04

BORING INFORMATION	
Groundwater Depth (ft bgs): Unknown, < 50 ft. bgs	**Boring Location:** Approx. 60 ft E of E corner of School St. and 35th Ave
Air Knife or Hand Auger Depth: 5.0 feet bgs	**Boring Diameter:** 2-inch
Coordinates: Latitude Longtitude	**Boring Type:** Exploratory

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID/ Comments
0		Air knife to five feet bgs.					
		Note: Lithology is interpreted from CPT logs. Soil not visually observed.					Borehole grouted to grade with Portland neat cement
2							
4							
		SILTY SAND		SM			
		SAND: Cemented.					
6		STIFF FINE GRAINED		ML			
8							
10							
12		CLAYEY SILT					
		SILT					
		STIFF FINE GRAINED					
14							

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID
16							
		CLAY		CL			
		STIFF FINE GRAINED					
18		SILTY CLAY					
		STIFF FINE GRAINED					
20		SILTY CLAY					
		CLAY					
		CLAYEY SILT		ML			
22		SILT					
		SILTY CLAY		CL			
		CLAYEY SILT		ML			
		SILTY CLAY		CL			
24		CLAY					
		SILTY CLAY					
		CLAYEY SILT		ML			
26		SILT					
28		CLAYEY SILT					
30		SILTY CLAY		CL			
		CLAYEY SILT		ML			
32		SAND: Cemented		SM			
		STIFF FINE GRAINED		ML			
		SILT					
34		SILTY CLAY		CL			
		STIFF FINE GRAINED		ML			
36							

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID
		CLAYEY SILT					
		STIFF FINE GRAINED					
38		SILT					
40		SILTY CLAY		CL			
		STIFF FINE GRAINED		ML			
		CLAYEY SILT					
42		STIFF FINE GRAINED					
44		CLAYEY SILT					
		SILT					
46		CLAYEY SILT					
48		SILT					
		CLAYEY SILT					
		STIFF FINE GRAINED					UB-5: Ground water grab sample at 50 ft. bgs.
50		CLAYEY SILT: Bottom of boring: 50 ft. bgs					

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LOG OF BORING

Borehole ID: UB-6

Total Depth: 50 ft. bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP #11132 Soil and Water Investigation	**Drilling Company:** Gregg Drilling & Testing
Site Location: 3201 35th Avenue, Oakland, CA	**Driller:** Dustin Tidwell
Project Manager: Leonard Niles	**Type of Drilling Rig:** CPT
RG: Leonard Niles	**Drilling Method:** Direct Push
Geologist: Kevin Uno	**Sampling Method:** Groundwater Grab
Job Number: 38486822.0013001	**Date(s) Drilled:** 7/21/04

BORING INFORMATION	
Groundwater Depth (ft bgs): Unknown, < 50 ft. bgs.	**Boring Location:** 20 ft. E of E corner of School St. and 35th Ave.
Air Knife or Hand Auger Depth: 5.0 feet bgs	**Boring Diameter:** 2-inch
Coordinates: **Latitude** **Longtitude**	**Boring Type:** Exploratory

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID/ Comments
0							
2							Borehole grouted to grade with Portland neat cement
4		Air knife to 5 ft. bgs					
6		Boring not lithologically logged. Purpose of boring was to collect depth discrete soil samples and groundwater grab sample. See boring UB-5 for lithology.					
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID
32		SILTY CLAY: Light brown with 5-10% fine sand. Moist, Stiff. Low to medium plasticity.		CL			UB-6-30.0 UB-6-30.5
34							
36							
38							
40							
42							
44							
46							
48							UB-6: Groundwater grab sample at 50 ft. bgs.
50							

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LOG OF BORING

Borehole ID: UB-7

Total Depth: 41.5 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP #11132 Soil and Water Investigation	**Drilling Company:** Gregg Drilling & Testing
Site Location: 3201 35th Avenue, Oakland, CA	**Driller:** Paul Rodgers
Project Manager: Leonard Niles	**Type of Drilling Rig:** Geoprobe
RG: Leonard Niles	**Drilling Method:** Direct Push
Geologist: Joe Gonzales	**Sampling Method:** Continuous core with acetate sleeve.
Job Number: 38486822.0013001	**Date(s) Drilled:** 04/19/04

BORING INFORMATION

Groundwater Depth (ft bgs): 36 feet bgs	**Boring Location:** 10 feet south of RW-1
Air Knife or Hand Auger Depth: 5.0 feet bgs	**Boring Diameter:** 2-inch
Coordinates: Latitude Longtitude	**Boring Type:** Exploratory

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID/ Comments
0		Air knife to five feet bgs					Borehole grouted to grade with Portland neat cement
6		GRAVELLY SANDY SILT: orangish brown, 50% silt, 30% medium to coarse sand, 20% fine subangular gravel, medium stiff to stiff, damp, increasing gravel with depth		ML	0		UB-7-5
10		SANDY GRAVELLY SILT: brown, 50% silt, 15% fine to coarse sand, 35% fine to coarse subangular gravel, stiff, damp		ML	0.8		
12		orangish brown, decreasing gravel and sand, some clay, slight odor					
14		grades to clay			236		UB-7-15
16		SANDY GRAVELLY CLAY: brown, 50% clay, 20% fine to coarse sand, 30% fine to coarse subangular to subrounded gavel, very stiff, damp, slight odor		CL			
20		same as above, mostly fine gravel, odor			133		
24		SILTY CLAY: brown, 60% clay, 40% silt, trace fine to coarse sand and fine gravel, stiff, orange mottling, odor		CL	87		UB-7-25
30							

