RO-14

URS

Alameda County

OCT 25 2004

October 18, 2004

Mr. Robert Schultz
Alameda County Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Re: Soil and Groundwater Investigation Report
Former ARCO Service Station #11132, ACEH Case No. RO0000014
3201 35th Ave., Oakland, California.

Dear Mr. Schultz:

On behalf of the Atlantic Richfield Company (an affiliated company of BP), URS Corporation (URS) has prepared this report for additional soil and water characterization at the above referenced facility. This Soil and Groundwater Investigation Report (report) was prepared in response to letters from the Alameda County Environmental Health (ACEH) to BP dated March 19, 2003 and September 9, 2002 (Attachment A). This report includes a discussion of the site background, work completed, results, and recommendations for additional work at the site.

1.0 SITE FEATURES AND BACKGROUND

The site is a 76-branded service station located on the northeast corner of 35th Avenue and Suter Street, south of Interstate 580, in a mixed commercial and residential area of East Oakland. The site has been operating as a gasoline service station since the early 1970s and was acquired by BP in 1989 from Mobil and sold in 1994 to Tosco, which is now Conoco Philips. Improvements to the property include the service station building, pump islands and underground storage tanks (USTs). The original USTs were replaced in 1986. It is uncertain from the available records if any soil excavation or disposal was performed following the UST removal. The product lines and dispensers were upgraded in 1990, and 100 cubic yards of soil were excavated and disposed. An active Quick Stop gasoline service station and two former gasoline service stations are located along 35th Avenue within 250 feet downgradient of the site.

Numerous site investigations have been performed at this site since the mid-1980s. A total of ten monitoring wells and one groundwater recovery well have been installed between 1986 and 1991, and are currently being gauged and sampled as part of a quarterly groundwater monitoring program. Ten soil borings were completed as temporary wells and groundwater samples collected in 1990.

Site investigative activities have revealed that the site soils generally consist of silty clays or clayey silts with varying amounts of sand and gravel. Groundwater was first encountered

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during drilling activities at depths ranging from 24 to 36 feet below ground surface (bgs). The depth of static groundwater in completed wells is approximately 14 to 20 feet bgs and the direction of groundwater flow is to the east-southeast with a gradient of 0.018 feet per foot as calculated from the recent August 2004 monitoring event.

Previous monitoring of the groundwater wells noted separate phase and dissolved phase hydrocarbons. Separate phase hydrocarbons have been reported in the on-site wells MW-1, MW-2 and RW-1, and the offsite wells MW-8, MW-9 and MW-10. The hand bailing of these separate phase hydrocarbons are routinely conducted as part of the quarterly groundwater monitoring program. During the August 4, 2004 monitoring event, 0.08 gallons, 0.16 gallons, 0.05 gallons, and 0.113 gallons were removed from MW-1, RW-1, MW-9 and MW-10, respectively. A separate phase hydrocarbon recovery and groundwater extraction and treatment system was intermittently operational for several years following 1992. The system is still in place, but is not currently active.

Separate phase hydrocarbons have been reported in soils on and off-site during various excavations and subsurface investigations. Total petroleum hydrocarbon as gasoline (TPH-g) were reported up to 210 parts per million (ppm) from the excavation (depth not recorded) following removal of the former USTs in 1986. It is uncertain from available records if this soil was subsequently over-excavated. TPH-g concentrations up to 21 ppm and benzene concentrations up to 0.0099 ppm to were reported in confirmatory soil sample PT-3 at a depth of 4 feet bgs from the product line excavation during 1990. The highest petroleum hydrocarbon concentrations detected in soil samples from borings onsite were in the boring for well RW-1 in 1990, with 50 ppm TPHg and 1.4 ppm benzene detected at a depth of 25 feet bgs. The highest petroleum hydrocarbon concentrations detected in soil samples from borings offsite were in the boring for well MW-5 in 1990, with 770 ppm TPHg and 4.8 ppm benzene detected at a depth of 25 feet bgs. MW-5 is located approximately 200 feet directly downgradient from the subject site USTs, and is adjacent to the Quick Stop gasoline service station at 3130 35th Avenue and Mangels Avenue. Toluene, ethylbenzene and xylenes have also been reported in soil samples collected on and off-site. Historical Soil and Groundwater Analytical data is shown on the cross sections (Figures 4, 5, and 6) and is included as Attachment B.

Dissolved phase hydrocarbons have been reported in the on and off-site groundwater wells. TPH-g has been reported up to 1,700,000 parts per billion (ppb) as measured in MW-1 in January 2000. The TPH-g concentrations reported during the latest sampling event of this well in February 2002 decreased to 52,000 ppb. MW-1 has not been sampled since that event due to the presence of separate phase hydrocarbons. Benzene, toluene, ethylbenzene and xylenes (BTEX compounds) and MTBE have also been reported in the groundwater. Benzene was reported at a maximum concentration of 19,000 ppb in a groundwater sample collected from MW-1 in February 1998 but attenuated to 465 ppb by the February 2002 sampling event. MTBE was reported at a maximum concentration of 78,000 ppb from the sample collected from RW-1 during the February 1999 monitoring event. The concentration of MTBE was noted to decrease to 6,100 ppb in a sample collected from RW-1 during the November 2003 monitoring event. These decreases indicate that natural attenuation is occurring in the shallow groundwater of the subject property and surrounding area. RW-1 has not been sampled since that event due to the presence of separate phase hydrocarbons.

Beginning with the Fourth Quarter 2003 monitoring event, TPH-g analysis was replaced by Gasoline Range Organics (GRO) by EPA Method 8260B. In the Second Quarter of 2004, the GRO analysis carbon range was changed from C6-C10 to C4-C12. During the most recent groundwater sampling event of August 4, 2004, the highest onsite GRO concentration was in well MW-2 at 38,000 µg/L. The maximum benzene concentration detected was 9,100 µg/L (MW-2). The maximum MTBE concentration was 390 µg/L (MW-5). Free product was reported in wells MW-1, RW-1, MW-8, MW-9, and MW-10.

The down gradient extent of dissolved phase hydrocarbons has been monitored through the sampling of the down gradient wells MW-5 and MW-8. During the May 4, 2004 sampling event, GRO, benzene and MTBE were reported in a groundwater collected from MW-8 located approximately 80 feet down gradient of the subject property at 42,000 µg/L, 570 µg/L and 2,000 µg/L, respectively. Well MW-8 was not sampled during the August 4, 2004 sampling event due to the presence of free product. Considerably lower GRO concentrations were reported in the groundwater sample collected from MW-5 located approximately 100 feet further down (and slightly cross gradient) with respect to MW-8. During the August 4, 2004 sampling event, a groundwater sample collected from MW-5 was reported to contain MTBE at 390 µg/L. GRO and benzene were not detected in MW-5 at the elevated laboratory reporting limits of 2,500 µg/L and 25 µg/L, respectively. This decrease in GRO and benzene concentrations indicates that the concentration of dissolved phase hydrocarbons is naturally attenuating through advection and dispersion and also likely by chemical and biological degradation as it migrates in the down gradient direction.

A sensitive receptor survey was completed in 1991 by Alton Geosciences. The survey revealed that the nearest residence is 50 feet from the subject property, the nearest hospital was 11,000 feet, and the nearest school was 11,000 feet from the subject property.

A groundwater remediation system was activated on the property in 1992 and operated intermittently through the 1990s. The treated groundwater was discharged into the sanitary sewer system under permit from the East Bay Municipal Utility District (EBMUD).

In response to the ACEH letter dated September 9, 2002, URS prepared and submitted a *Soil and Groundwater Investigation Workplan* on October 28, 2002, proposing the installation of two offsite groundwater monitoring wells to define the downgradient extent of the dissolved – phase petroleum hydrocarbon plume. A conduit study, contaminant plume monitoring, corrective action plan, and source characterization consisting of direct push soil borings were also proposed. ACEH did not approve the Workplan, and in a letter dated March 19, 2003 requested a Workplan Addendum. In response the March 19, 2003 ACEH letter, URS submitted a *Soil and Groundwater Investigation Workplan Addendum* on May 28, 2003 proposing 12 direct push soil borings with depth-discrete groundwater samples. The borings were to be advanced in pairs, with the first boring at each location being a continuous core soil boring lithologically logged, sampled for soil analysis, and used to identify water bearing zones. The second boring was to be a hydropunch at depth discrete intervals to sample groundwater.

ACEH requested further modifications to the Workplan Addendum in their October 13, 2003 letter, along with additional site background information and results of a preferential pathway survey. URS addressed the requests of the ACEH October 13, 2003 letter in a letter titled *Response to Technical Comments from ACHCS on "Soil and Groundwater Investigation Workplan Addendum"* submitted on December 13, 2003. In the letter, URS addressed ACEH requests for relocation of proposed borings, use of RWQCB Environmental Screening Levels, preferential pathway survey, one-half mile well survey, and missing historical reports and data. ACEH approved the May 28 and December 13, 2003 Addendums in their January 13, 2004 letter. In a letter submitted on January 23, 2004. URS requested an extension of the subsurface investigation report due date to 60 days after completion of the field work. ACEH approved the request for an extension in an April 14, 2004 telephone conversation. ACEH correspondence is included at Attachment A.

2.0 CONTAMINANT SOURCE CHARACTERIZATION

The scope of work performed for the Contaminant Source Characterization included the following:

2.1 Preliminary Field Activities

Before initiating field activities, URS obtained soil boring permits from Alameda County Public Works Agency (ACPWA) and a street excavation permit from the City of Oakland (Attachment C). A Site Health and Safety Plan (HASP) was created that describes hazards associated with the work. Underground utility clearance included notifying Underground Service Alert a minimum of 48 hours prior to initiating field activities.

The HASP, prepared for URS personnel conducting field activities, addressed the proposed soil borings and groundwater sampling protocol. A copy of the HASP was available on-site at all times. The URS Site supervisor held a daily tailgate safety meeting covering aspects of the HASP before the start of any work.

2.2 Soil Boring and Soil/Groundwater Sampling

Boring locations were cleared for the presence of underground utilities by electromagnetic methods by Cruz Brothers Locators, Inc. of Scotts Valley, CA. The first five feet of each boring was physically cleared to at least five feet using an Airknife or hand auger by Gregg Drilling and Testing, Inc. (Gregg) of Martinez, CA.

Intrusive work for this investigation was completed in two phases. On April 20 and 21, 2004, a URS geologist observed Gregg advance six soil borings located within the onsite source contamination area, using a truck-mounted Geoprobe™ direct push technologies (DPT) rig to an approximate depth of 26 to 42 feet bgs (UB-7 through UB-12) (Attachment D).

The five borings, UB-7 and UB-9 through UB-12, were terminated due to refusal encountered by the Geoprobe™ DPT rig at depths of 26 to 42 ft. bgs, shortly after groundwater was first

encountered. The borings were continuously cored from five feet to their total depths, with soil samples collected for analysis at approximately 10 foot intervals. A grab groundwater sample was collected from each boring using a bailer at first encountered groundwater (except for depth-discrete hydropunches at UB-7 and UB-11). Boring UB-8 was abandoned when pea gravel was encountered at 3 ft. bgs while clearing the boring with the Airknife.

Since the Geoprobe™ DPT rig was incapable of driving a discrete water sampling probe deeper than first encountered groundwater due to the stiff soil conditions, the depth discrete groundwater sampling proposed for the second set of onsite borings was not performed. Due to the inability if Geoprobe™ DPT equipment to penetrate deeper that first encountered groundwater because of stiff soil conditions, URS requested a change in the scope of work from ACEH to allow the use of heavier cone penetrometer testing (CPT) sampling equipment for the offsite borings. The change in scope if the investigation was described in the URS letter, "Request for Modification of Soil and Groundwater Investigation Work Plan Addendum Field Procedures" submitted to ACEH on May 4, 2004 and approved May 28, 2004 (Attachment A).

On July 21 and 22, 2004, a URS geologist observed Gregg advance six soil borings using a van-mounted Cone Penetrometer Testing (CPT) rig to an approximate depth of 50 feet bgs. Two of the six holes were lithologically logged using the CPT probe. Soil samples were taken and depth discrete groundwater samples were attempted at the other four boring locations (Attachment D). Groundwater grab samples were taken from each of the six offsite boring locations. The approximate locations of the onsite and offsite boring locations are illustrated on Figure 2.

DPT soil samples were collected in clear acetate sleeves and CPT soil samples were collected in brass tubes. Soil samples selected for laboratory analysis were covered at each end by Teflon™ tape and plastic caps. Groundwater samples were collected in Volatile Organic Analysis (VOA) containers preserved with HCl. All samples were placed in an ice-filled cooler and transported under a chain-of-custody to Sequoia Analytical laboratory in Morgan Hill, CA.

Since the CPT equipment was not capable of simultaneous lithologic logging and depth discrete soil and groundwater sampling within the same borings, only two of the offsite borings were logged by CPT probe (UB-2 and UB-5). Two depth discrete soil samples were collected from each of the other four soil borings (UB-1, UB-3, UB-4, and UB-6). Two depth discrete groundwater samples were attempted in each boring using a hydropunch-type sampling device with extendable screen at likely water-bearing zones as determined by CPT logs and a pore pressure dissipation test (PPDT) at UB-5 (Attachment E). Water was not recovered during any of the depth discrete sampling attempts due to low permeability of the formation and clay smearing of the borehole walls. Temporary one-inch PVC well screen and casing was placed in all six of the open boreholes and non-depth discrete grab groundwater samples were collected by bailer.

Selected soil samples were screened in the field for possible volatile hydrocarbons using a photo-ionization detector (PID). DPT soil samples were collected for laboratory analysis at the groundwater interface, from areas of obvious contamination, and from intervals containing significant hydrocarbon concentrations as screened by the PID. CPT soil samples were taken near the groundwater interface based on data results from *in situ* logging and pore pressure dissipation tests. Following completion of sampling activities, all borings were sealed to the surface with tremied a neat Portland cement grout slurry.

2.3 Geology and Hydrogeology

Each onsite DPT soil boring was lithologically logged by a URS geologist (Attachment D). The general lithology of native soils underlying the site consists of interbedded sandy, gravelly silts, silty clays, and sandy gravelly clays extending to the bottom of the borings, which range from 26 to 42.5 feet bgs for onsite borings from this investigation (UB-7, UB-9 through UB-12). Cross sections representing the subsurface geology using soil borings from this investigation and previous soil boring and well logs (Attachment F) and have been included in this report and are presented as Figures 3, 4, and 5. Current and historical soil and groundwater analytical data is included on the cross sections and in tables as Attachment B.

Two offsite CPT borings (UB-2 and UB-5) were lithologically logged by an *in situ* cone penetrometer, which records the ratio of cone bearing pressure and sleeve friction. An algorithm run on computer software interprets the lithology based on this ratio. Interpreted CPT boring logs are presented in Attachment D. A detailed explanation of CPT technology and the method for interpretation of lithology is presented as Attachment E. Offsite CPT borings indicate interbedded clays, silts, silty clays, and clayey silts. Both CPT borings also indicate sand lenses ranging from 0.5 to 1.5 ft. in thickness at approximately 33 to 35 ft. bgs. Sand lenses were also detected in boring UB-5 from 5.25 to 6 ft. bgs and in UB-2 from 46.25 to 46.75 ft. bgs.

Groundwater was encountered in all onsite borings except abandoned boring UB-8 at depths ranging from 25 ft. bgs (UB-12) to 40 ft bgs (UB-9). PPDTs were conducted at both borings (UB-2 and UB-5) logged by the CPT rig. The PPDT at UB-5 indicated groundwater at 32.6 ft bgs. However, attempts to recover a depth discrete groundwater sample at 33 to 37 ft. bgs using a hydropunch with screen extended for 20 minutes yielded no water. The sample attempt was aborted. Similar conditions were encountered when using a hydropunch at other sample depths in UB-5 and UB-2. As a result, groundwater grab samples were collected from temporary screened PVC well casing set in all six offsite CPT borings after waiting a minimum of 2 hours for a sufficient volume of groundwater to collect a sample. Due to the slow recovery rate, groundwater levels did not stabilize before the borings were grouted.

Based on the Third Quarter 2004 sampling event on August 4, 2004, the groundwater flow direction is west-southwest at a calculated hydraulic gradient of approximately 0.018 feet per foot (Figure 6).

3.0 SOIL AND GROUNDWATER ANALYTICAL RESULTS

3.1 Soil Analytical Results

URS submitted soil samples collected at the groundwater interface, from areas of obvious contamination, and from intervals containing significant hydrocarbon concentrations as screened by the PID. Sequoia Analytical, a State of California DHS Certified Laboratory, analyzed the selected soil and groundwater samples for Gasoline Range Organics (GRO), BTEX, MTBE, ethanol, tertiary amyl methyl ether (TAME), ethyl tertiary butyl ether (ETBE), di-isopropyl ether (DIPE), tertiary butyl alcohol (TBA), 1,2 Dibromoethane (EDB), and 1,2 Dichloroethane (1,2-DCA) using EPA Method 8260B (Attachment G). Soil Analytical data is presented in Table 1 and Boring Groundwater Grab Sample Analytical Data is presented in Table 2.

Soil sample analytical results from the 32 samples collected from 9 borings can be summarized as follows:

- GRO were detected in 6 samples from four of five onsite borings at concentrations at or above laboratory reporting limits ranging from 6.9 milligrams per kilogram (mg/kg) (UB-7-15), where 15 represents sample depth in feet bgs, to 820 mg/kg (UB-10-25). GRO were also detected in borings UB-9 and UB-11. GRO was not detected in any offsite soil samples.
- Benzene was detected at concentrations at or above laboratory reporting limits in 2 samples from 2 onsite borings at concentrations of 0.0093 mg/kg and 0.17 mg/kg (UB-7-41 and UB-9-35, respectively). Toluene was detected at a concentration above laboratory reporting limit in one onsite sample (UB-9-35) at 0.014 mg/kg. Ethylbenzene was detected in four samples from four onsite borings at concentrations at or above laboratory reporting limits ranging from 0.031 mg/kg (UB-9-35) to 5.7 mg/kg (UB-10-25). Xylenes were detected in 13 samples from all five onsite borings at concentrations at or above laboratory reporting limits ranging from 0.0055 mg/kg (UB-7-5) to 37 mg/kg (UB-10-35). No BTEX compounds were detected in the offsite soil samples.
- MTBE was detected in 13 samples from four onsite borings and one offsite boring (UB-4) at concentrations at or above laboratory reporting limits ranging from 0.0056 mg/kg (UB-4-30.0) to 0.20 mg/kg (UB-7-41).
- TBA was detected in five samples from onsite three borings at concentrations at or above laboratory reporting limits ranging from 0.14 mg/kg (UB-9-35) to 0.85 mg/kg (UB-10-35).

- Fuel oxygenates other than MTBE and TBA, including ethanol, TAME, ETBE, DIPE, EDB, and 1,2-DCA were not detected at concentrations at or above laboratory reporting limits in any soil samples collected.
- Lead was analyzed and was detected in one sample at a concentration of 7.9 mg/kg (UB-10-25).

Below is a comparison of the soil analytical results from this investigation to the Regional Water Quality Control Board's (RWQCB) Environmental Screening Levels (ESLs). The ESLs are summarized in lookup tables in the "Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater" guidelines, as revised in July 2003, "*Volume 1: Summary Tier 1 Lookup Tables*". As specified in the Tier 1 Lookup Table A and C, ESLs for the constituents of concern (COC) are the same for commercial/industrial and residential use sites where groundwater is a potential drinking water resource, regardless of whether subsurface soil impact is less than or greater than 10 feet (or 3 meters) bgs.

Constituent	ESL (mg/kg)
GRO/TPH-g	100
Benzene	0.044
Toluene	2.9
Ethylbenzene	3.3
Xylenes	1.5
MTBE	0.023
TBA	0.073

Of the 32 soil samples collected during this investigation, only one sample (UB-10-25) exceeds the ESL for GRO with a concentration of 820 mg/kg. One sample (UB-9-35) exceeds the ESL for benzene with a concentration of 0.17 mg/kg. One sample (UB-10-25) exceeds the ESL for ethylbenzene with a concentration of 5.7 mg/kg. Five samples exceed the ESL for total xylenes with concentrations ranging from 3.0 mg/kg (UB-10-15) to 37 mg/kg (UB-10-25). Five samples exceed the ESL for MTBE with concentrations ranging from 0.034 mg/kg (UB-11-37) to 0.20 mg/kg (UB-7-41). Five samples exceed the ESL for TBA with concentrations ranging from 0.14 mg/kg (UB-9-35) to 0.85 mg/kg (UB-10-35). No samples exceed the ESL for toluene or fuel additives other than MTBE and TBA. No offsite soil samples from this investigation exceed the ESL's outlined in Table C: Residential Land Use ESLs for deep soils where groundwater is a potential source of drinking water.