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID
32		SANDY GRAVELLY CLAY: brown, 50% clay, 15% fine to coarse sand, 35% fine gravel, very stiff, damp decreasing gravel		CL	70		
34		Increasing gravel and coarse sand					
36		SANDY GRAVELLY SILT: dark brown, 50% silt, 15% sand, 35% gravel, stiff to very stiff, wet Increasing coarse sand with depth		ML	17		UB-7-35 UB-7 (hydropunch) ⊠
38							
40		decreasing gravel, medium stiff, saturated, geoprobe refusal at 41.5 feet bgs			12		UB-7-41

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LOG OF BORING

Borehole ID: UB-8

Total Depth: 3.5 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP #11132 Soil and Water Investigation	**Drilling Company:** Gregg Drilling & Testing
Site Location: 3201 35th Avenue, Oakland, CA	**Driller:** Paul Rodgers
Project Manager: Leonard Niles	**Type of Drilling Rig:** Vacmasters 4000
RG: Leonard Niles	**Drilling Method:** Air knife
Geologist: Joe Gonzales	**Sampling Method:** NA
Job Number: 38486822.0013001	**Date(s) Drilled:** 04/19/04

BORING INFORMATION	
Groundwater Depth (ft bgs): Unknown	**Boring Location:** Near UST pad
Air Knife or Hand Auger Depth: 3.5 feet bgs	**Boring Diameter:** 6"
Coordinates: Latitude Longtitude	**Boring Type:** Exploratory

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID/ Comments
0 2		GRAVEL: Air knife to 3.5feet bgs: Gravel with cobbles. Could not clear hole to five feet. Abandoned boring.					No samples taken Borehole grouted to grade with Portland neat cement

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LOG OF BORING

Borehole ID: UB-9

Total Depth: 42.5 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP #11132 Soil and Water Investigation	**Drilling Company:** Gregg Drilling & Testing
Site Location: 3201 35th Avenue, Oakland, CA	**Driller:** Paul Rodgers
Project Manager: Leonard Niles	**Type of Drilling Rig:** Geoprobe
RG: Leonard Niles	**Drilling Method:** Direct Push
Geologist: Joe Gonzales	**Sampling Method:** Continuous core with acetate sleeve.
Job Number: 38486822.0013001	**Date(s) Drilled:** 04/19/04

BORING INFORMATION

Groundwater Depth (ft bgs): 40 feet bgs	**Boring Location:** Near west side of station building
Air Knife or Hand Auger Depth: 5.0 feet bgs	**Boring Diameter:** 2-inch
Coordinates: Latitude Longtitude	**Boring Type:** Exploratory

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID/ Comments
0		Air knife to five feet bgs					
2							Borehole grouted to grade with Portland neat cement
4							
6		SANDY GRAVELLY SILT: brown, 50% silt, 20% fine to coarse sand, 30% fine subangular gravel, very stiff, damp		ML	0		UB-9-5
8							
10		same as above, with more gravel			0		
12		increasing clay with depth					
14							
16		SANDY GRAVELLY CLAY: orangish brown, 50% clay, 15% fine to coarse sand, 35% fine to coarse sand, stiff to very stiff, damp, varying amounts of sand and gravel		CL	0.5		UB-9-15
18		slight odor					
20		same as above, dark brown, decreasing gravel			23		
22		some coarse gravel (4 cm diameter)					
24							
26		SILTY CLAY: orangish brown, 60% clay, 40% silt, medium stiff to stiff, damp to moist, slight odor, some orange mottling		CL	275		UB-9-25
28							
30							

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID
32		orangish brown, 50% clay, 30% silt, 10% cs sand, 10% fine sub rounded gravel, stiff, damp to moist			172		
34		some coarse gravel (3 cm diameter)			24		UB-9-35
36		SANDY GRAVELLY CLAY: orangish brown, 50% clay, 15% fine to coarse sand, 35% fine to coarse sand, stiff to very stiff, damp		CL			
38							
40					1.7		UB-9 :groundwater grab with bailer at 42.5 ft. bgs.
42		SANDY GRAVELLY SILT: orangish brown, 50% silt, 15% medium to coarse sand, 35% fine to coarse subangular gravel, medium stiff, moist to wet, geoprobe refusal at 42.5 feet bgs		ML			UB-9-42

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LOG OF BORING

Borehole ID: UB-10

Total Depth: 37.5 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP #11132 Soil and Water Investigation	**Drilling Company:** Gregg Drilling & Testing
Site Location: 3201 35th Avenue, Oakland, CA	**Driller:** Paul Rodgers
Project Manager: Leonard Niles	**Type of Drilling Rig:** Geoprobe
RG: Leonard Niles	**Drilling Method:** Direct Push
Geologist: Joe Gonzales	**Sampling Method:** Continuous core with acetate sleeve.
Job Number: 38486822.0013001	**Date(s) Drilled:** 04/20/04

BORING INFORMATION	
Groundwater Depth (ft bgs): 36feet bgs	**Boring Location:** 12 ft. SW of southern dispenser
Air Knife or Hand Auger Depth: 5.0 feet bgs	**Boring Diameter:** 2-inch
Coordinates: Latitude Longtitude	**Boring Type:** Exploratory

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID/ Comments
0		Air knife to five feet bgs					
2							Borehole grouted to grade with Portland neat cement.
4							
6		SANDY GRAVELLY CLAY: brown to light brown, 50% clay, 20% fine to coarse sand, 30% fine to coarse subangular gravel, very stiff, damp, decreasing gravel with depth		CL	0		UB-10-5
8							
10		increasing gravel dark brown, very stiff			0		
12							
14		orangish brown, 55% clay, 20% sand, 25% gravel, slight odor, decreasing gravel					
16					9.0		UB-10-15
18		increasing gravel					
20		dark brown, increasing gravel, odor			63		
22		varying amounts of sand and gravel					
24							
26					177		UB-10-25
28		NO RECOVERY		NR			
30							

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID
					0		
32		SILTY CLAY: reddish brown, 60% clay, 40% silt, trace fine to coarse sand and fine gravel, very stiff, damp		CL			
34							
36		SANDY GRAVELLY CLAY: reddish brown, 50% clay, 15% fine to coarse sand, 35% fine gravel, stiff, damp		CL	0		UB-10-35 ⊠ UB-10-37 (soil); UB-10 (groundwater grab with baller)

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LOG OF BORING

Borehole ID: UB-11
Total Depth: 37.5 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP #11132 Soil and Water Investigation	**Drilling Company:** Gregg Drilling & Testing
Site Location:	**Driller:** Paul Rodgers
Project Manager: Leonard Niles	**Type of Drilling Rig:** Geoprobe
RG: Leonard Niles	**Drilling Method:** Direct Push
Geologist: Joe Gonzales	**Sampling Method:** Continuous core with acetate sleeve.
Job Number: 38486822.0013001	**Date(s) Drilled:** 04/20/04

BORING INFORMATION	
Groundwater Depth (ft bgs): 36	**Boring Location:** Near planter on 35th Avenue
Air Knife or Hand Auger Depth: 5.0 ft. bgs	**Boring Diameter:** 2-inch
Coordinates: **Latitude** **Longtitude**	**Boring Type:** Exploratory

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID/ Comments
0		Air knife to five feet bgs					
2							Borehole grouted to grade with Portland neat cement.
4							
6		SANDY GRAVELLY CLAY: brown, 50% clay, 20% fine to coarse sand, 30% fine to coarse subrounded gravel, very stiff, moist, slight green color in soil		CL	0		UB-11-5
8							
10		same as above			0		
12		increasing gravel, with some coarse gravel (4 cm diameter). No greenish color.					
14							
16		SANDY GRAVELLY SILT: reddish brown to orangish brown, 50% silt, 15% fine to coarse sand, 35% fine to coarse gravel, gravel size is up to 3 cm in diameter, stiff, damp, slight odor		ML	15		UB-11-15
18		SANDY GRAVELLY CLAY: brown, 50% clay, 20% fine to coarse sand, 30% fine to coarse subrounded gravel, very stiff, damp, decreasing gravel with depth		CL			
20					0.5		
22		coarse gravel (4cm diameter)					
24							
26		SILTY CLAY: reddish brown, 60% clay, 40% silt, trace sand and fine gravel, very stiff, damp		CL	0		UB-11-25
28							
30		50% clay, 30% silt, 10% fine to coarse sand, 10% fine gravel					

Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID
32		continued increase of sand and gravel			1.3		
34							
36		SANDY GRAVELLY CLAY: reddish brown, 50% clay, 15% fine to coarse sand, 35% fine to coarse subrounded gravel, moderately stiff, moist to wet, geoprobe refusal at 37.5 feet bgs		CL	0		UB-11-35 UB-11 (groundwater grab with bailer); UB-11-37 (soil).

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LOG OF BORING

Borehole ID: UB-12

Total Depth: 26 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP #11132 Soil and Water Investigation	**Drilling Company:** Gregg Drilling & Testing
Site Location: 3201 35th Avenue, Oakland, CA	**Driller:** Paul Rodgers
Project Manager: Leonard Niles	**Type of Drilling Rig:** Geoprobe
RG: Leonard Niles	**Drilling Method:** Direct Push
Geologist: Joe Gonzales	**Sampling Method:** Continuous core with acetate sleeve.
Job Number: 38486822.0013001	**Date(s) Drilled:** 04/19/04
BORING INFORMATION	
Groundwater Depth (ft bgs): 25	**Boring Location:** Behind station building near former dispenser island
Air Knife or Hand Auger Depth: 5.0	**Boring Diameter:** 2-inch
Coordinates: Latitude Longtitude	**Boring Type:** Exploratory