The highest previous historical onsite soil COC concentrations, detected during 1990 adjacent to the USTs in boring/well RW-1 at 20 and 25 feet bgs, exceeded BTEX ESLs with concentrations of 1.4 mg/kg benzene, 18 mg/kg toluene, 8.0 mg/kg ethylbenzene and 40 mg/kg total xylenes. The highest historical offsite soil COC concentrations, detected during 1990 in

downgradient boring/well MW-5 at 25 feet bgs, exceeded TPH-g and BTEX ESLs with concentrations of 770 mg/ kg TPH-g, 4.8 mg/kg benzene, 44 mg/kg toluene, 13 mg/kg ethylbenzene and 94 mg/kg total xylenes. Soil samples from RW-1 and MW-5 were not analyzed for MTBE. It is likely that COC concentrations in soil at these areas has attenuated significantly since 1990, due to the much lower or non-detectable concentrations of COCs in soil samples from borings UB-7, located 10 feet from RW-1, and UB-1, located 30 feet from MW-5.

3.2 Groundwater Analytical Results

Depth discrete groundwater samples were collected using a hydropunch at two out of five onsite borings at depths of 31-36 ft. bgs (UB-7, UB-11). Grab groundwater samples were collected from onsite borings UB-9, UB-10, and UB-12 by bailer at depths of 42.5, 36, and 25 ft bgs, respectively. Tight soil conditions offsite also resulted in collecting grab groundwater samples at a depth of approximately 48 to 50 ft. bgs for all six offsite borings (UB-1 through UB-6). Groundwater samples were analyzed for GRO, BTEX, and fuel additives (including MTBE) using EPA Method 8260B. Groundwater elevation and maximum contaminant concentrations for the Third Quarter 2004 monitoring event are shown on Figure 6. Groundwater analytical results and isoconcentration contours for GRO, benzene, and MTBE are shown in Figures 7, 8, and 9, respectively. Historical quarterly groundwater monitoring analytical results are included in Attachment B.

Groundwater analytical results can be summarized as follows:

- GRO were detected in all five onsite groundwater samples and two of six offsite groundwater samples at concentrations at or above laboratory reporting limits ranging from 120 micrograms per liter (µ/L) (UB-12) to 32,000 µ/L (UB-7).
- Benzene was detected in four onsite groundwater samples and two offsite groundwater samples at concentrations at or above laboratory reporting limits ranging from 5.9 µ/L (UB-12) to 11,000 µ/L (UB-9).
- Toluene was detected in three onsite groundwater samples and one offsite groundwater sample at concentrations at or above laboratory reporting limits ranging from 1.2 µ/L (UB-6) to 2,400 µ/L (UB-10).
- Ethylbenzene was detected in four onsite groundwater samples and two offsite groundwater samples at concentrations at or above laboratory reporting limits ranging from 0.99 µ/L (UB-12) to 1,300 µ/L (UB-7).
- Total xylenes were detected in five onsite groundwater samples and four offsite groundwater samples at concentrations at or above laboratory reporting limits ranging from 0.81 µ/L (UB-1-48) to 4,000 µ/L (UB-7).

- MTBE was detected in five onsite groundwater samples and two offsite groundwater samples at concentrations at or above laboratory reporting limits ranging from 0.77 µ/L (UB-12) to 35,000 µ/L (UB-10).
- There were no other fuel additives (ethanol, TBA, DIPE, ETBE, TAME, 1,2-DCA, or EDB) detected at concentrations at or above laboratory reporting limits.

Below is a comparison of the groundwater analytical results from this investigation to the Regional Water Quality Control Board's (RWQCB) Environmental Screening Levels (ESLs). The ESLs are summarized in lookup tables in the "Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater" guidelines, as revised in July 2003, "*Volume 1: Summary Tier 1 Lookup Tables*". As specified in the Tier 1 Lookup Table A and C, ESLs for the COC are the same for commercial/industrial and residential use sites where groundwater is a potential drinking water resource, regardless of whether subsurface soil impact is less than or greater than 10 feet (or 3 meters) bgs.

Constituent	ESL (µg/L)
GRO/TPH-g	100
Benzene	1.0
Toluene	40
Ethylbenzene	30
Xylenes	13
MTBE	5
TBA	12

Of the eleven groundwater samples collected during this investigation, 7 samples exceeded the ESL for GRO with concentrations ranging from 120 µg/L (UB-12) to 32,000 (UB-7). Six samples exceeded the ESL for benzene with concentrations ranging from 5.9 µg/L (UB-12) to 11,000 µg/L (UB-9). Three samples exceeded the ESL for toluene with concentrations ranging from 960 µg/L (UB-7) to 2,400 µg/L (UB-10). Three samples exceeded the ESL for ethylbenzene with concentrations ranging from 1,000 µg/L (UB-10) to 1,300 µg/L (UB-7). Four samples exceeded the ESL for total xylenes with concentrations ranging from 51 µg/L (UB-11) to 4,000 µg/L (UB-7 and UB-10). Five samples exceeded the ESL for MTBE with concentrations ranging from 75 µg/L (UB-5) to 35,000 µg/L (UB-10). No samples exceeded the ESLs for fuel additives other than MTBE. The laboratory detection limits for COC for sample UB-11 were elevated due a GRO concentration of 1,200 µg/L.

In addition to groundwater analytical data from samples collected during the investigation, 2004 quarterly groundwater monitoring data from the second and third quarters can also be evaluated with respect to ESLs for site characterization. GRO exceeded the ESL in all of the

five wells (MW-2, MW-5, MW-8, MW-9, MW-10) sampled in the second quarter at concentrations ranging from 5,900 µg/L (MW-5) to 120,000 µg/L (MW-2). Benzene exceeded the ESL in all five wells at concentrations ranging from 230 µg/L (MW-9) to 15,000 µg/L (MW-2). MTBE exceeded the ESL in three wells at concentrations ranging from 42 µg/L (MW-5) to 2,000 µg/L (MW-8). Wells MW-1 and RW-1 could not be sampled due to the presence of free product. It is assumed that in both wells, the dissolved concentrations for GRO, BTEX, MTBE, and other fuel additives exceeded their respective ESLs.

In the third quarter of 2004, GRO exceeded the ESL in one of the two wells sampled at a concentration of 38,000 µg/L (MW-2). Well MW-5 had an increased laboratory reporting limit of 2,500 µg/L due to an elevated concentration of MTBE. Benzene exceeded the ESL in one well at a concentration of 9,100 µg/L (MW-2). MTBE exceeded the ESL in both wells at concentrations of 390 µg/L (MW-5) and 430 µg/L (MW-2). Wells MW-1, MW-8, MW-9, MW-10 and RW-1 could not be sampled due to the presence of free product. It is assumed that in these wells, the dissolved concentrations for GRO, BTEX, MTBE, and other fuel additives exceeded their respective ESLs. Second and third quarter 2004 groundwater analytical data is presented in Attachment B and Figures 3 through 6.

3.3 Waste Disposal

Soil generated during the field investigation was temporarily stored on-site in DOT approved 55-gallon drums. Following waste characterization, Dillard Environmental Services was contracted to dispose of all drilling-related waste.

4.0 CONTAMINANT PLUME DEFINITION

Results of this investigation indicate soil petroleum hydrocarbon contamination is limited to borings UB-4, UB-7, and UB-9 through UB-11 (Figures 2 through 5). With the exception of UB-4, these borings are all in proximity (<40 ft.) from the UST complex. Samples from borings UB-4 show low levels of MTBE, which is the most mobile COC.

The groundwater dissolved petroleum hydrocarbon plume contaminant plume can be defined using groundwater data from this investigation and quarterly groundwater monitoring data from monitoring wells associated with the site. Extremely low permeability conditions prevented depth discrete sampling at nine of eleven boring locations. As a result, a majority of the groundwater samples taken at this site were grab samples, which could contain groundwater from several water-bearing zones. However, it is unlikely that there are multiple water bearing zones within the interbedded silts and clays encountered in the investigation. The only other lithology encountered in the investigation likely to contain descrete water-bearing zones is a sand lens of approximately 1-3 ft. in thickness at approximately 32 to 35 ft bgs in offsite borings UB-2 and UB-5, and a second sand lens at approximately 46 to 47.5 ft bgs in UB-2 (Figures 3 and 5). Isoconcentration maps for GRO, benzene, and MTBE are

presented as figures 7, 8, and 9, respectively. Data for the isoconcentration maps has been compiled from the groundwater data from this investigation and from the most recent available data for monitoring wells associated with the Site. The data indicates the maximum downgradient extent of the dissolved phase petroleum hydrocarbon plume is defined by boring UB-3, where a trace concentration of xylenes was detected 300 ft south of the USTs. Concentrations of GRO and benzene exceeding the RWQCB ESLs were detected in boring UB-6 at 270 feet southwest and downgradient of the site USTs.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The purpose of the investigation was to provide contaminant source characterization and contaminant plume definition at and around the Site. Fieldwork was conducted for source characterization in order to assess the lateral and vertical extent of petroleum hydrocarbons in soils in the vicinity of the contaminant sources, such as the UST complex, former and current product dispensers, and product piping. The results of the investigation performed by URS can be summarized as follows:

Twenty-one of thirty-two soil samples had detections above the laboratory reporting limits for either GRO, BTEX, MTBE, and/or other fuel oxygenates. Onsite soil borings UB-7, UB-9, UB-10, and UB-11, which were all located in the vicinity of the UST complex, had the highest concentrations of COCs, exceeding applicable RWQCB ESLs for GRO, benzene, ethylbenzene, total xylenes, MTBE and TBA. Soil sample UB-10-25 had the maximum concentrations detected in this investigation of GRO (820 mg/kg), ethylbenzene (5.7 mg/kg), and xylene (37 mg/kg). The maximum benzene, toluene and MTBE concentrations detected in soil were 0.17 mg/kg, 0.014 mg/kg, and 0.20 mg/kg, respectively, in sample UB-7-41. Comparisions of historical analytical data from boring/well RW-1, located adjacent to the USTs, with that from boring UB-7, located 10 feet away, imply that attenuation of COCs in soil has occurred over time in this area.

BTEX compounds were not detected at or above laboratory reporting limits in soil samples collected from offsite borings UB-1 and UB-2. Only two offsite soil samples (UB-4-30.0 and UB-4-30.5) had detections of COC (MTBE) above the laboratory reporting limit. Both detections of MTBE were below applicable RWQCB ESLs. Comparisions of historical analytical data from offsite downgradient boring/well MW-5, located adjacent on Mangels Avenue, with that from boring UB-1, located 30 feet away, imply that attenuation of COCs in soil has occurred over time in this area.

Groundwater sampling results showed similar trends to the soil samples with onsite borings UB-7 and UB-9 through UB-11 showing the highest concentrations of the COC. Other than MTBE, no fuel additives were detected at or above reporting limits in groundwater samples collected during this investigation.

Two offsite downgradient groundwater samples taken along Mangels Ave. had detections above the laboratory detection limit for xylenes (UB-1 and UB-3). However, both concentrations were below the applicable RWQCB ESL for xylene. Two offsite groundwater samples (UB-5 and UB-6) taken from borings along 35th Ave. had detections at or above the

laboratory reporting limits for GRO, BTEX, and MTBE, and exceeded applicable ESLs for GRO, benzene and MTBE. Further downgradient delineation of the dissolved-phase hydrocarbon plume may be impractical due to the presence of two known or potential leaking fuel UST complexes: a former Exxon Service Station at the intersection of 35th Ave and School St., and an active Quick Stop Service Station at the intersection of 35th Ave. and Mangels Ave.

Recent sampling events indicate groundwater flow direction is to the east-southeast at a calculated hydraulic gradient of 0.018 feet per foot (Figure 6).

5.1 Offsite Monitoring Well Installations

Based on these conclusions, URS recommends that two additional off-site groundwater monitoring wells be installed. URS recommends installing proposed well MW-11 on School Street, around the corner from boring UB-6 on 35th Avenue. This is the farthest practical downgradient location for a well before encountering the former Exxon Site. URS recommends installing the second proposed well, MW-12, just past boring UB-3 on Mangels Ave. The rationale for installing monitoring wells at these two locations is based on detections of COC in the most distal offsite soil borings (UB-3 and UB-6). URS is including two options for well constructions that use different technologies. The preferred first option is a multiple chambered casing that can accommodate up to three discrete screened intervals. The second option would be to install nested, traditional PVC wells screened at discrete saturated zones.

The proposed multi-chambered wells will be constructed of Teflon™ Continuous Multi-Port Tubing (CMT) installed in continuously cored borings using a sonic drilling system with conductor casing to seal off multiple water bearing zones. Each chamber of the CMT will be perforated to screen the precise interval of each discrete saturated zone encountered during continuous coring. CMT is available with three or seven chambers. URS recommends three-chamber CMT due to the nearly homogenous lithology encountered in borings UB-1 through UB-12. Centralizers will be used as needed because CMT will be coming off of a large spool. A 2/12 sand filter pack will be installed to 1 to 2 feet above the top of each screened interval overlain by hydrated bentonite pellets to the bottom of the next screened interval. Above the top-most screen interval and bentonite seal, the boring will be grouted to the surface with cement/bentonite (Attachment H).

The second option consists of nested wells constructed of Schedule 40 PVC with 0.010-inch slotted screen with a maximum screened interval of 15 ft. These may be installed using either a sonic or hollow stem auger drill rig. The exact depth and screened interval length of the proposed wells will be determined by an experienced URS field geologist based on the lithology of the boring. A filter pack consisting of No. 2/12 sand will be installed to 1 to 2 feet above the top of each well screen, which will be overlain by 1 to 2 feet of bentonite, and bentonite-cement grout to the surface (Attachment H).

Wells will be completed with a traffic-rated vault-box to protect each well. After the completion of the wellhead fittings, the monitoring wells will be surveyed. A California-

licensed land surveyor will be scheduled to survey the top-of-casing elevations with respect to mean sea level (NAVD '88 datum) and for horizontal coordinates (NAD '83 datum).

Within 48 hours after well installation, the new monitoring wells will be developed. The process will consist of surging and bailing each well to remove fine-grained sediments from the well and sand pack. Adjustments will be made accordingly for developing CMT monitoring wells as traditional surging methods are not feasible. Periodic measurements of pH, conductivity, temperature, and turbidity will be recorded during development. If a well contains free product, it will not sampled and free product will be removed according to California Code of Regulation, Title 23, Div. 3, Chap. 16, Section 2655, UST Regulations. A minimum of three and a maximum of ten casing volumes of groundwater will be removed until water quality parameters have stabilized. All purge water generated during well development will be properly disposed of offsite at a California regulated facility.

Upon ACEH approval of the recommendation to install two additional offsite monitoring wells, URS will complete the proposed work. URS will submit a Soil and Water Investigation Completion Report within 180 days of approval of the proposed work. Pursuant to ACEH request, URS will submit a Corrective Action Plan (CAP) within 90 days of submitting the Soil and Water Investigation Completion Report.

6.0 LIMITATIONS

This report is based on data, site conditions, and other information that are generally applicable as of the date of the report, and the conclusions and recommendations herein are therefore applicable only to that time frame. This report has been prepared solely for the use of Atlantic Richfield Company and the lead regulatory agency, and should not be used by any third party.

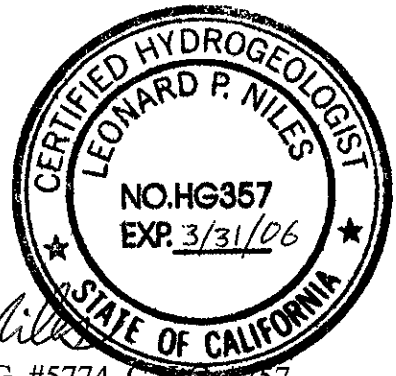
Background information, including but not limited to previous field measurements, analytical results, site plans, and other data has been furnished to URS by Atlantic Richfield Company, its previous consultants, and/or third parties that URS has used in preparing this report. URS has relied on this information as furnished. URS is not responsible for nor has it confirmed the accuracy of this information.

The analytical data provided by the laboratory approved by Atlantic Richfield Company have been reviewed and verified by that laboratory. URS has not performed an independent review of the data and is neither responsible for nor has confirmed the accuracy of these data.

We appreciate the opportunity to present this Soil and Groundwater Investigation Report to the ACEH on behalf of ARCO and trust that this document meets with your approval. Please do not hesitate to contact us at (510) 874-1720 with any questions or comments.

Sincerely,

URS CORPORATION



Kevin Uno
Staff Geologist

Leonard P. Niles, R.G. #5774, C.H.G. #357
Project Manager

cc: Mr. Kyle Christie, Remediation Management, (electronic file uploaded to ENFOS)
Ms. Liz Sewell, ConocoPhillips (electronic file upload to FTP server)

Attachments:

Figure 1 – Site Location Map
Figure 2 –Site Map with Boring, Well, and Cross Section Locations
Figure 3 – Cross Section A-A'
Figure 4 – Cross Section B-B'
Figure 5 – Cross Section C-C'
Figure 6 – Groundwater Elevation Contour and Analytical Summary Map, Third Quarter (August 4, 2004)
Figure 7 – GRO Groundwater Isoconcentration Map
Figure 8 – Benzene Groundwater Isoconcentration Map
Figure 9 – MTBE Groundwater Isoconcentration Map

Table 1 – Soil Analytical Results
Table 2 – Groundwater Analytical Results

Attachment A – ACEH Correspondence dated September 9, 2002, March 19, 2003, October 13, 2003, January 13, 2004, and May 28, 2004.