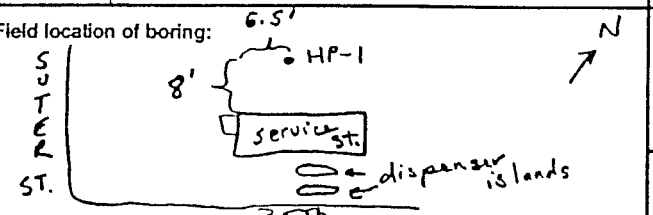
Depth (ft bgs)	Symbol	Lithologic Description	Blow Count	USCS	PID (ppm)	Recovery	Sample ID/ Comments
0		Air knife to five feet bgs					
2							Borehole grouted to grade with Portland neat cement.
4							
6		SANDY GRAVELLY SILT: brown, 50% silt, 20% fine to coarse sand, 30% fine subangular gravel, medium stiff to very stiff, damp		ML	0		UB-12-5
8		increasing gravel with depth					
10		dark brown, 50% silt, 15% fine to coarse sand, 35% fine to coarse subrounded to subangular gravel, trace clay, very stiff, damp			0		UB-12-10
12							
14							
16		SANDY GRAVELLY CLAY: orangish brown, 50% clay, 15% fine to coarse sand, 35% fine to coarse subangular gravel, very stiff, damp		CL	0		UB-12-15
18		decreasing gravel and stiffness with depth					
20		brown			0		
22		increasing gravel dark brown					
24		Increased coarse sands and gravels			0		UB-12 (groundwater grab with bailer); UB-12-25 (soil). ▽
26		SANDY GRAVELLY SILT: light brown, 50% silt, 15% medium to coarse sand, 35% fine to coarse subangular to subrounded gravel, medium stiff, wet, geoprobe refusal at 26 feet bgs		ML			

FIELD LOG OF EXPLORATORY BORING

EMCON ASSOCIATES

PROJECT No. 0952-044.02 DATE 11/22/94 | BORING No. HP-1 Sheet 1 of 2
CLIENT TOSCO 11132
LOCATION 3201 35th St., Oakland, CA
LOGGED BY D. Galasso

Field location of boring:



Ground Elev. Datum

Drilling Co. Precision
Drill rig model XO 1
Drilling method CPT
Hole dia. 2 3/4"

Boring completion data Grouted hole to surface adding asphalt patch to top on boring

Depth to ▽	—	Depth to ▼			
Time		Time			
Date	—	Date			

OVM	Pocket Penetrometer (TSF)	Blows/6 in. and/or Pressure (PSI)	Type of Sampler	Recovery (ft/ft)	Sample Number and Container Type	Depth	Sampled Interval	Well Detail	Soil/Rock Symbol	Graphic Log	DESCRIPTION
									As		Asphalt - 4"
									GP		Gravel (GP) dark gray (2.5Y, N4/0) 40% coarse (gravel) size sand, 60% fine gravel, damp, no odor (very little to look at)
				0.5/3		1					
						2					
						3					
0.3				0.5/3	4-4.5	4			GP		Sandy Gravel (GP) olive brn (2.5Y, 4/4) 5% low-plasticity fines, 35% fine to coarse sand (1:2:3), 60% fine gravel, damp, no odor (very little to look at)
						5					
						6					
				3/3		7					@ light olv. brn (2.5Y, 5/4) 5% low-plasticity fines, 40% fine to coarse sand (1:2:3), 55% fine to coarse gravel, mineral break-up, damp, no odor
						8					
						9					
0.6					9.5-10	10					
				1/3							
						11			SM		Silty/... Sand light olv. brn (2.5Y, 5/4) 35% med. fines, 55% fine to coarse sand, 10% fine gravel, reddish gray veining heavy orange mottling, iron + manganese staining, gray mineral weathering, damp, no odor black, red, white minerals
0.6					11.5-12	12					@ 20-25% med. fines, 60-65% fine to coarse sand (1:2:3) 15% fine to coarse gravel (1:2) damp, no odor
				3/3		13					
						14					
0.3					15-15.5	15					
						16					@ 25-30% low-med fines 70-75% fine to coarse sand (1:2:4) damp, no odor
				3/3		17					
						18					
						19					@ 15-20% low-med fines, 70-80% fine to coarse sand (1:2:4), 5-10% fine gravel damp, no odor

Reviewed by Date

FIELD LOG OF EXPLORATORY BORING

EMCON ASSOCIATES

PROJECT No. 0952-044.02 DATE 11/22/94
CLIENT TOSCO 11132
LOCATION 3201 35th St., Oakland, CA
LOGGED BY D. Galasso

BORING No. HP-1
Sheet 2 of 2

Field location of boring:

Drilling Co. Precision
Drill rig model XD 1
Drilling method CPT
Hole dia. 2 3/8

Boring completion data Grouted hole to surface adding asphalt patch to top of boring