Attachment B – Historical Soil and Groundwater Analytical Data

Attachment C – Soil Boring Permits

Attachment D – Soil Boring Logs

Attachment E – Cone Penetrometer Testing Supplemental Data

Attachment F – Historical Soil Boring and Well Logs

Attachment G – Laboratory Analytical Reports and Chain-of-Custody Records

Attachment H – Typical Monitoring Well Completion Diagrams

References:

A: *Supplemental Site Investigation*, Alton Geoscience Inc., September 4, 1990
B: *Soil Sampling Report*, Kaprealian Engineering Inc., October 11, 1990
C: *Phase III Supplemental Site Investigation Study*, Alton Geoscience Inc, August 1991.
D: *Baseline Assessment Report,* Emcon Environmental, December 24, 1994.
E. *Soil and Groundwater Investigation Workplan*, URS Corp., October 28, 2002
F. *Soil and Groundwater Investigation Workplan Addendum*, URS Corp., May 19, 2003
G. *Response to Technical Comments from ACHC on 'Soil and Groundwater Investigation Workplan Addendum'*, URS Corp., December 13, 2003
H. *Request for Modification of 'Soil and Groundwater Investigation Workplan Addendum' Filed Procedures*, URS Corp., May 4, 2004

REFERENCE:

BASE MAP FROM USGS TOPO!
NORTH REGION 7

7.5 MINUTE TOPOGRAPHIC
PHOTOREVISED 1998

QUADRANGLE LOCATION

NORTH

0 1400 2800

APPROXIMATE SCALE 1"= 1400'

URS	Project No. 38486822 Former BP Service Station #11132 3201 35th Avenue Oakland, California	SITE LOCATION MAP	FIGURE 1

Oct 18, 2004 - 2:21pm
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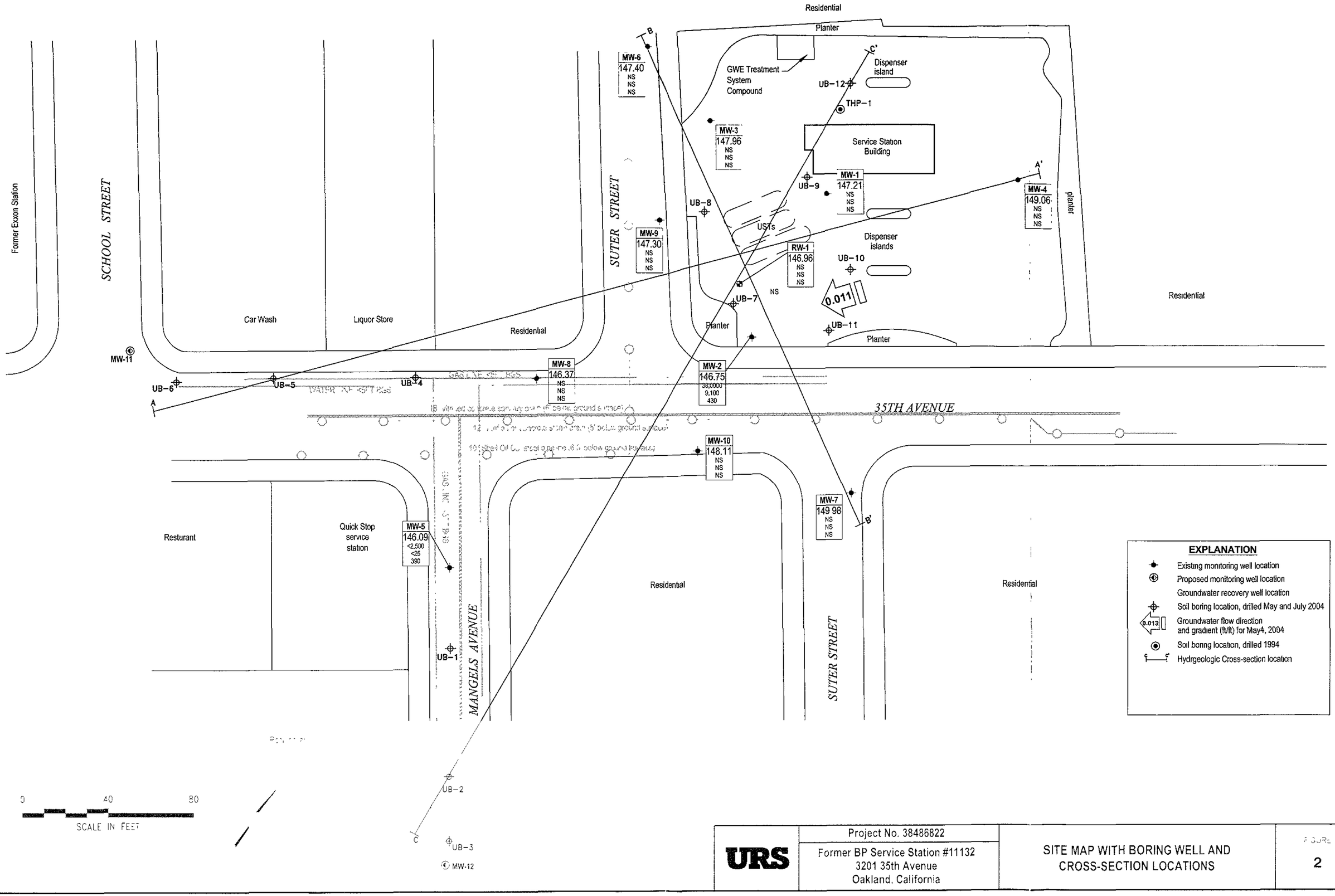
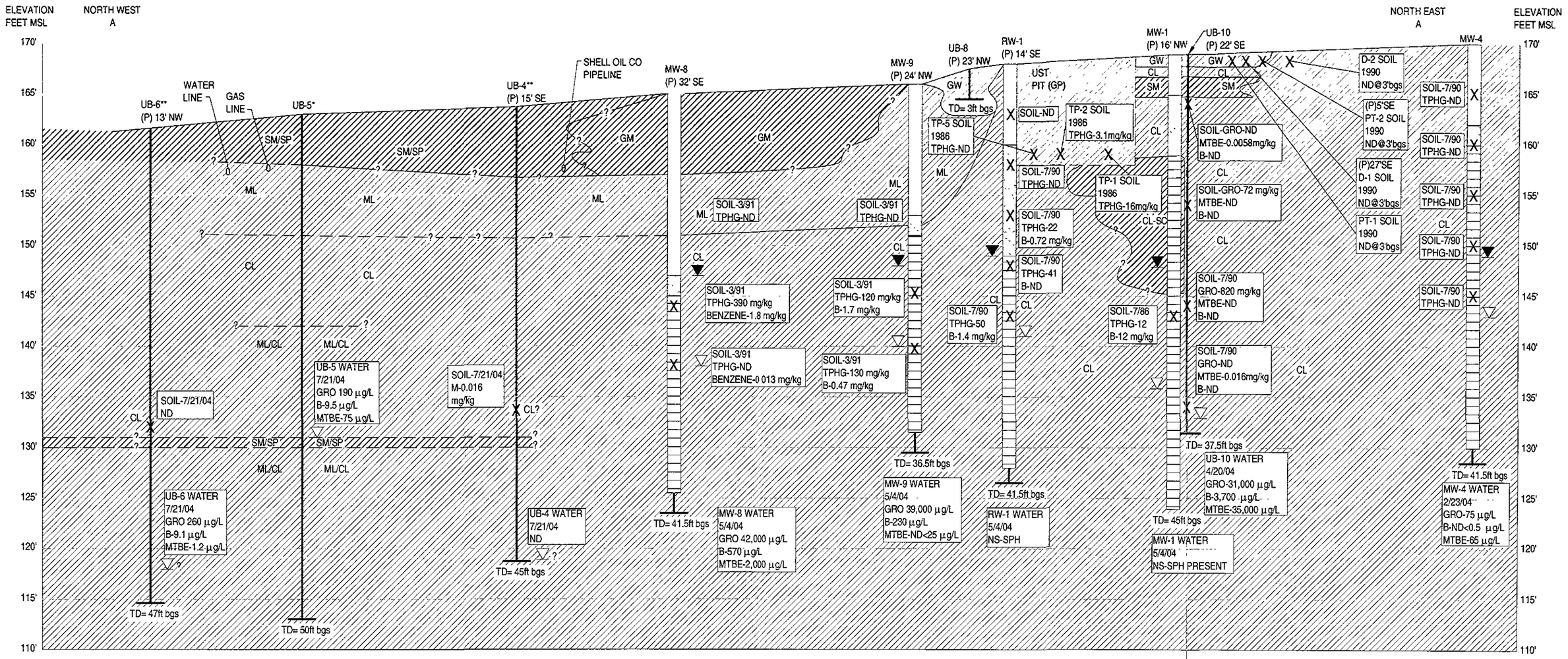


URS	Project No. 38486822 Former BP Service Station #11132 3201 35th Avenue Oakland, California	SITE MAP WITH BORING WELL AND CROSS-SECTION LOCATIONS	FIGURE 2



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 } HIGH PERMEABILITY
SP= SAND

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

ML=SILT
CLAY
CH=CLAY } LOW PERMEABILITY

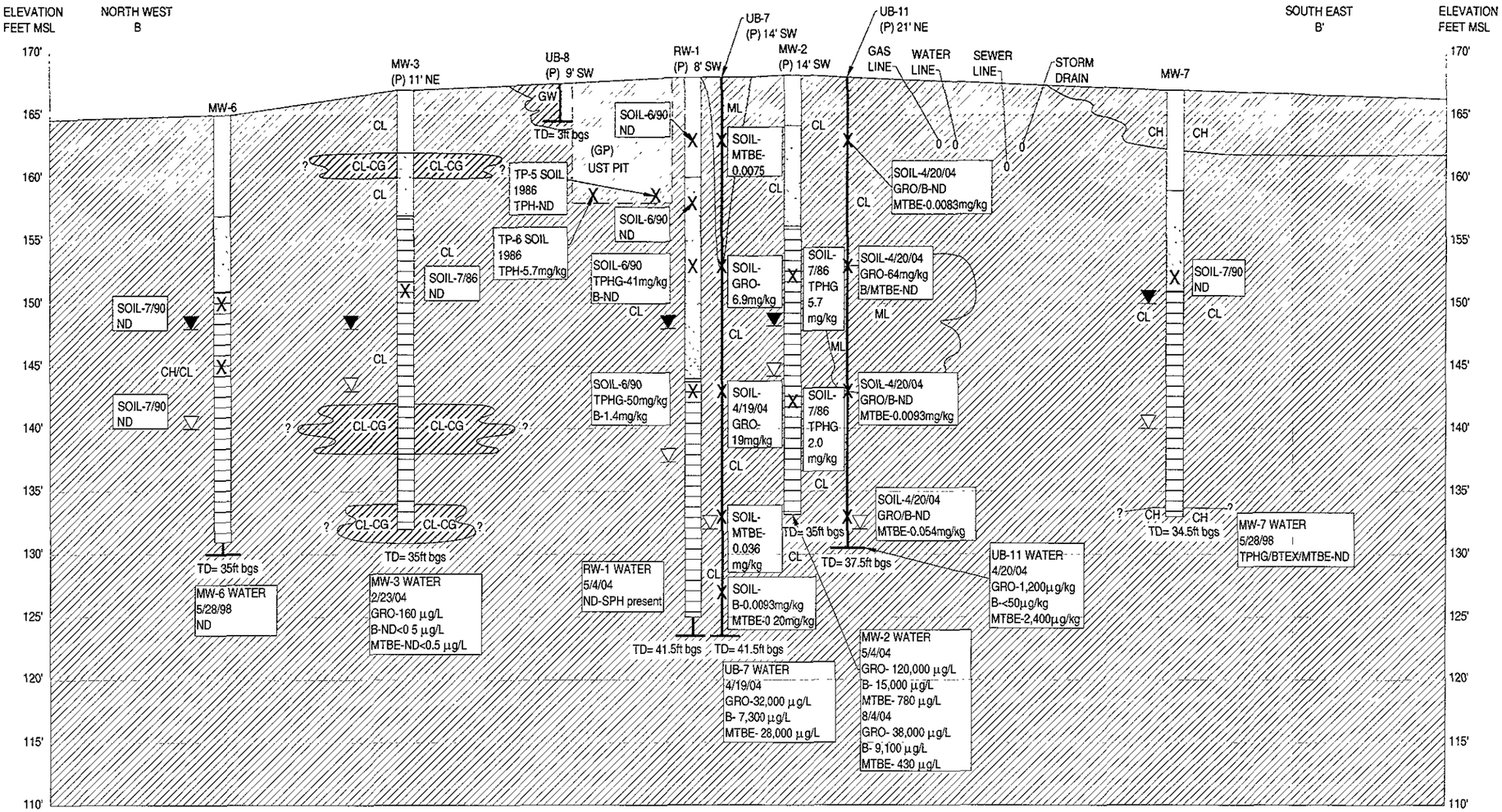
CL / SM — LITHOLOGY CONTACT; INFERRED WHERE DASHED OR QUERIED

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 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 } HIGH PERMEABILITY
SP= SAND

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

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

? 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

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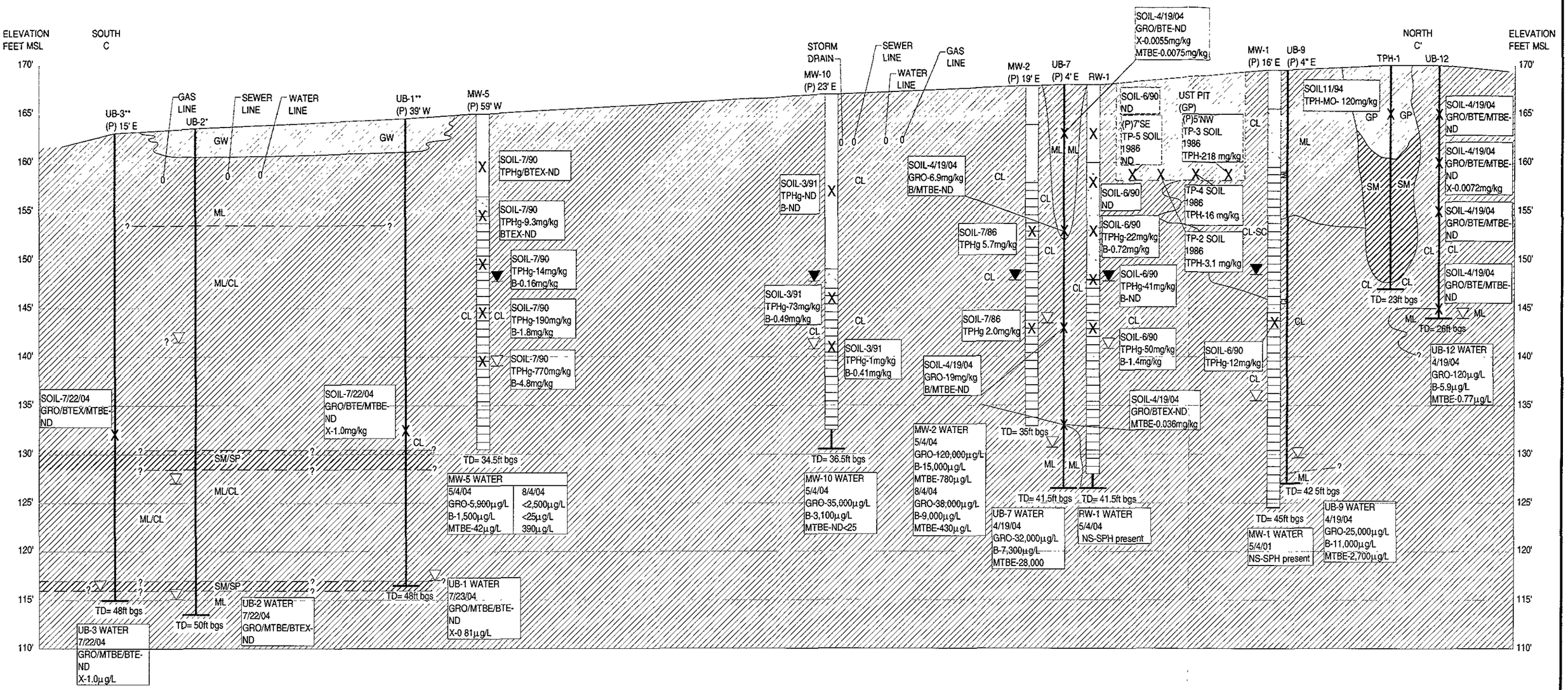


EXPLANATION

(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=GRAVELEY CLAY } MODERATE PERMEABILITY
SC=CLAYEY SAND

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

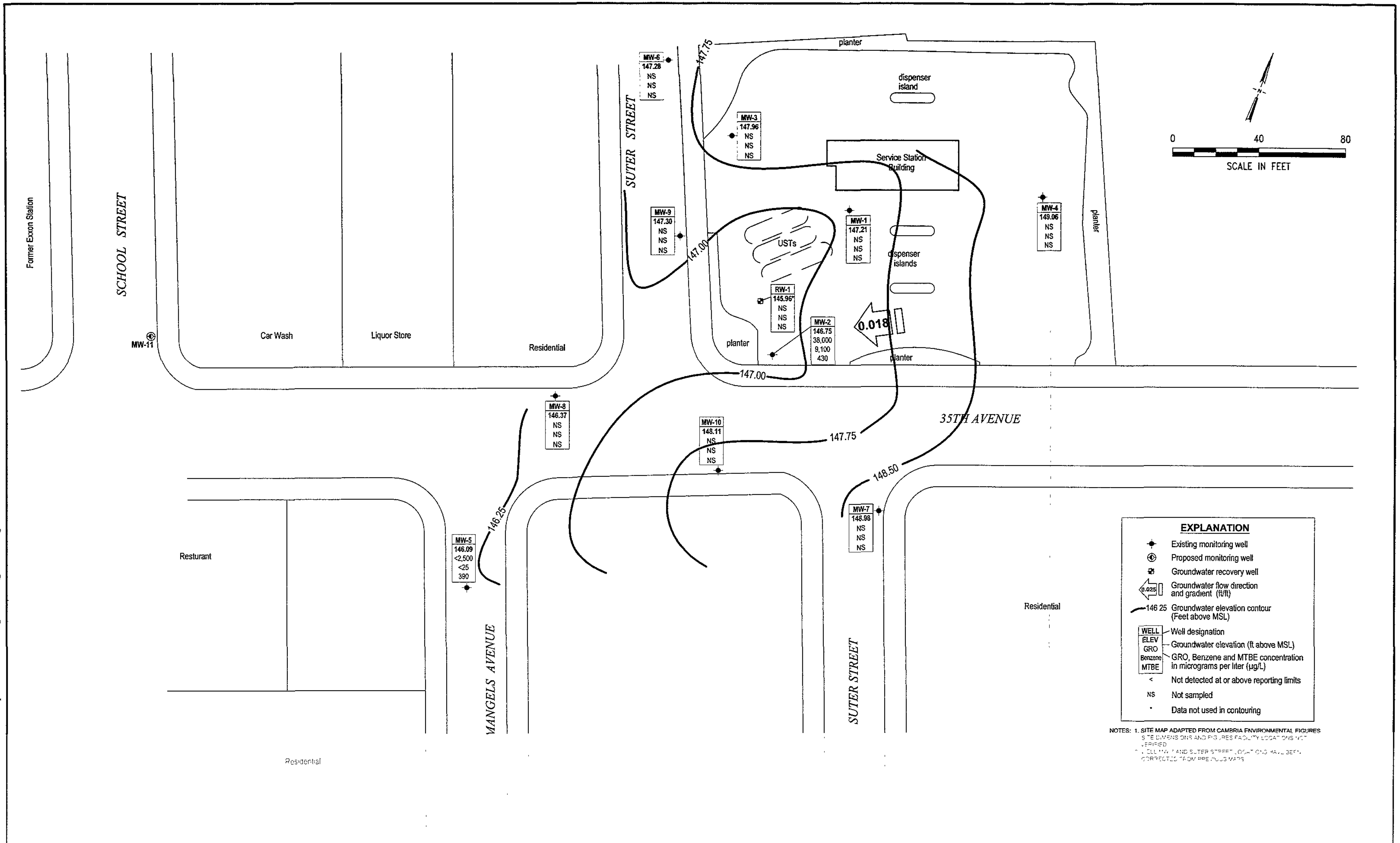
CL / SM LITHOLOGY CONTACT, INFERRED WHERE DASHED OR QUERIED

UST EXCAVATION; BACKFILLED WITH GRAVEL

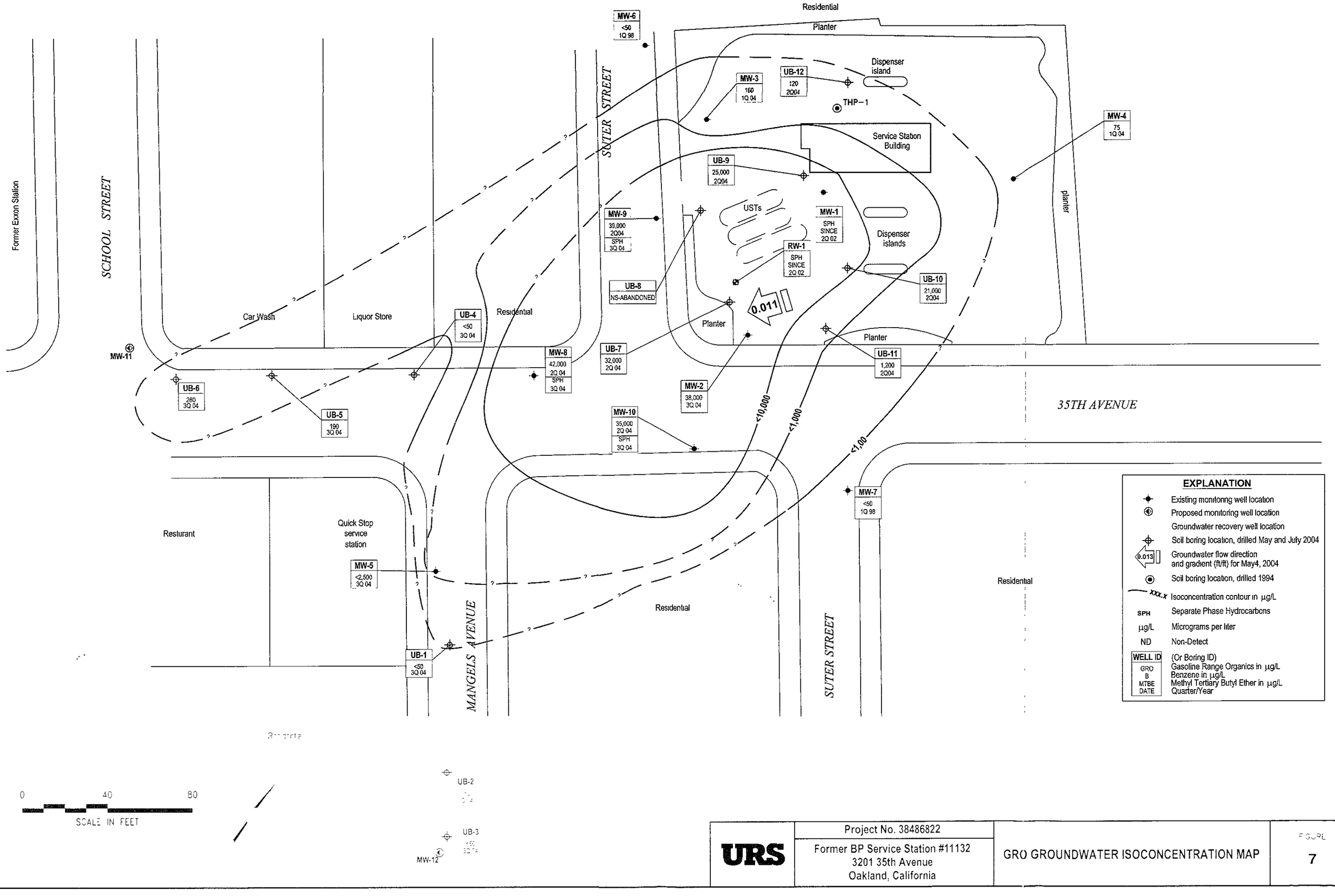
0 30 60 HORIZONTAL SCALE IN FEET

0 10 20 VERTICAL SCALE IN FEET

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



URS	Project No. 38486822 Former BP Service Station #11132 3201 35th Avenue Oakland, California	GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL SUMMARY MAP Third Quarter 2004 (August 4, 2004)	FIGURE 6