Ground Elev. see pg. 1 Datum

Depth to ▽	—	Depth to ▼			
Time		Time			
Date	—	Date			

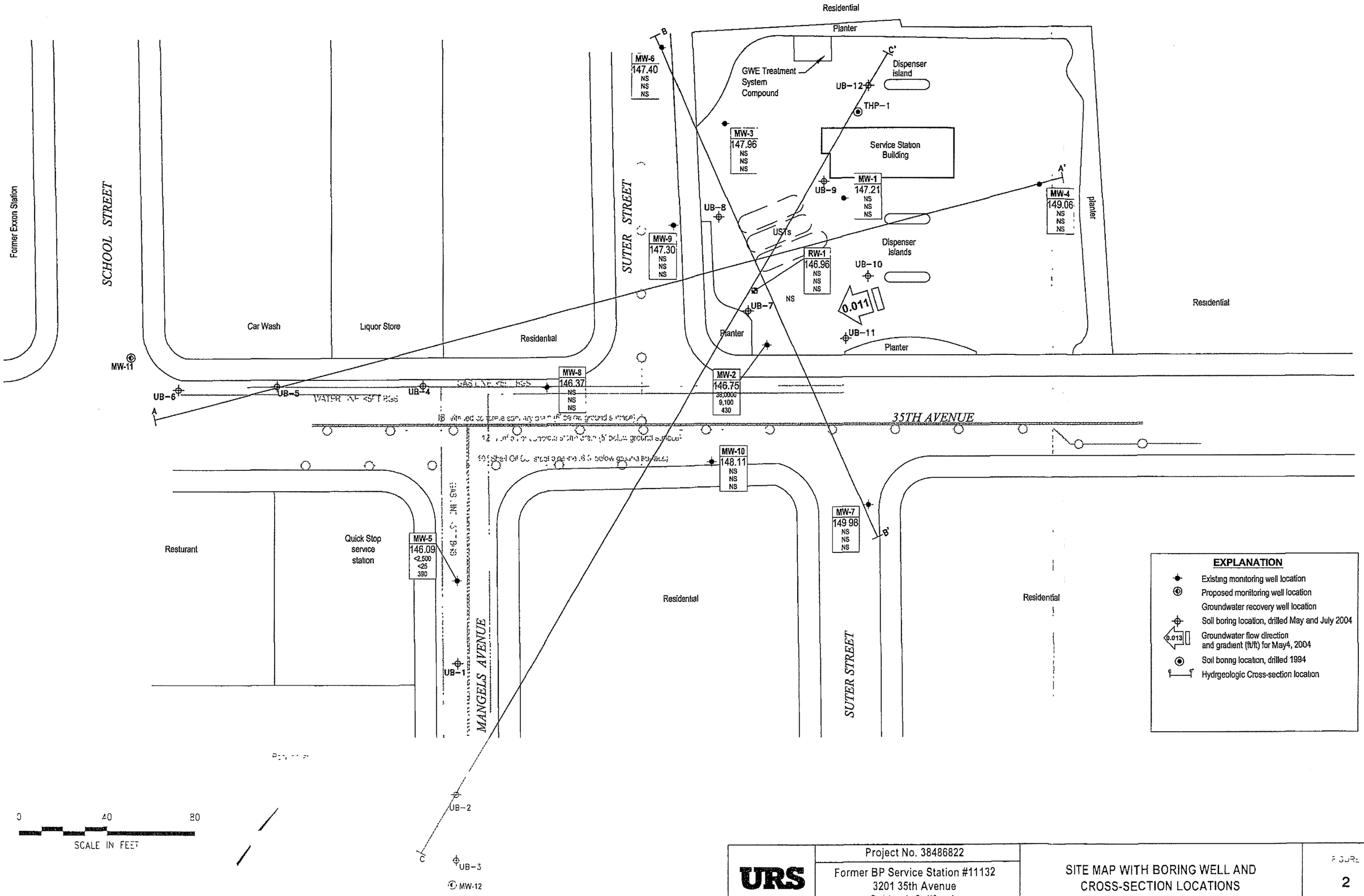
OVM	Pocket Penetrometer (TSF)	Blows/6 in. and/or Pressure (PSI)	Type of Sampler	Recovery (ft/ft)	Sample Number and Container Type	Depth	Sampled Interval	Well Detail	Soil/Rock Symbol	Graphic Log	DESCRIPTION
0.6					20-20.5				SM		Silty Sand (SM) continued.
						21					
											Clay (CL) olive (5Y, 5/3)
				1/3		22					95% high-plast. fines, 5% fine sand
1.3					22.5-23				CL		orange mottling, iron-staining, gray veining, damp, no odor
						23					Refusal at 23.0'
											Boring terminated
						24					
						25					