URS	Project No. 38486822 Former BP Service Station #11132 3201 35th Avenue Oakland, California	GRO GROUNDWATER ISOCONCENTRATION MAP	FIGURE 7

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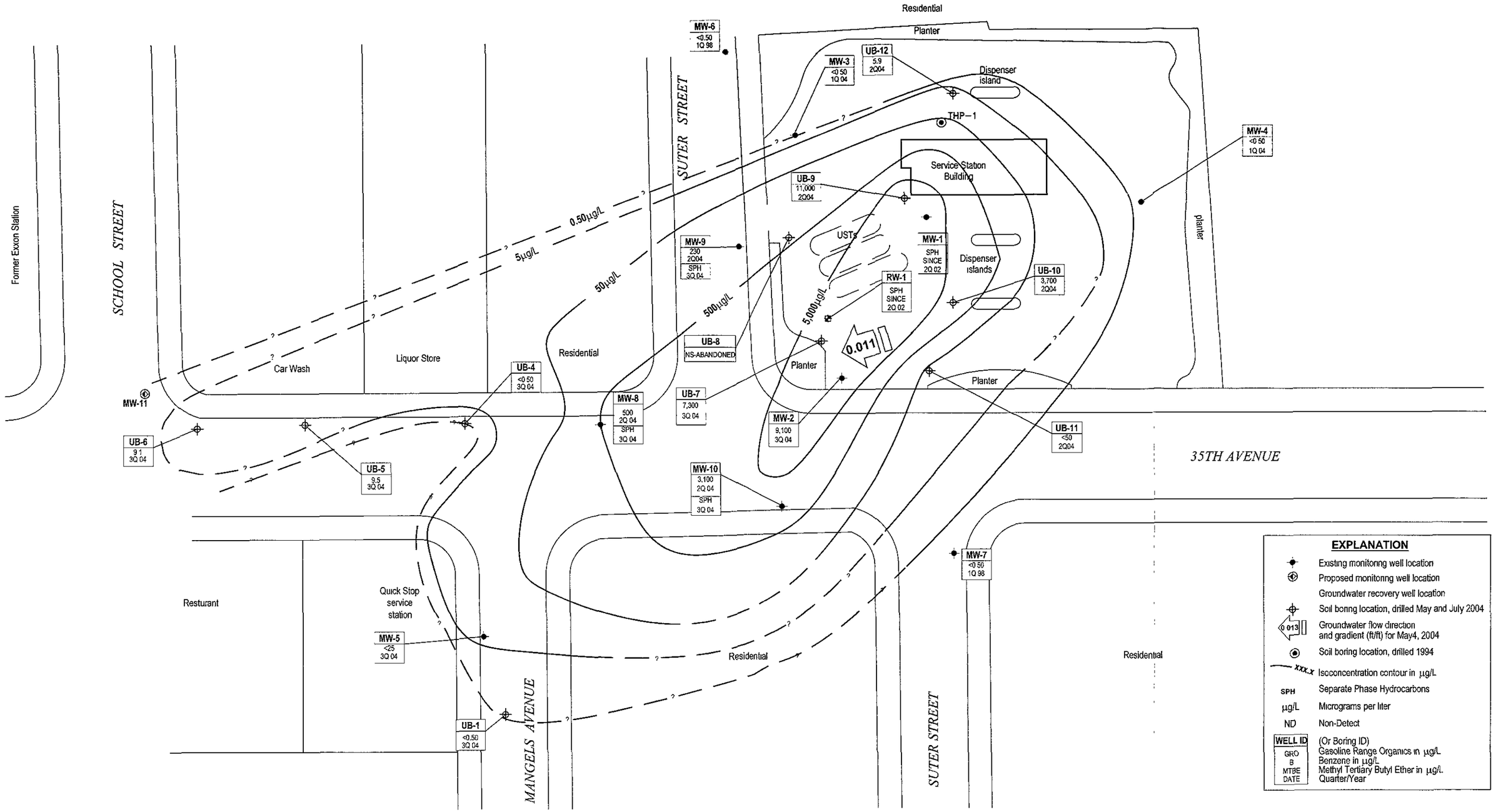
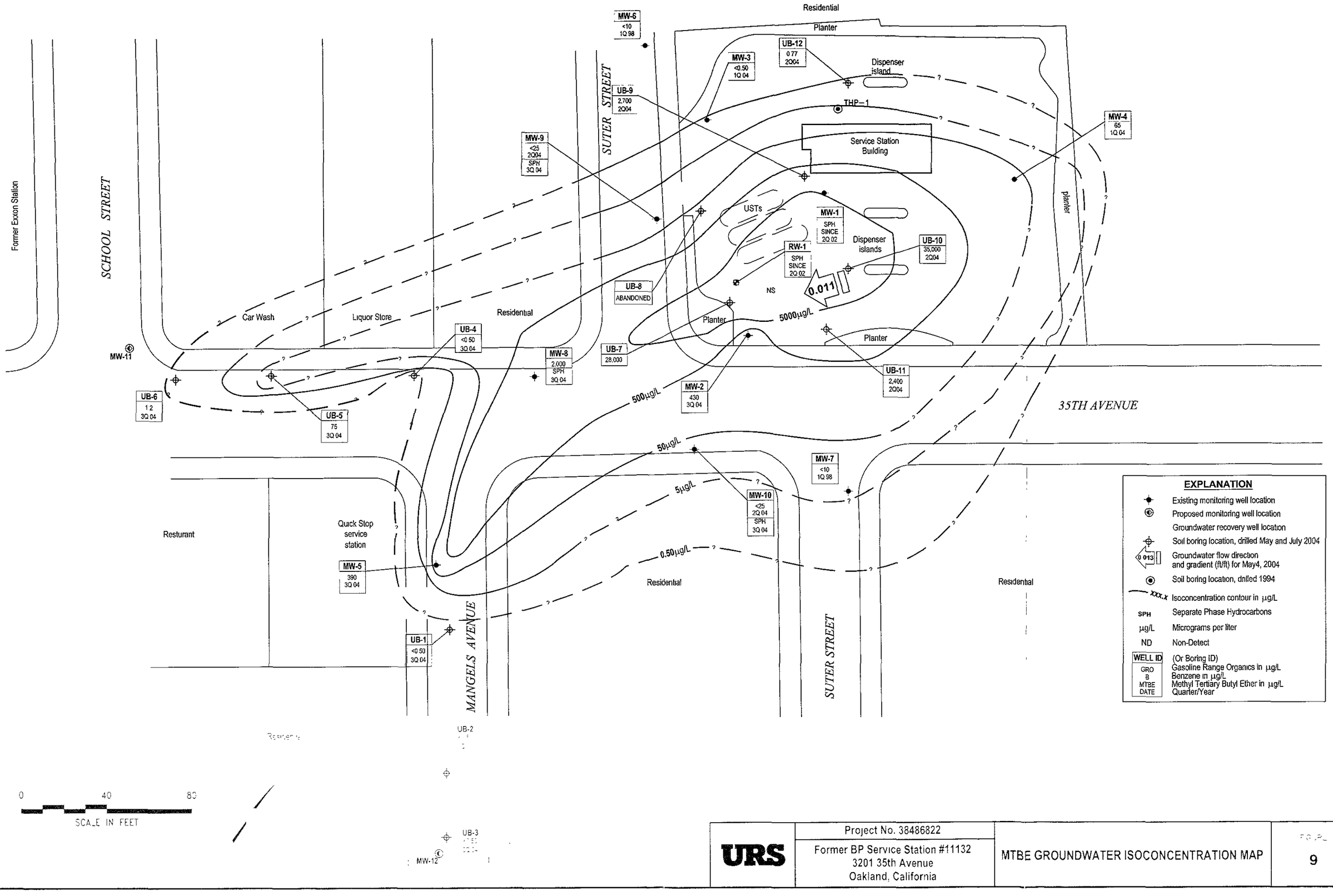


URS	Project No. 38486822 Former BP Service Station #11132 3201 35th Avenue Oakland, California	BENZENE GROUNDWATER ISOCONCENTRATION MAP	FIGURE 8



URS	Project No. 38486822 Former BP Service Station #11132 3201 35th Avenue Oakland, California	MTBE GROUNDWATER ISOCONCENTRATION MAP	FIGURE 9

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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

ATTACHMENT A
ACEH Correspondence dated September 9, 2002, October 13, 2003, March 19, 2003, January 13, 2004, and May 28, 2004

"Hwang, Don, Env. Health" <don.hwang@acgov.org>

05/28/2004 08:22 AM

To: "'Leonard_Niles@URSCorp.com'" <Leonard_Niles@URSCorp.com>
cc:
Subject: RE: Site #11132 workplan modification

Leonard, The proposed changes are acceptable. Don

-----Original Message-----
From: Leonard_Niles@URSCorp.com [mailto:Leonard_Niles@URSCorp.com]
Sent: Wednesday, May 05, 2004 10:26 AM
To: DHwang@co.alameda.ca.us
Cc: supplpv@bp.com; Joseph_Gonzales@URSCorp.com; Robert_Horwath@URSCorp.com
Subject: Site #11132 workplan modification

Don,

URS advanced six onsite geoprobe borings at the former BP site#11132 at 3201 35th Avenue, Oakland on April19-20, 2004. Due to difficulties encountered in drilling due to dense soils, URS proposes using a cone penetration testing (CPT) rig for the proposed offsite borings as described in the attached letter (hard copy in mail). Please let me know if the proposed change in scope of work is acceptable.

Leonard P. Niles, R.G./C.H.G
Senior Geologist
URS Corporation
1333 Broadway, Suite 800
Oakland, CA 94612
Direct: 510.874.1720
Fax: 510.874.3268

(See attached file: BP 11132 ACHCS SWI Modification Letter_5-4-04_DRAFT.doc)

URS

May 4, 2004

Mr. Don Hwang
Alameda County Health Care Services
1131 Harbor Bay Parkway, Ste. 250
Alameda, CA 94502-6577

RE: Fuel Leak Case No. RO0000014, BP Station #11132, 3201 35th Ave., Oakland, CA, Request for Modification of Soil and Groundwater Investigation Work Plan Addendum Field Procedures.

Dear Mr. Hwang,

On behalf of Atlantic Richfield Company (RM, an affiliate of BP), URS has prepared this letter to the Alameda County Health Care Services (ACHCS) requesting a modification to field procedures proposed in the *Soil and Groundwater Investigation Workplan Addendum,* submitted by URS on May 28, 2003, and a further letter responding to ACHCS technical comments submitted by URS on December 13, 2003. ACHCS approved the proposed scope of work for the soil and groundwater investigation at the former BP service station #11132 at 3201 35th Avenue, Oakland in a letter dated January 13, 2004.

URS performed the onsite portion of the soil and groundwater investigation on April 19 and 20, 2004, advancing six direct push technology (DPT) borings to a maximum depth of 42.5 feet below ground surface (bgs) with a truck-mounted Geoprobe™ rig. Due to unexpectedly high resistance of subsurface soils, the Geoprobe™ DPT rig was not able to penetrate significantly deeper than first encountered groundwater. Vadose zone soil samples and a grab groundwater sample were collected from each boring. It was not possible to collect depth-discrete groundwater samples in the proposed six separate adjacent borings as originally planned, since the DPT depth-discrete water sampling device would not penetrate the high density soils to adequate depths.

Since the Geoprobe™ DPT rig as originally proposed is inadequate for the purpose of collecting depth-discrete groundwater samples in the dense soils encountered in the site vicinity, URS requests a change in scope of work for the proposed offsite borings. URS proposes the use of a cone penetration testing (CPT) rig for logging of the soils and collection of depth-discrete water samples. The CPT rig determines soil characteristics by hydraulically driving a cone penetrometer into subsurface soils. The subsurface stratigraphy is continuously logged using friction ratio and pore water pressure measurement data. When using dual casing, the CPT system is capable of collecting depth-discrete water samples simultaneously with stratigraphic logging within the same borehole. It can collect individual soil samples with some difficulty but not is not capable of continuous coring. Because of the heavier weight of the rig and more powerful hydraulic drive, the CPT rig can penetrate denser soils deeper than the Geoprobe™ DPT rig can. A detailed summary of DPT technology from the EPA *Expedited Site Assessment Guidelines* is attached.

URS proposes advancing only one boring at each offsite location, instead of the originally proposed two, for a total of six offsite borings. The locations will remain the same as originally

URS Corporation
1333 Broadway, Suite 800
Oakland, CA 94612-1924
Tel: 510.893.3600
Fax: 510.874.3268

proposed, three along 35th Avenue and three along Mangels Avenue. URS will collect depth-discrete groundwater samples from relatively high-permeability saturated zones encountered to a maximum depth of approximately 50 feet. Due to the difficulty in soil sampling with the CPT system, URS will collect only one soil sample per boring within the capillary fringe zone. Since the primary purpose of the offsite borings is the downgradient delineation of the dissolved-phase hydrocarbon plume in groundwater, one soil sample per boring should be adequate.

URS does not recommend additional onsite borings with the CPT rig, since the primary purpose of the onsite investigation was soil characterization of the source area, which has been accomplished with the previous Geoprobe™ borings. The existing onsite monitoring wells and grab groundwater samples from the Geoprobe™ borings have provided adequate data for onsite dissolved-phase plume characterization. If necessary, URS can perform the additional CPT borings adjacent to some or all of the previous onsite Geoprobe™ borings.

URS is awaiting approval of City of Oakland encroachment permits to advance the proposed offsite DPT borings located along the 35th Avenue and Mangels Avenue. These permit applications may need to be modified for the revised scope of work, which would be only six borings using a CPT rig. In our January 23, 2004 letter, URS had requested an extension for the subsurface investigation report from the previous due date of March 13, 2004 to 60 days after completion of subsurface investigation field activities, subject to approval of encroachment and boring permits. While URS can currently submit a report for the completed onsite portion of the investigation, we feel it would be more appropriate in addition to being more cost effective to submit the results of the combined onsite and offsite soil and water investigation in a single report within 60 days after completion of the offsite portion of the investigation.

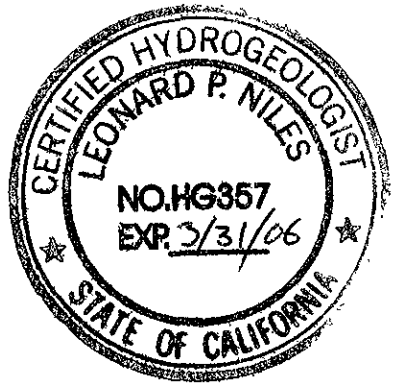
URS would appreciate approval of our proposal to revise the scope of work to six offsite borings using a CPT rig and no additional onsite borings. URS would also appreciate approval to submit the combined onsite and offsite soil and water investigation report within 60 days after completion of the offsite borings, or notification of whether a separate report for the completed onsite borings should be submitted first with the offsite report to be submitted later. Please feel free to contact me at 510.874.1720 with any questions or comments you may have.

Sincerely,

URS Corporation

Leonard P. Niles

Leonard P. Niles, R.G. 5774/C.H.G 357
Project Manager



ATTACHMENT

United States Environmental Protection Agency, *Expedited Site Assessment Guidelines*, Chapter V, *In Situ Measurements Using Specialized Direct Push Probes*, pages V-30 – V-38, March 1997.

Cc: Mr. Paul Supple: BP/ARCO, Environmental Resources Management, PO Box 6549, Moraga, CA 94549
Ms. Liz Sewell, ConocoPhillips, 75 Broadway, Sacramento, CA 95818

11132

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

January 13, 2004 ZM

Mr. Paul Supple
BP Oil
PO Box 6549
Moraga, CA 94570

Dear Mr. Supple:

Subject: Fuel Leak Case No. RO0000014, BP Station #11132, 3201 35th Ave., Oakland, CA

Alameda County Environmental Health (ACEH) staff has reviewed "... Response to Technical Comments from ACHCS on 'Soil and Groundwater Investigation Workplan Amendment,' May 28, 2003" dated December 12, 2003 by URS Corporation (URS). ACEH approves of "Soil and Groundwater Investigation Workplan Amendment, dated May 28, 2003" with the "... Response ..." dated December 12, 2003. We request that you perform the work proposed and send us the technical reports requested below.

TECHINCAL REPORT REQUEST

Please submit technical reports to the Alameda County Environmental Health (Attention: Don Hwang), according to the following schedule:

March 13, 2004 - Soil and Groundwater Investigation

These reports are being requested pursuant to the Regional Water Quality Control Board's (Regional Board) authority under Section 13267 of the California Water Code. If you have any questions, please call me at (510) 567-6746.

Sincerely,

Don Hwang

Don Hwang
Hazardous Materials Specialist
Local Oversight Program

C: Leonard Niles, URS Corporation, 500-12th St., Suite 200, Oakland, CA 94607-4014
Donna Drogos
File

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

October 13, 2003

Mr. Paul Supple
BP Oil
PO Box 6549
Moraga, CA 94570

Dear Mr. Supple:

Subject: Fuel Leak Case No. RO0000014, BP Station #11132, 3201 35th Ave., Oakland, CA

Alameda County Environmental Health (ACEH) staff has reviewed "Soil and Groundwater Investigation Workplan Amendment" dated May 28, 2003 by URS Corporation (URS). We generally concur with the work proposed. We request that you address the following technical comments and send us the technical reports requested below.

TECHNICAL COMMENTS

1. Corrective Action Plan – The California Regional Water Quality Control Board, San Francisco Bay Region (SFRWQCB)'s "Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (Interim Final - July 2003)" is acceptable for risk evaluation. The Oakland Risk-Based Corrective Action (RBCA) approach to evaluate risk may also be used for Benzene, Toluene, Ethyl Benzene, Xylene (BTEX).
2. Contaminant Source Characterization – Proposed borings UB-7 and UB-8 are located downgradient of the underground tanks. We would like them moved as close to the tanks as possible but in native soil. There may have been releases since the tanks were replaced in 1986. Please locate borings UB-7 and UB-8 closer to the tanks.
3. Preferential Pathway Survey – In addition to the map(s) to be submitted, please use cross-sections showing the location and depth of all utility lines and trenches (including sewers, storm drains, pipelines, trench backfill, etc.) within and near the site and plume area(s). Evaluate the probability of the contaminant plumes encountering preferential pathways and conduits that could spread the contamination, particularly in the vertical direction to deeper water aquifers. Please submit.
4. Well Survey – Locate wells within a quarter mile radius of the site. Show the location of the wells on a map and list well construction details for each well. Indicate which of the wells may be potential receptors.

5. Missing reports
    a. 1986 - removal of underground tanks
    b. September 4, 1990 – installation of MW4, MW5, MW6, MW7, RW1
    c. October 11, 1990 –.sampling of D1, D2, D3, PT-1, 2, 3, 4
    d. December 16, 1994 - sampling of THP1-S-4-4.5
    e. March 1991 - SB 8, 9, 10

Please submit.

TECHINCAL REPORT REQUEST

Please submit technical reports to the Alameda County Environmental Health (Attention: Don Hwang), according to the following schedule:

December 13, 2003 – Site plan showing borings UB-7 and UB-8 closer to the tanks.
December 13, 2003 – Preferential Pathway Survey
December 13, 2003 – Well Survey
December 13, 2003 – Missing reports

These reports are being requested pursuant to the Regional Water Quality Control Board's (Regional Board) authority under Section 13267 of the California Water Code. If you have any questions, please call me at (510) 567-6746.

Sincerely,

Don Hwang
Hazardous Materials Specialist
Local Oversight Program

C: Leonard Niles, URS Corporation, 500-12th St., Suite 200, Oakland, CA 94607-4014
Donna Drogos
File

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
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1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

March 19, 2003

Mr. Scott Hooton
BP Oil
295 SW 41st Street, Bldg 13, Suite N
Renton, CA 98055-4931

Mr. Dave DeWitt
Tosco Marketing Co
2000 Crow Canyon Pl, Ste 400
San Ramon, CA 95118-3686

Dear Messrs. Hooton and DeWitt:

Subject: Fuel Leak Case No. RO0000014, BP Station #11132, 3201 35th Ave., Oakland, CA

Our office is in receipt of the March 7, 2003 letter from URS Corporation (URS) regarding their submission of their workplan dated October 28, 2002, their disagreement with a conversation from our office, which requested additional investigation, and their intent to implement the workplan by March 20, 2003. URS and Mr. Scott Hooton of BP Oil were notified by our office on November 1, 2002 that the workplan was not approved and an addendum to the workplan was required. We request that you address the following technical comments and send us the technical reports requested below.

TECHNICAL COMMENTS

1. Contaminant Plume Definition - We do not agree that the proposal to install groundwater monitoring wells will determine the extent of contamination in the soil and groundwater. Instead, we want a proposal for borings for that purpose. Submit your proposal in the Workplan Addendum requested below.
2. Groundwater Contaminant Plume Monitoring – We do not agree with the proposal to install groundwater monitoring wells at this time. Instead, we want a proposal for borings to better determine the location for future wells. Submit a proposal for borings to locate wells in the Workplan Addendum requested below.
3. Corrective Action Plan - We do not agree with the proposal to solely use the Oakland Risk-Based Corrective Action (RBCA) approach to evaluate risk. The Oakland RBCA does not include Total Petroleum Hydrocarbons (TPH). The ceiling value of 5,000 ug/l found in the State Regional Water Quality Control Board (SRWQCB)'s "Application of Risk Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater" dated December 2001, may be used. Also, we judge the RBCA process to be inappropriate for Methyl Tertiary-Butyl Ether (MTBE) but instead use a resource protection cleanup goal of not greater than 5 ppb. Characterization and definition of your contaminant plumes should be completed before performing risk evaluation. Submit a proposal to evaluate risk from TPH, and MTBE using the resource protection cleanup goal of 5 ppb in the Workplan Addendum requested below.

4. Contaminant Source Characterization - The workplan proposes to incorporate soil data into the conceptual site model (CSM). The data need not be limited to soil only. Modify the workplan in the Workplan Addendum requested below.

TECHINCAL REPORT REQUEST

Please submit technical reports to the Alameda County Environmental Health (Attention: Don Hwang), according to the following schedule:

May 19, 2003 - Workplan Addendum

These reports are being requested pursuant to the Regional Water Quality Control Board's (Regional Board) authority under Section 13267 of the California Water Code. If you have any questions, please call me at (510) 567-6746.

Sincerely,

Don Hwang
Hazardous Materials Specialist
Local Oversight Program

C: Leonard Niles, URS Corporation, 500-12th St., Suite 200, Oakland, CA 94607-4014
Donna Drogos
File

ALAMEDA COUNTY
HEALTH CARE SERVICES
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DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

RO0000014

September 9, 2002

Mr. Scott Hooton
BP Oil
295 SW 41st Street, Bldg 13, Suite N
Renton, CA 98055-4931

Mr. Dave DeWitt
Tosco Marketing Co
2000 Crow Canyon Pl, Ste 400
San Ramon, CA 95118-3686

RE: SWI and CAP for BP Station #11132 at 3201 35th Ave, Oakland, CA

Dear Messrs. Hooton and DeWitt:

I have completed review of the fuel leak case file for the above referenced site. Up to 1,700,000 ppb TPHg, 19,000 ppb benzene and 56,000 ppb MTBE has been detected in groundwater. Separate phase hydrocarbon has been noted in wells RW-1 and MW-1 since July 1990. This letter presents a request for full three-dimensional definition, investigation, and a proposal for cleanup of soil and groundwater contamination from the unauthorized release at the site. You are hereby required to complete a Soil and Water Investigation and prepare a Corrective Action Plan (CAP) for the subject site in accordance with California Code of Regulations, Title 23, Division 3, Chapter 16, Article11, "Corrective Action Requirements; State Water Resources Control Board Resolution 92-49, "Policies and Procedure for Investigation, Cleanup and Abatement of Discharges Under Water Code Section 13304"; and with the Regional Water Quality Control Board Water Quality Control Plan for the basin.

The following technical comments address investigation and cleanup performance objectives that shall be considered as part of the required Soil and Water Investigation and CAP. A workplan for the Soil and Water Investigation is **due by October 28, 2002** that addresses each of the following technical comments.

TECHNICAL COMMENTS

1. **Conduit Study**

   The purpose of the conduit study is to locate potential migration pathways and potential conduits and determine the probability of the plume encountering preferential pathways and conduits that could spread the contamination. Please provide a map showing the location and depth of all utility lines and trenches (including sewers and storm drains), wells (water supply, irrigation, monitoring, abandoned and improperly-destroyed), and creeks (former and present) or underground water channels.

   Using the results of the conduit study and data from previous investigations at the site, you are to develop the initial three-dimensional conceptual model of site conditions. You are to use this initial conceptual model to determine the appropriate configuration for samplings points in the SWI phase of work at this site. Discuss your analysis and interpretation of the results of the conduit study and explain your rationale for the configuration of sampling points in the SWI work plan requested below.

wells that are necessary to appropriately monitor the movement of the plume. Please submit your proposal for the installation of monitoring wells in the Soil and Water Investigation Report and report on the installation of the wells in the Soil and Water Investigation Completion Report.

Quarterly groundwater monitoring should continue at the site. Analysis for ether oxygenates, ethanol, EDB and 1,2-DCA (using EPA Method 8260) should be included for the next two quarters, at a minimum.

5. Corrective Action Plan

The purpose of the CAP is to use the information obtained during investigation activities to propose cost-effective **final cleanup objective for the entire contaminant plume and remedial alternative for soil and groundwater** that will adequately protect human health and safety, the environment, eliminate nuisance conditions, and protect water resources.

A CAP for the final cleanup of contamination in soil and groundwater caused by an unauthorized release at the site will be requested upon completion of the Soil and Water Investigation in accordance with the schedule specified below. The CAP shall address at least two technically and economically feasible methods to restore and protect beneficial uses of water and to meet the cleanup objectives for each contaminant established in the CAP. The CAP must propose verification monitoring to confirm completion of corrective actions and evaluate CAP implementation effectiveness.

TECHINCAL REPORT REQUEST

Please submit technical reports according to the following schedule:

October 28, 2002 – Work plan for Soil and Water Investigation

110 Days from Work Plan Approval – Soil and Water Investigation (Results of Expedited Site Assessment) Report

180 Days from Submittal of Soil and Water Investigation Report – Soil and Water Investigation Completion Report

90 Days after Submittal of Soil and Water Investigation Completion Report - Corrective Action Plan

October 30, 2002 – Quarterly Report for the Third Quarter 2002

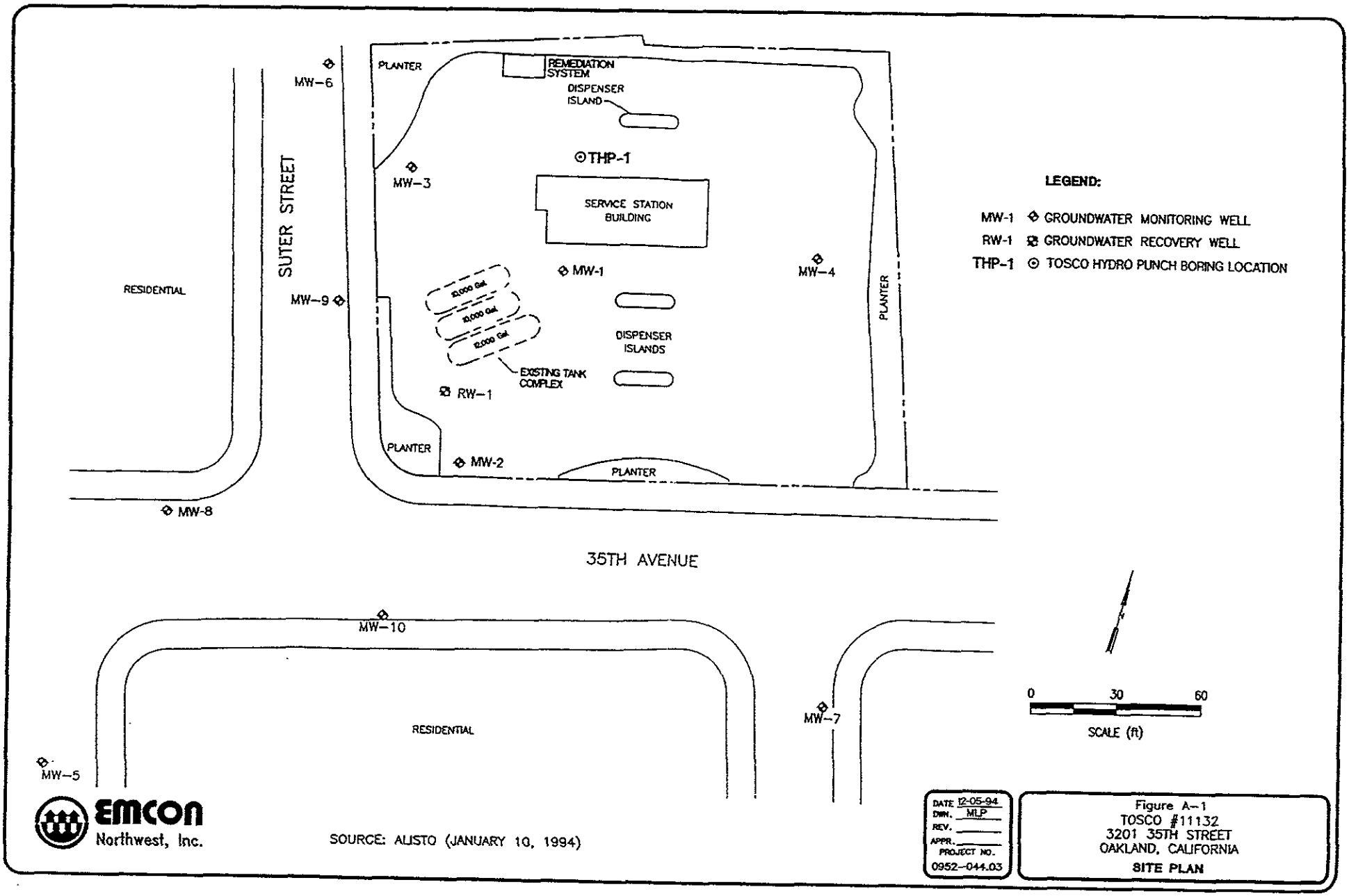
January 30, 2003 – Quarterly Report for the Fourth Quarter 2002

April 30, 2003 – Quarterly Report for the First Quarter 2003

These reports are being requested pursuant to the Regional Board's authority under Section 13267 of the California Water Code. **Each report shall include conclusions and recommendations for the next phases of work required at the site.** It is requested that all required work be performed in a prompt and timely manner. I have proposed a schedule for the submittal of the Soil and Water Investigation Report and the CAP. Revisions to the proposed schedule shall be requested in writing with appropriate justification for anticipated delays.

ATTACHMENT B

Historical Soil and Groundwater Analytical Data



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

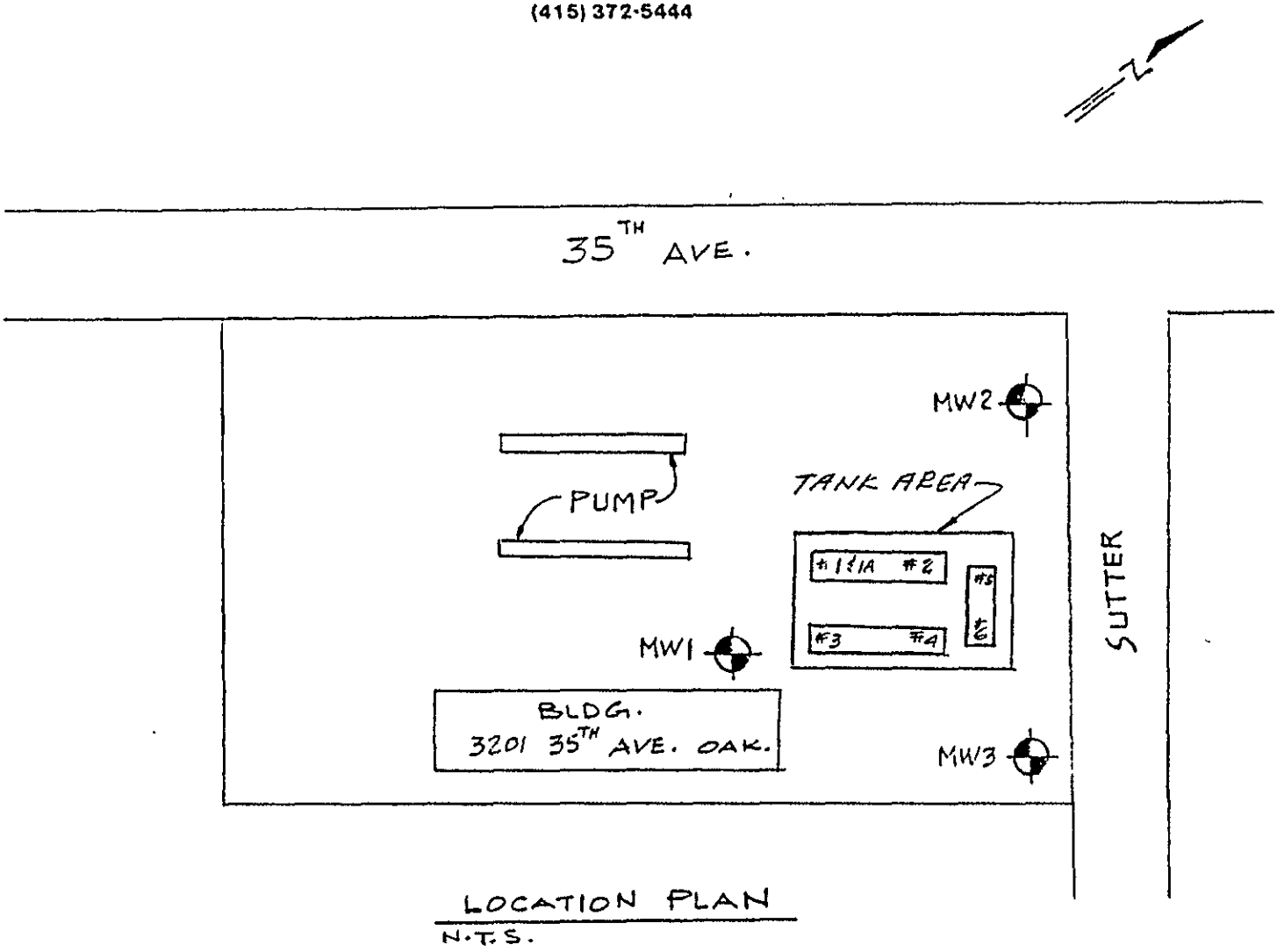
Site Number 11132
3201 - 35th Avenue, Oakland, California

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).

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

Source: Alton, February 28, 1990

Figure C-2

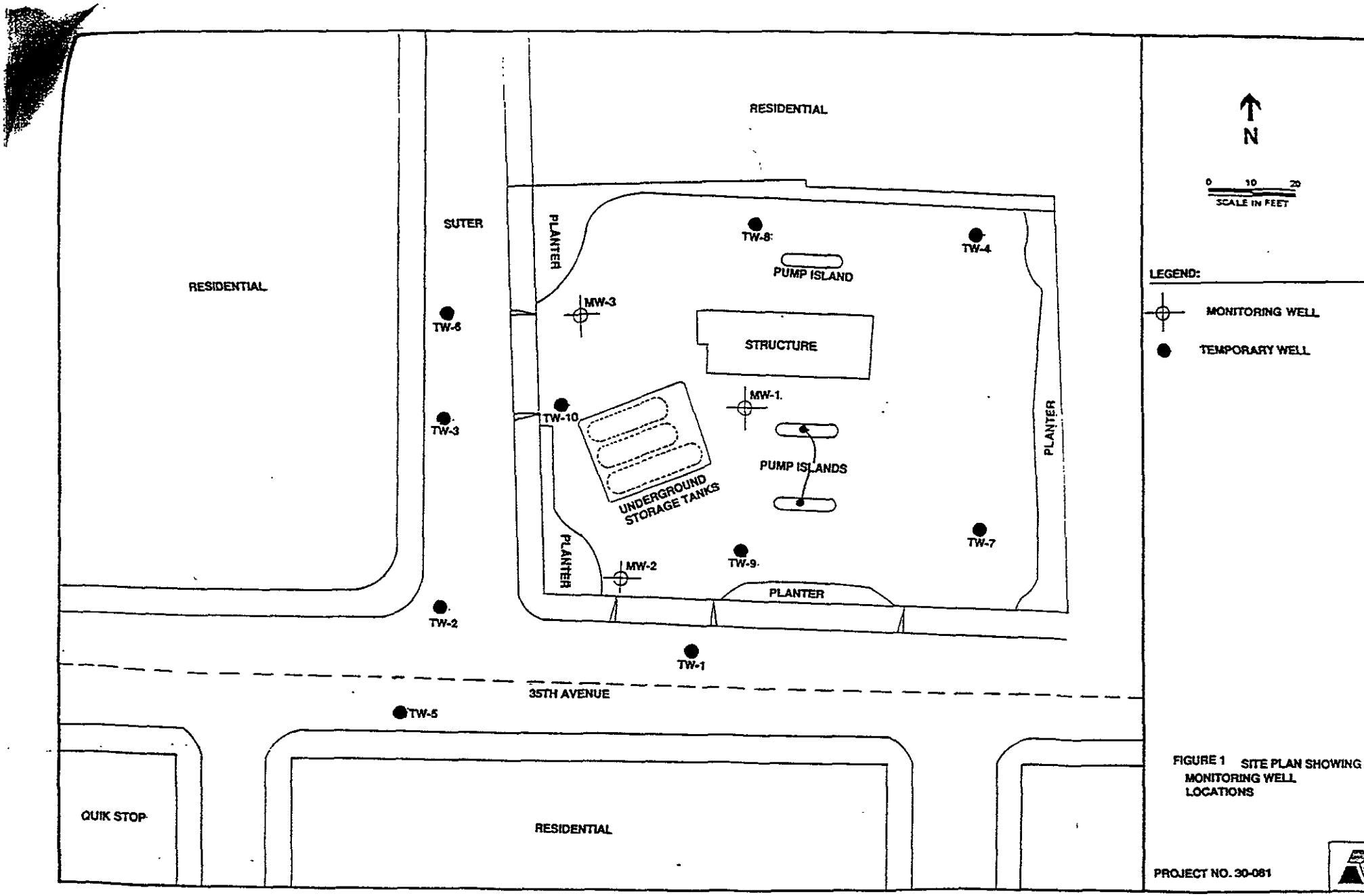
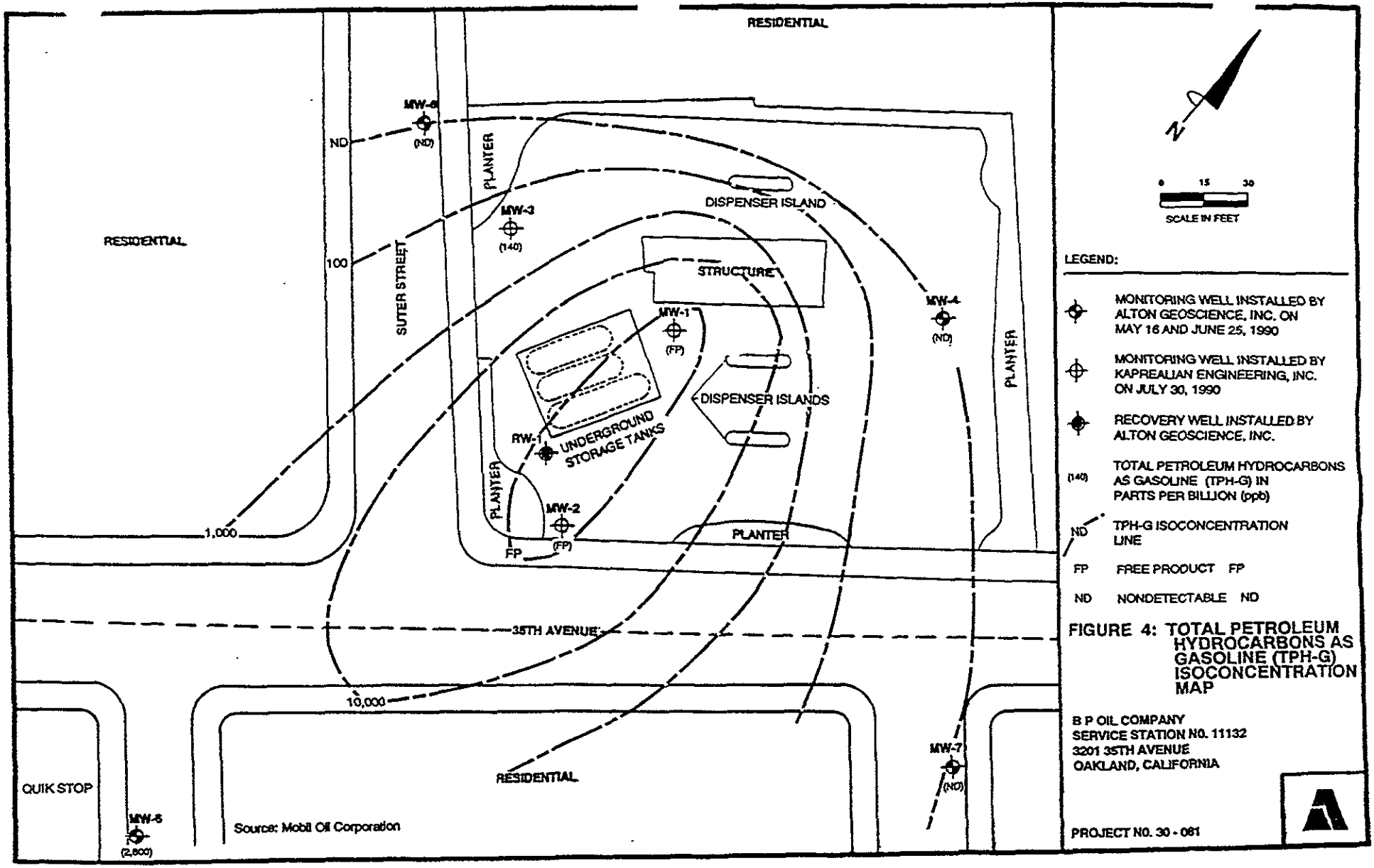