Reviewed by: _____ Date: _____

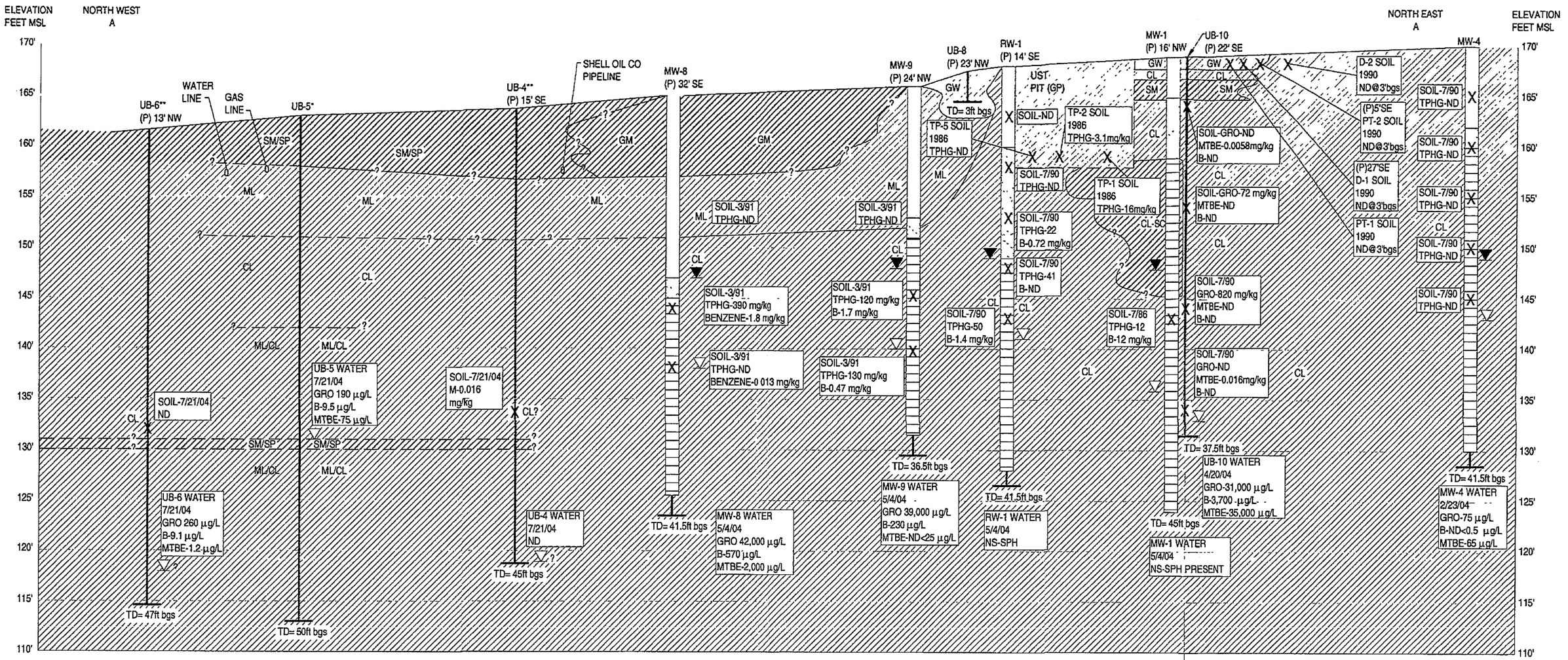
Form F-9 Rev. 10/90

APPENDIX C

Geologic Cross-Sections



URS	Project No. 38486822 Former BP Service Station #11132 3201 35th Avenue Oakland, California	SITE MAP WITH BORING WELL AND CROSS-SECTION LOCATIONS	FIGURE 2



EXPLANATION

(P) 13' NW — BORING IS PROJECTED, WITH DISTANCE IN FEET AND DIRECTION FROM CROSS-SECTION LINE

WELL CASING

FILTER PACK INTERVAL

SCREENED INTERVAL

FIRST ENCOUNTERED WATER WHILE DRILLING

STATIC WATER LEVEL IN COMPLETED WELL MAY 4 2004

MSL — FEET ABOVE MEAN SEA LEVEL

X-SOIL MTBE 0.016mg/kg — SOIL SAMPLE ANANYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM

WATER MTBE 75 ug/L — WATER SAMPLE ANANYTICAL RESULTS IN MICROGRAMS PER LITER

** NOT LOGGED EXCEPT FOR SINGLE SOIL SAMPLE AT 30-31 ft bgs

* LITHOLOGY INTERPRETED FROM CONE PENETROMETER LOG AND DATA

GP= GRAVEL
GW= GRAVEL
SP= SAND
} HIGH PERMEABILITY

SM=SILTY SAND
GM=SILTY GRAVEL
GC=GRAVELLY CLAY
SC=CLAYEY SAND
} MODERATE PERMEABILITY

ML=SILT
CL=CLAY
OH=CLAY
} LOW PERMEABILITY

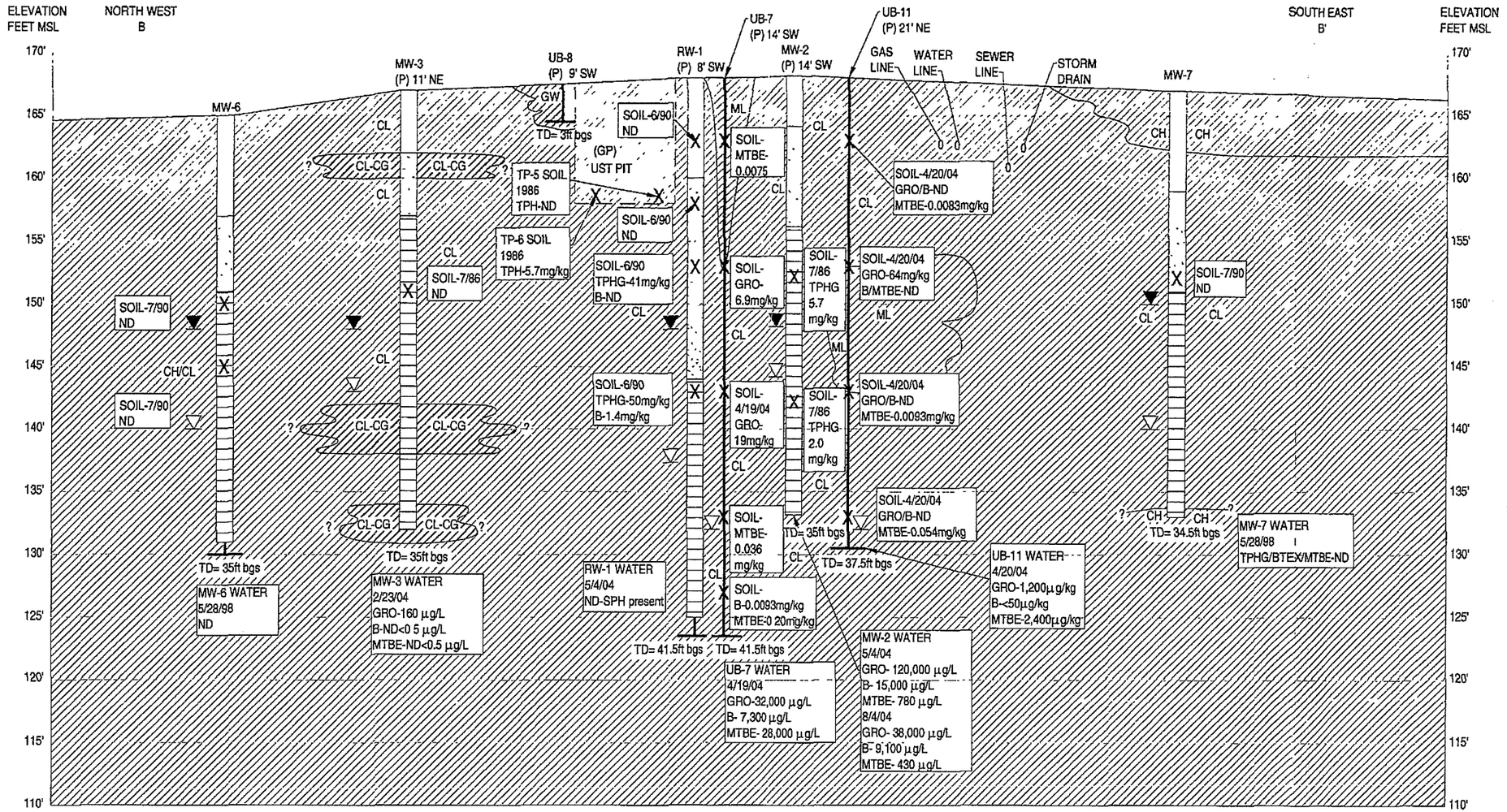
CL / SM — LITHOLOGY CONTACT; INFERRED WHERE DASHED OR QUERIED

UST EXCAVATION; BACKFILLED WITH GRAVEL

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET

URS	Project No. 38486822 Former BP Service Station #11132 3201 35th Avenue Oakland, California	HYDROGEOLOGIC CROSS-SECTION A-A'	3



EXPLANATION

(P) 13' NW — BORING IS PROJECTED, WITH DISTANCE IN FEET AND DIRECTION FROM CROSS-SECTION LINE

WELL CASING

FILTER PACK INTERVAL

SCREENED INTERVAL

FIRST ENCOUNTERED WATER WHILE DRILLING

STATIC WATER LEVEL IN COMPLETED WELL MAY 4 2004

MSL — FEET ABOVE MEAN SEA LEVEL

X SOIL-MTBE 0.018mg/kg — SOIL SAMPLE ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM

WATER-MTBE 75 Mg/L — WATER SAMPLE ANALYTICAL RESULTS IN MICROGRAMS PER LITER

** NOT LOGGED EXCEPT FOR SINGLE SOIL SAMPLE AT 30-31 ft bgs

* LITHOLOGY INTERPRETED FROM CONE PENETROMETER LOG AND DATA

GP= GRAVEL, GW= GRAVEL, SP= SAND } HIGH PERMEABILITY

SM=SILTY SAND, GM=SILTY GRAVEL, GC=GRAVELLY CLAY, SC=CLAYEY SAND } MODERATE PERMEABILITY

ML=SILT, CL=CLAY, CH=CLAY } LOW PERMEABILITY

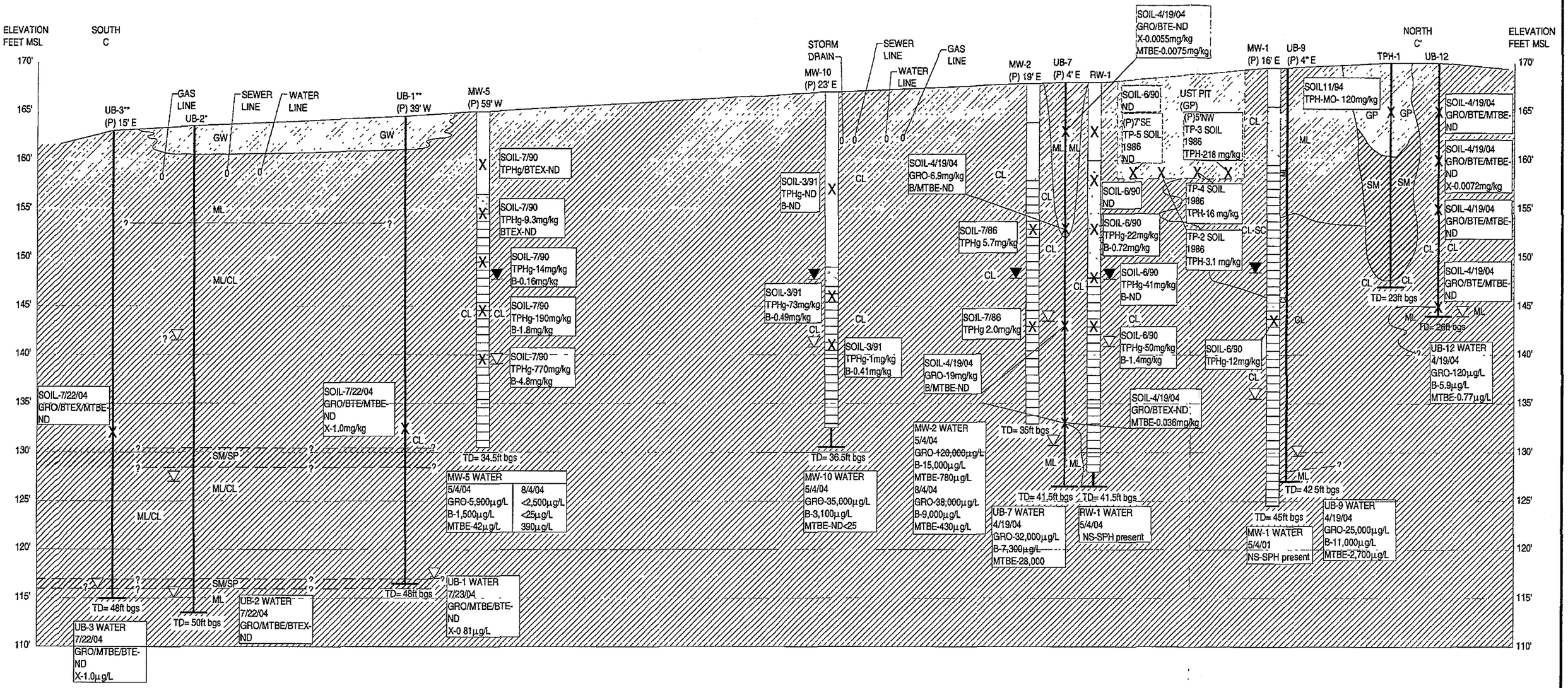
? CL SM — LITHOLOGY CONTACT, INFERRED WHERE DASHED OR QUERIED

UST EXCAVATION; BACKFILLED WITH GRAVEL

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET

URS	Project No. 38486822 Former BP Service Station #11132 3201 35th Avenue Oakland, California	HYDROGEOLOGIC CROSS-SECTION B-B'	4



EXPLANATION

(P) 13' NW — BORING IS PROJECTED, WITH DISTANCE IN FEET AND DIRECTION FROM CROSS-SECTION LINE

WELL CASING

FILTER PACK INTERVAL

SCREENED INTERVAL

FIRST ENCOUNTERED WATER WHILE DRILLING

STATIC WATER LEVEL IN COMPLETED WELL MAY 4 2004

MSL — FEET ABOVE MEAN SEA LEVEL

X-SOIL MTBE 0.018 mg/kg — SOIL SAMPLE ANANYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM

WATER-MTBE 78 MG/L — WATER SAMPLE ANANYTICAL RESULTS IN MICROGRAMS PER LITER

** NOT LOGGED EXCEPT FOR SINGLE SOIL SAMPLE AT 30-31 ft bgs (UB-3), AND A 32-33 ft bgs (UB-1).

* LITHOLOGY INTERPRETED FROM CONE PENETROMETER LOG AND DATA

GP= GRAVEL
GW= GRAVEL } HIGH PERMEABILITY
SP= SAND

SM=SILTY SAND
GM=SILTY GRAVEL
GC=GRAVELLY CLAY } MODERATE PERMEABILITY
SC=CLAYEY SAND

ML=SILT
CL=CLAY
CH=CLAY } LOW PERMEABILITY

CL / SM — LITHOLOGY CONTACT, INFERRED WHERE DASHED OR QUERIED

UST EXCAVATION; BACKFILLED WITH GRAVEL

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET

URS	Project No. 38486822 Former BP Service Station #11132 3201 35th Avenue Oakland, California	HYDROGEOLOGIC CROSS-SECTION C-C'	5

APPENDIX D

Sensitive Receptors Survey

SENSITIVE RECEPTORS SURVEY
SITE SURVEY AND LITERATURE SEARCH

Client: BP Oil Company Project No.: 30-081-01

Station No.: 11132

Location: 3201 35TH Ave. Oa

City/State: Oakland CA

I. Provide answers to the following questions:

A. Is there a public water supply well within 2500 feet? Y/N N
If Yes, Distance — ft.

B. Is there a private water supply well within 1000 feet? Y/N N
If Yes, Distance — ft.

C. Is there a subway within 1000 feet? Y/N N
If Yes, Distance — ft.

D. Is there a basement within 1000 feet? Y/N N
If Yes, Distance — ft.

E. Is there a school within 1000 feet? Y/N Yes
If Yes, Distance 1000 ft.

F. Is there a surface body of water within 1000 feet? Y/N Yes
If Yes, Distance 500 ft.
Name Peralta Creek

II. Describe type of local water supply.

Public: X

- Suppliers Name: East Bay Municipal Water District
- Suppliers Source: Sierra Snow Melt, Pardee Dam
- Distance to Site:

Private:

SENSITIVE RECEPTORS SURVEY
SITE SURVEY AND LITERATURE SEARCH

III. Distance to Nearest Adjacent Properties:

Residential	50 ft.
Commercial	.00 ft.
Industrial	— ft.
Hospital	11,000 ft.
School (Allandale School)	1000 ft.
Name	

IV. Aquifer Classification, if available.

Class I	- Special Ground Waters	
	- Irreplaceable Drinking Water Source	
	- Ecologically Vital	
Class II	- Current and Potential Drinking Water Sources	
Class III	- Not Potential Source of Drinking Water	X

V. Describe observation wells, if any.

Number	11
Free Product?	Y/N yes

VI. Signature of Preparer: Matthew A. Taylor

Date: 2-20-91

VII. Sketch of Site