FIGURE 1 SITE PLAN SHOWING MONITORING WELL LOCATIONS

PROJECT NO. 30-081



Source: Alton, September 4, 1990

Figure C-3

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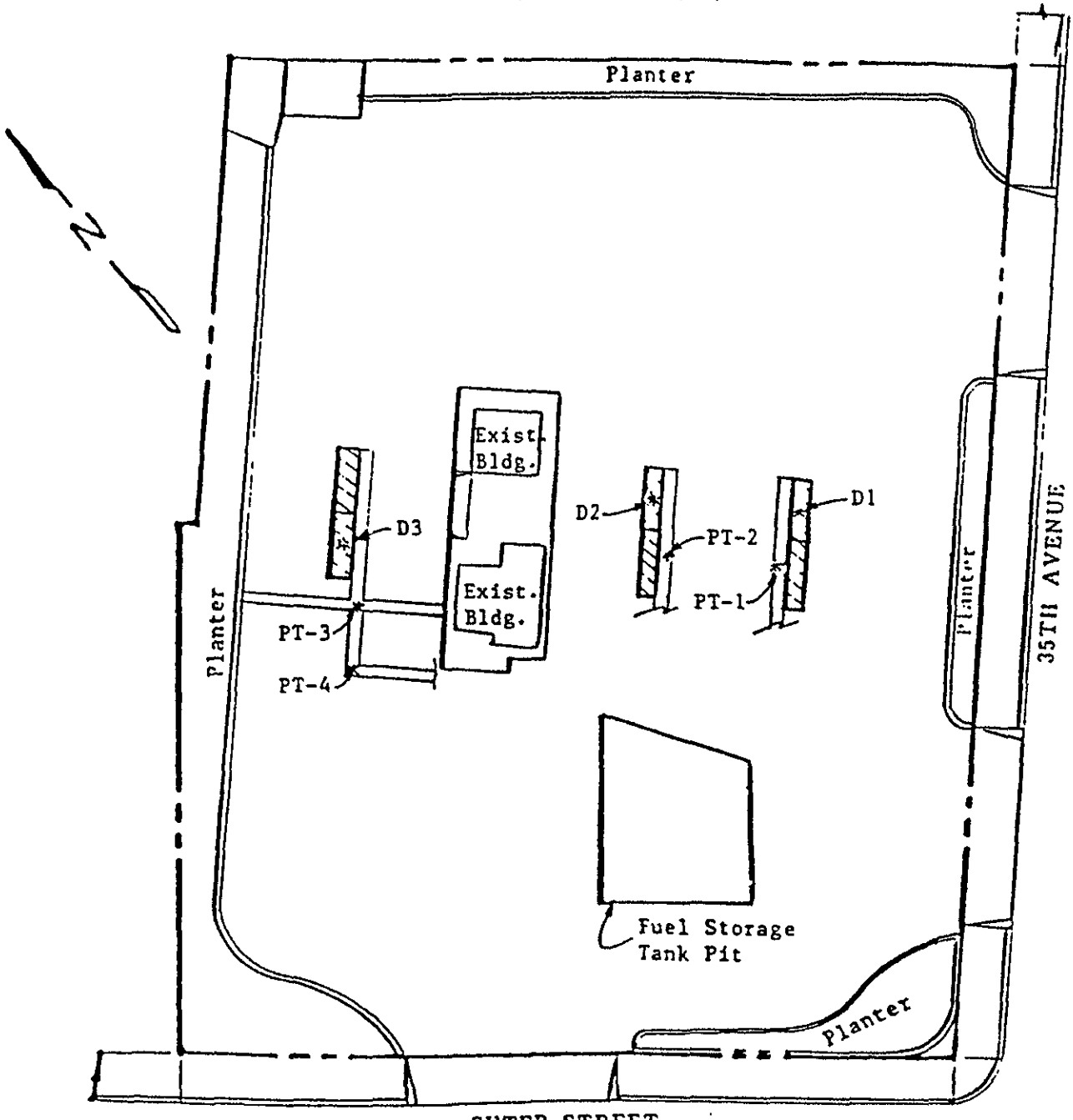
PO BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX (707) 746-5581



SITE PLAN

LEGEND

* Sample Point Location

0 30 60
Approx. scale feet

BP Service Station
3201 35th Avenue
Oakland, CA

Source: KEI, October 11, 1990a

Figure C-4

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
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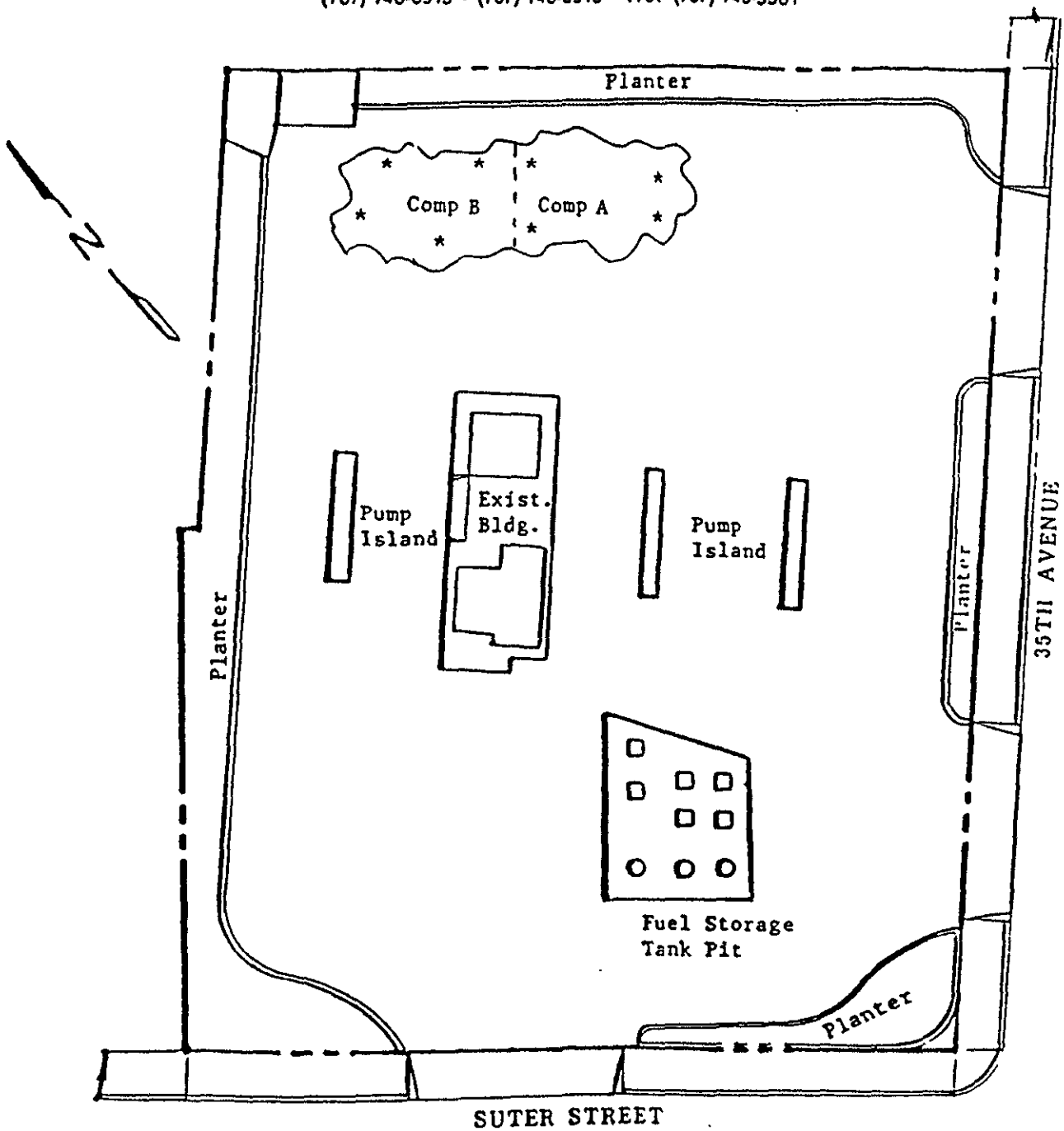
(707) 746-6915 • (707) 746-6916 • FAX (707) 746-5581



SITE PLAN
Figure 1

LEGEND

* Sample Point Location

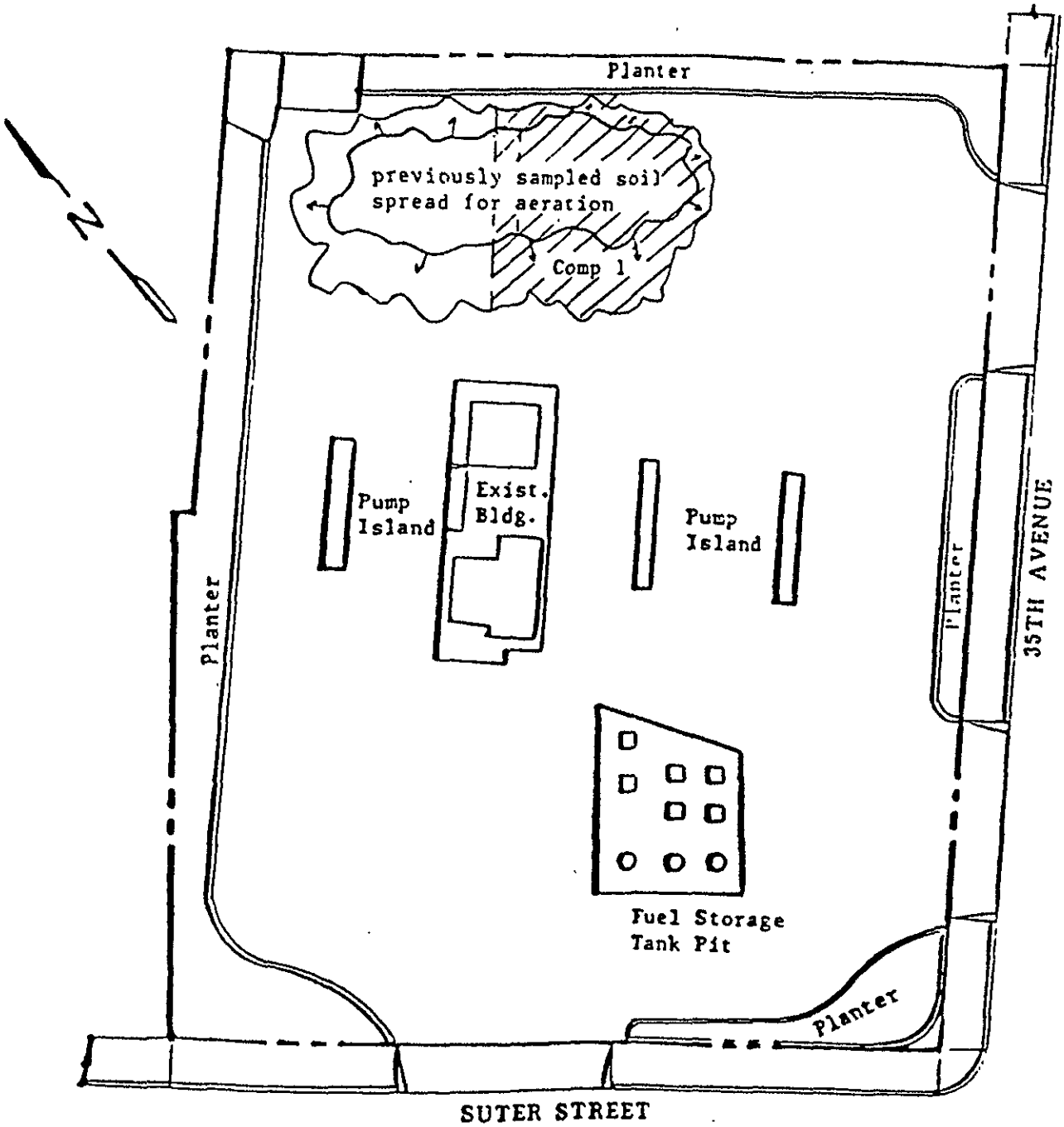
0 30 60
Approx. scale feet

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

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 C-2

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

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 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

KEI-J90-0804.R2
October 11, 1990

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

KEI-J90-0804.R1
October 11, 1990

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 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11132
3201 35TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-024

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (ft) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (ft) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	DO (ppm)	LAB
MW-1	07/09/90	169.75	—	0.22	—	—	—	—	—	—	—	—
MW-1	12/21/90	169.75	—	0.56	—	—	—	—	—	—	—	—
MW-1	03/07/91	169.75	20.58	—	—	—	—	—	—	—	—	—
MW-1	06/27/91	169.75	—	0.18	—	—	—	—	—	—	—	—
MW-1	09/27/91	169.75	—	0.27	—	—	—	—	—	—	—	—
MW-1	12/18/91	169.75	—	0.28	—	—	—	—	—	—	—	—
MW-1	04/01/91	169.75	16.51	0.15	153.36	—	—	—	—	—	—	—
MW-1	07/03/92	169.75	22.30	0.27	147.85	—	—	—	—	—	—	—
MW-1	10/05/92	169.75	23.98	0.24	146.95	—	—	—	—	—	—	—
MW-1	01/13/93	169.75	17.03	0.24	152.90	—	—	—	—	—	—	—
MW-1	04/23/93	169.75	18.10	0.42	151.97	—	—	—	—	—	—	—
MW-1	07/12/93	169.75	22.02	0.49	148.10	—	—	—	—	—	—	—
MW-1	10/21/93	169.75	25.12	1.08	145.46	—	—	—	—	—	—	—
MW-1	01/21/94	169.75	23.02	0.78	147.20	—	—	—	—	—	—	—
MW-1	04/20/94	169.75	24.54	1.80	146.54	—	—	—	—	—	—	—
MW-2	07/09/90	169.14	—	0.10	—	—	—	—	—	—	—	—
MW-2	12/21/90	169.14	—	0.48	—	—	—	—	—	—	—	—
MW-2	03/07/91	169.14	19.16	—	—	—	—	—	—	—	—	—
MW-2	06/27/91	169.14	—	0.19	—	—	—	—	—	—	—	—
MW-2	09/27/91	169.14	—	0.15	—	—	—	—	—	—	—	—
MW-2	12/18/91	169.14	—	0.26	—	—	—	—	—	—	—	—
MW-2	04/01/91	169.14	14.21	0.10	153.01	—	—	—	—	—	—	—
MW-2	07/03/92	169.14	20.93	0.03	147.23	—	—	—	—	—	—	—
MW-2	10/05/92	169.14	22.74	0.21	145.56	—	—	—	—	—	—	—
MW-2	01/13/93	169.14	15.55	0.02	152.61	—	—	—	—	—	—	—
MW-2	04/23/93	169.14	16.54	0.21	151.76	—	—	—	—	—	—	—
MW-2	07/12/93	169.14	20.46	0.06	147.73	—	—	—	—	—	—	—
MW-2	10/21/93	169.14	24.91	0.21	143.48	—	—	—	—	—	—	—
MW-2	01/21/94	169.14	21.20	—	146.94	—	—	—	—	—	—	—
MW-2	04/20/94	169.14	22.44	—	146.70	1800	140	330	84	280	1.7	PACE
MW-3	07/09/90	167.17	—	—	—	140	5.3	4.6	2.0	3.8	—	—
MW-3	12/21/90	167.17	—	—	—	0.19	100	8.9	8.9	27	—	—
MW-3	03/07/91	167.17	17.40	—	149.77	0.4	88	22	6.1	57	—	—
MW-3	06/27/91	167.17	—	—	—	380	28	26	13	44	—	—
MW-3	09/27/91	167.17	—	—	—	0.07	7.9	NO	0.4	1.1	—	—
MW-3	12/18/91	167.17	—	—	—	0.26	24	24	0.8	28	—	—
MW-3	04/01/91	167.17	13.69	—	153.48	NO	NO	NO	NO	NO	—	—
MW-3	07/03/92	167.17	19.56	—	147.84	71	6.4	0.9	5.0	13	—	ANA
MW-3	10/05/92	167.17	21.22	—	146.95	67	5.1	1.1	6.1	8.1	—	ANA
OC-1 (d)	10/05/92	—	—	—	—	NO<50	2.2	NO<0.5	1.5	2.8	—	ANA
MW-3	01/13/93	167.17	13.83	—	153.54	830	50	34	42	89	—	PACE
MW-3	04/23/93	167.17	19.02	—	152.15	NO<50	NO<0.5	NO<0.5	NO<0.5	NO<0.5	—	PACE
OC-1 (d)	04/23/93	—	—	—	—	NO<50	NO<0.5	NO<0.5	NO<0.5	NO<0.5	—	PACE
MW-3	07/12/93	167.17	18.16	—	148.01	250	12	4.2	12	16	—	PACE
MW-3	10/21/93	167.17	21.81	—	146.36	52	4.4	1.4	4.7	3.3	—	PACE
OC-1 (d)	10/21/93	—	—	—	—	85	7.4	1.0	6.9	4.2	—	PACE
MW-3	01/21/94	167.17	19.94	—	147.23	57	3.0	2.4	3.6	9.0	—	PACE
MW-3	04/20/94	167.17	20.24	—	146.93	500	26	23	33	86	1.8	PACE

25-May-94

Source: Alisto, May 25, 1994

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11132
3201 36TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-024

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (a) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	DO (ppm)	LAB
MW-1	07/08/90	170.36	--	--	--	ND	ND	ND	ND	ND	--	--
MW-1	12/21/90	170.36	--	--	--	ND	ND	ND	ND	0.8	--	--
MW-1	03/07/91	170.36	20.72	--	149.64	ND	2.2	3.8	1.5	2.8	--	--
MW-1	06/27/91	170.36	--	--	--	ND	0.3	1.8	0.4	1.0	--	--
MW-1	09/27/91	170.36	--	--	--	ND	ND	ND	ND	ND	--	--
MW-1	12/18/91	170.36	--	--	--	ND	ND	ND	ND	ND	--	--
MW-1	04/01/91	170.36	17.49	--	152.87	ND	ND	ND	ND	ND	--	--
MW-1	07/03/92	170.36	22.16	--	148.20	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	ANA
MW-1	10/05/92	170.36	23.38	--	146.98	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	ANA
MW-1	01/13/93	170.36	17.58	--	152.78	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-1	04/23/93	170.36	15.72	--	154.64	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-1	07/12/93	170.36	21.74	--	148.62	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-1	10/21/93	170.36	23.64	--	146.72	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-1	01/21/94	170.36	22.42	--	147.94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-1	04/20/94	170.36	22.66	--	147.70	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.2	PACE
MW-5	07/08/90	165.14	--	--	--	280	200	210	46	280	--	--
MW-5	12/21/90	165.14	--	--	--	0.88	300	34	8.4	39	--	--
MW-5	03/07/91	165.14	16.80	--	148.34	ND	17	0.9	0.7	1.6	--	--
MW-5	06/27/91	165.14	--	--	--	330	120	10	12	8	--	--
MW-5	09/27/91	165.14	--	--	--	0.73	230	16	20	22	--	--
MW-5	12/18/91	165.14	--	--	--	ND	ND	ND	ND	ND	--	--
MW-5	04/01/91	165.14	11.99	--	153.15	600	230	84	11	60	--	--
MW-5	07/03/92	165.14	16.85	--	148.48	150	36	ND<0.5	ND<0.5	1.1	--	ANA
MW-5	10/05/92	165.14	20.32	--	144.82	270	79	4	1.7	2.9	--	ANA
MW-5	01/13/93	165.14	13.03	--	152.11	180	58	6.0	1.8	7.8	--	PACE
MW-5	04/23/93	165.14	13.51	--	151.63	6700	440	98	35	135	--	PACE
MW-5	07/12/93	165.14	18.06	--	147.08	250	67	2.9	2.1	6.0	--	PACE
MW-5	10/21/93	165.14	20.41	--	144.73	210	62	1.5	ND<0.5	1.4	--	PACE
MW-5	01/21/94	165.14	18.86	--	146.28	110	36	1.2	ND<0.5	0.7	--	PACE
MW-5	04/20/94	165.14	17.30	--	147.84	690	230	4.5	1.6	11	1.3	PACE
MW-6	07/08/90	165.40	--	--	--	ND	ND	ND	ND	ND	--	--
MW-6	12/21/90	165.40	--	--	--	0.17	2.6	7.0	4.9	26	--	--
MW-6 (d)	03/07/91	165.40	--	--	--	--	--	--	--	--	--	--
MW-6 (d)	06/27/91	165.40	--	--	--	--	--	--	--	--	--	--
MW-6 (d)	09/27/91	165.40	--	--	--	--	--	--	--	--	--	--
MW-6	12/18/91	165.40	--	--	--	ND	1.3	22	ND	2.7	--	--
MW-6	04/01/91	165.40	11.79	--	153.61	ND	ND	ND	ND	ND	--	--
MW-6	07/03/92	165.40	17.77	--	147.63	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	ANA
MW-6	10/05/92	165.40	19.46	--	145.94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	ANA
MW-6	01/13/93	165.40	11.34	--	154.06	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-6	04/23/93	165.40	12.92	--	152.48	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-6	07/12/93	165.40	17.36	--	148.04	ND<50	ND<0.5	ND<0.5	ND<0.5	0.7	--	PACE
MW-6	10/21/93	165.40	19.98	--	145.42	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-6	01/21/94	165.40	18.10	--	147.30	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-6	04/20/94	165.40	14.68	--	148.72	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.0	PACE

Source: Alisto, May 25, 1994

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11132
3201 35TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-024

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	DO (ppm)	LAB
MW-7	07/08/90	167.81	--	--	--	ND	ND	ND	ND	ND	--	--
MW-7	12/21/90	167.81	--	--	--	ND	ND	ND	ND	ND	--	--
MW-7	03/07/91	167.81	19.04	--	148.57	ND	ND	0.4	0.3	2.4	--	--
MW-7	06/27/91	167.81	--	--	--	78	17	4	0.8	2.2	--	--
MW-7	09/27/91	167.81	--	--	--	ND	0.4	ND	ND	0.4	--	--
MW-7	12/18/91	167.81	--	--	--	ND	0.7	2.9	0.8	3.3	--	--
MW-7	04/01/91	167.81	15.14	--	152.43	ND	ND	ND	ND	ND	--	--
MW-7	07/03/92	167.81	20.28	--	147.33	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	ANA
MW-7	10/05/92	167.81	21.56	--	146.05	ND<50	ND<0.5	ND<0.5	ND<0.5	1.5	--	ANA
MW-7	01/13/93	167.81	15.41	--	152.20	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-7	04/23/93	167.81	15.84	--	151.77	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-7	07/12/93	167.81	19.84	--	147.77	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-7	10/21/93	167.81	21.81	--	146.00	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-7	01/21/94	167.81	20.69	--	147.12	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
QC-1 (c)	01/21/94	--	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-7	04/20/94	167.81	20.54	--	147.27	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.5	PACE
MW-8	03/07/91	165.74	16.72	--	149.02	2.7	710	450	64	310	--	--
MW-8	06/27/91	165.74	--	--	--	12000	3400	1100	340	720	--	--
MW-8	09/27/91	165.74	--	--	--	41	5700	5200	1100	4300	--	--
MW-8	12/18/91	165.74	--	--	--	3.2	980	150	120	250	--	--
MW-8	04/01/91	165.74	12.54	--	153.20	15000	3800	2800	410	1900	--	--
MW-8	07/03/92	165.74	16.76	--	148.98	72000	19000	32000	3000	15000	--	ANA
MW-8	10/05/92	165.74	20.46	0.01	145.27	--	--	--	--	--	--	--
MW-8	01/13/93	165.74	12.87	0.01	152.88	--	--	--	--	--	--	--
MW-8	04/23/93	165.74	13.90	SHEEN	151.84	--	--	--	--	--	--	--
MW-8	07/12/93	165.74	18.30	SHEEN	147.44	--	--	--	--	--	--	--
MW-8	10/21/93	165.74	21.01	0.95	144.54	--	--	--	--	--	--	--
MW-8	01/21/94	165.74	19.12	0.03	146.64	--	--	--	--	--	--	--
MW-8	04/20/94	165.74	19.28	0.03	146.48	28000	1700	4100	940	4000	1.1	PACE
MW-9	03/07/91	166.20	16.79	--	149.41	7.1	220	4	2.4	2400	--	--
MW-9	06/27/91	166.20	--	--	--	3800	520	400	85	310	--	--
MW-9	09/27/91	166.20	--	--	--	3.2	720	150	50	180	--	--
MW-9	12/18/91	166.20	--	--	--	ND	2.5	1.1	0.3	5.8	--	--
MW-9	04/01/91	166.20	12.89	--	153.31	12000	2000	2800	360	1600	--	--
MW-9	07/03/92	166.20	16.88	--	147.31	5700	17000	840	220	800	--	ANA
MW-9	10/05/92	166.20	20.52	--	145.68	1400	440	17	14	100	--	ANA
MW-9	01/13/93	166.20	12.92	--	153.28	11000	1200	1700	340	1400	--	PACE
QC-1 (d)	01/13/93	--	--	--	0.00	11000	1200	1600	320	1300	--	PACE
MW-9	04/23/93	166.20	14.08	--	152.12	24000	2800	4500	730	3400	--	PACE
MW-9	07/12/93	166.20	18.44	--	147.76	13000	1400	1100	260	1400	--	PACE
QC-1 (d)	07/12/93	--	--	--	--	10000	1200	800	310	1200	--	PACE
MW-9	10/21/93	166.20	21.81	0.88	145.08	--	--	--	--	--	--	--
MW-9	01/21/94	166.20	19.28	--	148.92	--	--	--	--	--	--	--
MW-9	04/20/94	166.20	19.72	--	146.48	43000	2800	6400	1300	7900	1.7	PACE
QC-1 (d)	04/20/94	--	--	--	--	45000	2700	6400	1200	8200	--	PACE

Source: Alisto, May 25, 1994

25-May-94

PAGE 3

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11132
3201 36TH AVE., E.E., OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 94-024

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (ft) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (ft) (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	DO (ppm)	LAB
MW-10	03/07/91	167.01	14.09	—	146.92	1.8	120	190	32	220	—	—
MW-10	06/27/91	167.01	—	—	—	13000	7200	800	160	300	—	—
MW-10	09/27/91	167.01	—	—	—	57	12000	7200	1400	4600	—	—
MW-10	12/16/91	167.01	—	—	—	6.3	2500	120	38	79	—	—
MW-10	04/01/91	167.01	13.92	—	153.09	NO	NO	NO	NO	NO	—	—
MW-10	07/03/92	167.01	19.92	—	147.09	8400	6100	1300	160	880	—	ANA
MW-10	10/05/92	167.01	21.82	0.19	146.33	—	—	—	—	—	—	—
MW-10	01/13/93	167.01	14.43	0.03	152.60	—	—	—	—	—	—	—
MW-10	04/23/93	167.01	15.26	0.06	151.80	—	—	—	—	—	—	—
MW-10	07/12/93	167.01	19.78	0.45	147.57	—	—	—	—	—	—	—
MW-10	10/21/93	167.01	22.80	0.69	144.63	—	—	—	—	—	—	—
MW-10	01/21/94	167.01	20.26	0.06	146.81	—	—	—	—	—	—	—
MW-10	04/20/94	167.01	20.74	—	146.27	100000	12000	34000	3400	14000	1.0	PACE
MW-1	07/09/90	166.01	—	1.21	—	—	—	—	—	—	—	—
MW-1	12/21/90	166.01	—	0.01	—	—	—	—	—	—	—	—
MW-1	03/07/91	166.01	17.62	SHEEN	160.39	—	—	—	—	—	—	—
MW-1	06/27/91	166.01	—	0.04	—	—	—	—	—	—	—	—
MW-1	09/27/91	166.01	—	0.02	—	—	—	—	—	—	—	—
MW-1	12/16/91	166.01	—	0.02	—	—	—	—	—	—	—	—
MW-1	04/01/91	166.01	14.40	0.11	153.69	—	—	—	—	—	—	—
MW-1	07/03/92	166.01	20.84	SHEEN	147.35	—	—	—	—	—	—	—
MW-1	10/05/92	166.01	22.24	0.08	144.73	—	—	—	—	—	—	—
MW-1	01/13/93	166.01	14.84	0.05	151.46	—	—	—	—	—	—	—
MW-1	04/23/93	166.01	14.17	0.16	151.94	—	—	—	—	—	—	—
MW-1	07/12/93	166.01	20.18	0.06	147.88	—	—	—	—	—	—	—
MW-1	10/21/93	166.01	25.70	0.56	142.72	—	—	—	—	—	—	—
MW-1	01/21/94	166.01	21.34	0.40	147.07	—	—	—	—	—	—	—
MW-1	04/20/94	166.01	32.20	—	136.81	—	—	—	—	—	—	—
QC-6 [d]	10/05/92	—	—	—	—	NO<50	NO<0.5	NO<0.5	NO<0.5	NO<0.5	—	ANA
QC-2 [d]	01/13/93	—	—	—	—	NO<50	NO<0.5	NO<0.5	NO<0.5	NO<0.5	—	PACE
QC-5 [d]	04/23/93	—	—	—	—	NO<50	NO<0.5	NO<0.5	NO<0.5	NO<0.5	—	PACE
QC-5 [d]	07/12/93	—	—	—	—	NO<50	NO<0.5	NO<0.5	NO<0.5	NO<0.5	—	PACE
QC-2 [d]	10/21/93	—	—	—	—	NO<50	NO<0.5	NO<0.5	NO<0.5	NO<0.5	—	PACE
QC-5 [d]	01/21/94	—	—	—	—	NO<50	NO<0.5	NO<0.5	NO<0.5	NO<0.5	—	PACE
QC-5 [d]	04/20/94	—	—	—	—	NO<50	NO<0.5	2.1	NO<0.5	2.1	—	PACE
						NO<50	NO<0.5	NO<0.5	NO<0.5	NO<0.5	—	PACE

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
DO	Dissolved oxygen
ppb	Parts per billion
ppm	Parts per million
—	Not analyzed/available/applicable/measurable
NO	Not detected above reported detection limit
ANA	Anametrix, Inc.
PACE	Pace Inc.

NOTES:

(a) Casing elevations surveyed to the nearest 0.01 foot, relative to mean sea level.

(b) Groundwater elevations adjusted assuming a specific gravity of 0.75 for free product.

(c) Blind duplicate.

(d) Not sampled due to an abandoned vehicle parked over well.

(e) Travel blank.

28-May-94

PAGE 4

Source: Alisto, May 25, 1994

Table C-12

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
	02/18/94	<0.01	1.07
MW-6	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	1.60	1.90
	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	7.94

Source: Alisto, May 25, 1994

Table 1

Groundwater Elevation and Analytical Data

Former BP Station #11132

3201 35th Ave, Oakland, CA

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-1	7/9/1990	--	169.75		0.22		--	--	--	--	--	--	--	--	--	
	12/21/1990	--	169.75		0.58		--	--	--	--	--	--	--	--	--	
	3/7/1991	--	169.75	20.59	--		--	--	--	--	--	--	--	--	--	
	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	1.80	143.41	--	--	--	--	--	--	--	--	--	
	8/1/1994	--	169.75	24.11	0.35	145.29	--	--	--	--	--	--	--	--	--	
	12/23/1994	--	169.75	18.19	0.29	151.27	--	--	--	--	--	--	--	--	--	
	1/26/1995	--	169.75	16.25	1.10	152.40	--	--	--	--	--	--	--	--	--	
	6/8/1995	--	169.75	22.92	1.20	145.63	--	--	--	--	--	--	--	--	--	
	8/22/1995	--	169.75	24.45	0.85	144.45	--	--	--	--	--	--	--	--	--	
	10/27/1995	--	169.75	25.41	0.69	143.65	--	--	--	--	--	--	--	--	--	
	1/25/1996	--	169.75	18.20	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	0.98	144.78	--	--	--	--	--	--	--	--	--	
	1/21/1997	--	169.75	16.80	0.90	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
	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	0.87	145.48	140,000	3,000	8,500	3,900	22,100	5,700	5.3	--	--	
	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	0.54	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	--	--	--	--	--	--	--	--	--	

Table 1

Groundwater Elevation and Analytical Data

Former BP Station #11132

3201 35th Ave, Oakland, CA

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-1	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	0.00	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	0.40	146.49	--	--	--	--	--	--	--	--	--	j
	11/12/2002	--	169.75	22.65	0.37	146.73	--	--	--	--	--	--	--	--	--	j
	1/29/2003	--	169.75	18.15	0.30	151.30	--	--	--	--	--	--	--	--	--	j,n
	5/22/2003	--	169.75	18.49	0.20	151.06	--	--	--	--	--	--	--	--	--	j
	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
	11/18/2003	NP	169.75	21.70	0.25	148.25	--	--	--	--	--	--	--	--	--	
	02/23/2004	NP	169.75	16.34	0.09	153.48	--	--	--	--	--	--	--	--	--	
	05/04/2004	NP	169.75	21.28	0.16	148.60	--	--	--	--	--	--	--	--	--	
	08/04/2004	--	**169.75**	**22.54**	**0.10**	**147.29**	--	--	--	--	--	--	--	--	--	
	09/22/2004	**NP**	**169.75**	**22.76**	**0.20**	**147.15**	--	--	--	--	--	--	--	--	--	

Table 1

Groundwater Elevation and Analytical Data

Former BP Station #11132

3201 35th Ave, Oakland, CA

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-2	7/9/1990	--	168.14		0.10		--	--	--	--	--	--	--	--	--	
	12/21/1990	--	168.14		0.48		--	--	--	--	--	--	--	--	--	
	3/7/1991	--	168.14	19.18	--		--	--	--	--	--	--	--	--	--	
	4/1/1991	--	168.14	15.21	0.10	152.83	--	--	--	--	--	--	--	--	--	
	6/27/1991	--	168.14		0.19		--	--	--	--	--	--	--	--	--	
	9/27/1991	--	168.14		0.15		--	--	--	--	--	--	--	--	--	
	12/18/1991	--	168.14		0.36		--	--	--	--	--	--	--	--	--	
	7/3/1992	--	168.14	20.93	0.03	147.18	--	--	--	--	--	--	--	--	--	
	10/5/1992	--	168.14	22.74	0.21	145.19	--	--	--	--	--	--	--	--	--	
	1/13/1993	--	168.14	15.55	0.02	152.57	--	--	--	--	--	--	--	--	--	
	4/23/1993	--	168.14	16.54	0.21	151.39	--	--	--	--	--	--	--	--	--	
	7/12/1993	--	168.14	20.46	0.06	147.62	--	--	--	--	--	--	--	--	--	
	10/21/1993	--	168.14	24.91	0.31	142.92	--	--	--	--	--	--	--	--	--	
	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	0.04	145.86	--	--	--	--	--	--	--	--	--	
	12/23/1994	--	168.14	16.25	0.03	151.86	--	--	--	--	--	--	--	--	--	
	1/26/1995	--	168.14	14.55	0.39	153.20	--	--	--	--	--	--	--	--	--	
	6/8/1995	--	168.14	21.18	0.43	146.53	--	--	--	--	--	--	--	--	--	
	8/22/1995	--	168.14	22.76	0.36	145.02	--	--	--	--	--	--	--	--	--	
	10/27/1995	--	168.14	23.61	0.30	144.23	--	--	--	--	--	--	--	--	--	
	1/25/1996	--	168.14	15.95	0.15	152.04	--	--	--	--	--	--	--	--	--	
	4/19/1996	--	168.14	17.33	0.07	150.74	--	--	--	--	--	--	--	--	--	
	7/23/1996	--	168.14	21.25	0.05	146.84	--	--	--	--	--	--	--	--	--	
	11/11/1996	--	168.14	22.27	0.01	145.86	--	--	--	--	--	--	--	--	--	
	1/21/1997	--	168.14	15.19	0.01	152.94	--	--	--	--	--	--	--	--	--	
	4/29/1997	--	168.14	20.22	0.01	147.91	--	--	--	--	--	--	--	--	--	
	4/30/1997	--	168.14		--		130,000	4,600	15,000	6,000	37,000	<5000	5	--	--	
	8/21/1997	--	168.14	21.74	0.01	146.39	110,000	6,000	16,000	4,700	28,000	<500	4.6	--	--	
	11/5/1997	--	168.14	21.61	0.01	146.52	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	--	--	--	

Table 1

Groundwater Elevation and Analytical Data

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

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-2	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	--	--	--	
	11/12/2002	--	168.14	21.34	SHEEN	146.80	46,000	4,100	4,300	1,900	10,000	1,900	--	--	--	
	1/29/2003	--	168.14	16.80	SHEEN	151.34	77,000	4,700	2,600	2,800	13,000	820	--	--	--	n
	5/22/2003	--	168.14	17.15	SHEEN	150.99	52,000	6,400	2,600	1,800	7,400	1,000	--	--	--	
	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	Sheen
	05/04/2004	P	168.14	20.09	--	148.05	120,000	15,000	17,000	4,900	24,000	780	--	SEQM	6.6	Heavy sheen
	08/04/2004	**P**	**168.14**	**21.39**	**--**	**146.75**	**38,000**	**9,100**	**3,300**	**1,900**	**5,800**	**430**	**--**	**SEQM**	**6.69**	**Heavy sheen**
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	ND	ND	ND	ND	ND	--	--	--	--	
	6/27/1991	--	167.17		--		380	28	26	13	46	--	--	--	--	
	9/27/1991	--	167.17		--		0.07	7.9	ND	0.4	1.1	--	--	--	--	
	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

Table 1

Groundwater Elevation and Analytical Data

Former BP Station #11132

3201 35th Ave, Oakland, CA

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-3	4/23/1993	--	167.17	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	c,i
	4/23/1993	--	167.17	15.02	--	152.15	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	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	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	c
	12/23/1994	--	167.17	14.70	--	152.47	<50	<0.5	0.78	<0.5	<0.5	9.8	1.7	--	--	i
	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	--	--	
	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	--	--	
	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	--	--	--	--	--	--	--	--	--	

Table 1

Groundwater Elevation and Analytical Data

Former BP Station #11132

3201 35th Ave, Oakland, CA

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-3	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	--	--	--	--	--	--	--	--	--	
	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**	--	--	--	--	--	--	--	--	--	
MW-4	7/9/1990	--	170.36		--		ND	ND	ND	ND	ND	--	--	--	--	
	12/21/1990	--	170.36		--		ND	ND	ND	ND	0.8	--	--	--	--	
	3/7/1991	--	170.36	20.72	--	149.64	ND	2.2	3.8	1.5	2.8	--	--	--	--	
	4/1/1991	--	170.36	17.49	--	152.87	ND	ND	ND	ND	ND	--	--	--	--	
	6/27/1991	--	170.36		--		ND	6.3	1.8	0.4	1	--	--	--	--	
	9/27/1991	--	170.36		--		ND	ND	ND	ND	ND	--	--	--	--	
	12/18/1991	--	170.36		--		ND	ND	ND	ND	ND	--	--	--	--	
	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	--	--	
	12/23/1994	--	170.36	17.03	--	153.33	--	--	--	--	--	--	--	--	--	

Table 1

Groundwater Elevation and Analytical Data

Former BP Station #11132

3201 35th Ave, Oakland, CA

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-4	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	--	--	--	--	--	--	--	--	--	
	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	--	--	--	--	--	--	--	--	--	

Table 1

Groundwater Elevation and Analytical Data

Former BP Station #11132

3201 35th Ave, Oakland, CA

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-4	11/18/2003	--	170.36	21.65	--	148.71	--	--	--	--	--	--	--	--	--	
	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**	--	--	--	--	--	--	--	--	--	
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	ND	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		--		ND	ND	ND	ND	ND	--	--	--	--	
	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
	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	--	--	

Table 1

Groundwater Elevation and Analytical Data

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

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-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	--	--	--	--	--	--	--	--	--	
	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	--	--	--	
	11/18/2003	--	165.14	--	--	--	--	--	--	--	--	--	--	--	--	Well inaccessible 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**	
MW-6	7/9/1990	--	165.4		--		ND	ND	ND	ND	ND	--	--	--	--	
	12/21/1990	--	165.4		--		0.17	2.6	7	4.9	26	--	--	--	--	
	3/7/1991	--	165.4		--		--	--	--	--	--	--	--	--	--	e

Table 1

Groundwater Elevation and Analytical Data

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

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-6	4/1/1991	--	165.4	11.79	--	153.61	ND	ND	ND	ND	ND	--	--	--	--	
	6/27/1991	--	165.4		--		--	--	--	--	--	--	--	--	--	e
	9/27/1991	--	165.4		--		--	--	--	--	--	--	--	--	--	e
	12/18/1991	--	165.4		--		ND	1.3	22	ND	2.7	--	--	--	--	
	7/3/1992	--	165.4	17.77	--	147.63	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	
	10/5/1992	--	165.4	19.46	--	145.94	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	
	1/13/1993	--	165.4	11.34	--	154.06	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	i
	4/23/1993	--	165.4	12.92	--	152.48	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	i
	7/12/1993	--	165.4	17.36	--	148.04	<50	<0.5	<0.5	<0.5	0.7	<5.0	--	--	--	i
	10/21/1993	--	165.4	19.98	--	145.42	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	i
	1/21/1994	--	165.4	18.10	--	147.30	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	i
	4/20/1994	--	165.4	18.68	--	146.72	<50	<0.5	<0.5	<0.5	<0.5	17.4	2	--	--	i
	8/1/1994	--	165.4	18.90	--	146.50	<50	<0.5	<0.5	<0.5	<0.5	8.66	1.5	--	--	i
	12/23/1994	--	165.4	12.94	--	152.46	--	--	--	--	--	--	--	--	--	
	1/26/1995	--	165.4	10.46	--	154.94	<50	<0.5	<0.5	<0.5	<1	--	7.3	--	--	
	6/8/1995	--	165.4	16.84	--	148.56	--	--	--	--	--	--	--	--	--	
	8/22/1995	--	165.4	19.48	--	145.92	<50	<0.50	<0.50	<0.50	<1.0	<5.0	6.7	--	--	d
	10/27/1995	--	165.4	20.39	--	145.01	--	--	--	--	--	--	--	--	--	
	1/25/1996	--	165.4	12.24	--	153.16	<50	<0.50	<0.50	<0.50	<1.0	9.9	--	--	--	
	4/19/1996	--	165.4	13.90	--	151.50	--	--	--	--	--	--	--	--	--	
	7/23/1996	--	165.4	17.83	--	147.57	--	--	--	--	--	--	--	--	--	
	11/11/1996	--	165.4	18.90	--	146.50	<50	<0.5	<1.0	<1.0	<1.0	<10	7.7	--	--	
	1/21/1997	--	165.4	11.97	--	153.43	--	--	--	--	--	--	--	--	--	
	4/29/1997	--	165.4	17.04	--	148.36	<50	<0.5	<1.0	<1.0	<1.0	<10	4.5	--	--	
	8/21/1997	--	165.4	18.58	--	146.82	--	--	--	--	--	--	--	--	--	
	11/5/1997	--	165.4	19.17	--	146.23	70	<0.5	<1.0	<1.0	<1.0	85	4.3	--	--	
	2/3/1998	--	165.4	9.87	--	155.53	--	--	--	--	--	--	--	--	--	
	5/28/1998	--	165.4	13.38	--	152.02	<50	<0.5	<1.0	<1.0	<1.0	<10	3.7	--	--	
	12/30/1998	--	165.4	14.45	--	150.95	--	--	--	--	--	--	--	--	--	
	2/2/1999	--	165.4	18.29	--	147.11	--	--	--	--	--	--	--	--	--	
	5/10/1999	--	165.4	17.49	--	147.91	--	--	--	--	--	--	--	--	--	
	8/24/1999	--	165.4	17.61	--	147.79	--	--	--	--	--	--	--	--	--	
	11/3/1999	--	165.4	16.26	--	149.14	--	--	--	--	--	--	--	--	--	
	3/1/2000	--	165.4	17.43	--	147.97	--	--	--	--	--	--	--	--	--	

Table 1

Groundwater Elevation and Analytical Data

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

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-6	4/21/2000	--	165.4	13.32	--	152.08	--	--	--	--	--	--	--	--	--	
	7/31/2000	--	165.4	13.46	--	151.94	--	--	--	--	--	--	--	--	--	
	11/20/2000	--	165.4	14.78	--	150.62	--	--	--	--	--	--	--	--	--	
	2/18/2001	--	165.4	11.33	--	154.07	--	--	--	--	--	--	--	--	--	
	6/7/2001	--	165.4	16.36	--	149.04	--	--	--	--	--	--	--	--	--	
	9/5/2001	--	165.4	18.61	--	146.79	--	--	--	--	--	--	--	--	--	
	11/30/2001	--	165.4	15.20	--	150.20	--	--	--	--	--	--	--	--	--	
	2/20/2002	--	165.4	12.74	--	152.66	--	--	--	--	--	--	--	--	--	
	6/20/2002	--	165.4	16.68	--	148.72	--	--	--	--	--	--	--	--	--	
	9/11/2002	--	165.4	18.38	--	147.02	--	--	--	--	--	--	--	--	--	
	11/12/2002	--	165.4	18.78	--	146.62	--	--	--	--	--	--	--	--	--	
	1/29/2003	--	165.4	14.45	--	150.95	--	--	--	--	--	--	--	--	--	n
	5/22/2003	--	165.4	14.36	--	151.04	--	--	--	--	--	--	--	--	--	
	7/28/2003	--	165.4	18.43	--	146.97	--	--	--	--	--	--	--	--	--	
	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**	--	--	--	--	--	--	--	--	--	
MW-7	7/9/1990	--	167.61		--		ND	ND	ND	ND	ND	--	--	--	--	
	12/21/1990	--	167.61		--		ND	ND	ND	ND	ND	--	--	--	--	
	3/7/1991	--	167.61	19.04	--	148.57	ND	ND	0.4	0.3	2.4	--	--	--	--	
	4/1/1991	--	167.61	15.18	--	152.43	ND	ND	ND	ND	ND	--	--	--	--	
	6/27/1991	--	167.61		--		70	17	4	0.8	2.2	--	--	--	--	
	9/27/1991	--	167.61		--		ND	0.4	ND	ND	0.4	--	--	--	--	
	12/18/1991	--	167.61		--		ND	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	--	--	--	--	
	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	--	--	--	--	i
	10/21/1993	--	167.61	21.61	--	146.00	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	i
	1/21/1994	--	167.61	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	i
	1/21/1994	--	167.61	20.49	--	147.12	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	c i

Table 1

Groundwater Elevation and Analytical Data

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

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-7	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	--	--	
	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	--	149.28	--	--	--	--	--	--	--	--	--	
	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

Table 1

Groundwater Elevation and Analytical Data

Former BP Station #11132

3201 35th Ave, Oakland, CA

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-7	1/29/2003	--	167.61	19.10	--	148.51	--	--	--	--	--	--	--	--	--	
	5/22/2003	--	167.61	18.83	--	148.78	--	--	--	--	--	--	--	--	--	
	7/28/2003	--	167.61	19.88	--	147.73	--	--	--	--	--	--	--	--	--	
	11/18/2003	--	167.61	20.50	--	147.11	--	--	--	--	--	--	--	--	--	
	11/18/2003	--	168.08	20.50	--	147.58	--	--	--	--	--	--	--	--	--	
	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**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	
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	0.01	145.25	--	--	--	--	--	--	--	--	--	
	1/13/1993	--	165.74	12.87	0.01	152.86	--	--	--	--	--	--	--	--	--	
	4/23/1993	--	165.74	13.90	SHEEN	151.84	--	--	--	--	--	--	--	--	--	
	7/12/1993	--	165.74	18.30	SHEEN	147.44	--	--	--	--	--	--	--	--	--	
	10/21/1993	--	165.74	21.91	0.95	142.88	--	--	--	--	--	--	--	--	--	
	1/21/1994	--	165.74	19.12	0.03	146.59	--	--	--	--	--	--	--	--	--	
	4/20/1994	--	165.74	19.28	0.03	146.43	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	0.03	151.90	--	--	--	--	--	--	--	--	--	
	1/26/1995	--	165.74		--		--	--	--	--	--	--	--	--	--	
	6/8/1995	--	165.74	17.82	0.29	147.63	--	--	--	--	--	--	--	--	--	
	8/22/1995	--	165.74	19.41	0.20	146.13	--	--	--	--	--	--	--	--	--	
	10/27/1995	--	165.74	20.47	0.14	145.13	--	--	--	--	--	--	--	--	--	
	1/25/1996	--	165.74	13.35	0.22	152.17	--	--	--	--	--	--	--	--	--	
	4/19/1996	--	165.74	14.40	0.20	151.14	--	--	--	--	--	--	--	--	--	
	7/23/1996	--	165.74	18.35	0.14	147.25	--	--	--	--	--	--	--	--	--	
	11/11/1996	--	165.74	19.41	0.02	146.31	--	--	--	--	--	--	--	--	--	
	1/21/1997	--	165.74	12.29	0.01	153.44	--	--	--	--	--	--	--	--	--	
	4/29/1997	--	165.74		--		--	--	--	--	--	--	--	--	--	e

Table 1

Groundwater Elevation and Analytical Data

Former BP Station #11132

3201 35th Ave, Oakland, CA

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-8	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	0.10	146.19	57,000	790	2,700	2,300	15,200	<1000	5	--	--	
	2/3/1998	--	165.74	9.33	0.03	156.38	--	--	--	--	--	--	--	--	--	
	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	0.05	150.21	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
	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	SHEEN	146.59	420	6.4	2.9	16	110	31	--	--	--	
	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	SHEEN	150.67	--	--	--	--	--	--	--	--	--	
	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	SHEEN	146.34	--	--	--	--	--	--	--	--	--	o
	9/12/2003	--	165.74	19.34	--	146.40	--	--	--	--	--	--	--	--	--	o
	11/18/2003	P	165.74	18.80	--	146.94	8,800	500	37	530	930	1,700	--	SEQM	--	o,p
	02/23/2004	P	165.74	12.82	--	152.92	32,000	840	360	1,000	7,100	110	--	SEQM	6.6	Sheen
	05/04/2004	P	165.74	18.87	--	146.87	42,000	570	230	1,700	8,400	2,000	--	SEQM	7.0	Sheen
	08/04/2004	**--**	**165.74**	**19.37**	**0.05**	**146.41**	--	--	--	--	--	--	--	--	--	
	09/22/2004	**NP**	**165.74**	**19.60**	**--**	**146.14**	--	--	--	--	--	--	--	--	--	

Table 1

Groundwater Elevation and Analytical Data

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

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-9	3/7/1991	--	166.2	16.79	--	149.41	7.1	220	4	2.4	2,400	--	--	--	--	
	4/1/1991	--	166.2	12.89	--	153.31	12,000	2,000	2,600	360	1,600	--	--	--	--	
	6/27/1991	--	166.2		--		3,600	520	400	85	310	--	--	--	--	
	9/27/1991	--	166.2		--		3.2	720	150	50	180	--	--	--	--	
	12/18/1991	--	166.2		--		ND	2.5	1.1	0.3	5.8	--	--	--	--	
	7/3/1992	--	166.2	18.89	--	147.31	5,700	17,000	840	230	800	--	--	--	--	
	10/5/1992	--	166.2	20.52	--	145.68	1,400	440	17	14	100	--	--	--	--	
	1/13/1993	--	166.2	--	--	--	11,000	1,200	1,600	330	1,300	--	--	--	--	c,i
	1/13/1993	--	166.2	12.92	--	153.28	11,000	1,200	1,700	340	1,400	--	--	--	--	i
	4/23/1993	--	166.2	14.08	--	152.12	24,000	2,800	4,500	730	3,400	--	--	--	--	i
	7/12/1993	--	166.2	--	--	--	10,000	1,200	900	310	1,200	--	--	--	--	c
	7/12/1993	--	166.2	18.44	--	147.76	13,000	1,400	1,100	360	1,400	20.8	--	--	--	i
	10/21/1993	--	166.2	21.81	0.89	143.50	--	--	--	--	--	--	--	--	--	
	1/21/1994	--	166.2	19.28	--	146.92	--	--	--	--	--	--	--	--	--	
	4/20/1994	--	166.2	--	--	--	45,000	2,700	6,800	1,200	8,200	740	--	--	--	c,d
	4/20/1994	--	166.2	19.72	--	146.48	43,000	2,800	6,800	1,300	7,900	768	1.7	--	--	i
	8/1/1994	--	166.2	20.18	0.05	145.97	--	--	--	--	--	--	--	--	--	
	12/23/1994	--	166.2	14.22	0.02	151.96	--	--	--	--	--	--	--	--	--	
	1/26/1995	--	166.2	11.85	0.13	154.22	--	--	--	--	--	--	--	--	--	
	6/8/1995	--	166.2	18.33	--	147.87	--	--	--	--	--	--	--	--	--	
	8/22/1995	--	166.2	19.95	0.01	146.24	--	--	--	--	--	--	--	--	--	
	10/27/1995	--	166.2	20.88	0.01	145.31	--	--	--	--	--	--	--	--	--	
	1/25/1996	--	166.2	13.84	0.07	152.29	--	--	--	--	--	--	--	--	--	
	4/19/1996	--	166.2		--		--	--	--	--	--	--	--	--	--	
	7/23/1996	--	166.2	18.84	0.03	147.33	--	--	--	--	--	--	--	--	--	
	11/11/1996	--	166.2	19.91	0.01	146.28	--	--	--	--	--	--	--	--	--	
	1/21/1997	--	166.2	12.93	0.01	153.26	--	--	--	--	--	--	--	--	--	
	4/29/1997	--	166.2	18.03	SHEEN	148.17	--	--	--	--	--	--	--	--	--	
	4/30/1997	--	166.2		--		78,000	1,900	3,600	3,100	20,600	<5000	5.5	--	--	
	8/21/1997	--	166.2	19.56	0.01	146.63	110,000	2,100	3,400	2,300	18,800	<500	5.1	--	--	
	11/5/1997	--	166.2	20.59	0.01	145.60	59,000	1,400	1,700	2,200	17,000	<500	4.5	--	--	
	2/3/1998	--	166.2	10.56	--	155.64	55,000	490	1,200	1,400	10,200	<1000	4.9	--	--	
	5/28/1998	--	166.2	--	--	--	53,000	290	830	1,400	10,500	<500	--	--	--	c

Table 1

Groundwater Elevation and Analytical Data

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

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-9	5/28/1998	--	166.2	14.21	0.01	151.98	41,000	250	1,200	1,500	11,400	<250	3.8	--	--	
	12/30/1998	--	166.2	15.61	--	150.59	83,000	860	1,300	2,400	21,000	180	--	--	--	
	2/2/1999	--	166.2	12.33	--	153.87	75,000	530	960	1,900	17,000	<50	--	--	--	
	5/10/1999	--	166.2	15.67	--	150.53	22,000	600	1,500	1,100	4,400	72	--	--	--	
	8/24/1999	--	166.2	19.10	--	147.10	85,000	850	1,300	1,700	20,000	<250	--	--	--	
	11/3/1999	--	166.2	19.58	--	146.62	72,000	700	780	1,900	19,000	<5.0	--	--	--	
	3/1/2000	--	166.2	13.19	--	153.01	34,000	78	490	1,100	8,200	63	--	--	--	
	4/21/2000	--	166.2	14.29	--	151.91	55,000	260	920	1,500	16,000	<5.0	--	--	--	
	7/31/2000	--	166.2	15.01	--	151.19	1,200,000	1,500	6,300	15,000	120,000	1,600	--	--	--	
	11/20/2000	--	166.2	18.23	--	147.97	320,000	3,500	19,000	5,000	40,000	3,900	--	--	--	
	2/18/2001	--	166.2	13.14	--	153.06	32,000	290	417	1,180	10,400	121	--	--	--	
	6/7/2001	--	166.2	17.41	--	148.79	96,000	421	704	2,330	17,300	223	--	--	--	
	9/5/2001	--	166.2	20.56	--	145.64	39,000	445	323	1,240	8,940	310	--	--	--	
	11/30/2001	--	166.2	17.42	--	148.78	60,000	310	586	1,890	14,200	285	--	--	--	
	2/20/2002	--	166.2	13.87	--	152.33	14,000	64	122	897	2,650	293	--	--	--	
	6/20/2002	--	166.2	18.22	--	147.98	29,000	307	168	1,100	5,670	208	--	--	--	
	9/11/2002	--	166.2	20.27	--	145.93	230,000	1,400	680	3,600	23,000	<2500	--	--	--	
	11/12/2002	--	166.2	19.40	SHEEN	146.80	840	5.8	3.6	28	160	21	--	--	--	
	1/29/2003	--	166.2	14.30	0.10	151.80	--	--	--	--	--	--	--	--	--	j,n
	5/22/2003	--	166.2	15.16	SHEEN	151.04	23,000	260	<50	1,000	2,900	<50	--	--	--	
	6/24/2003	--	166.2		--		--	--	--	--	--	--	--	--	--	e
	7/28/2003	--	166.2	19.55	--	146.65	1,500,000	<500	<500	9,800	79,000	<500	--	--	--	
	8/12/2003	--	166.2	19.60	SHEEN	146.60	--	--	--	--	--	--	--	--	--	o
	9/12/2003	--	166.2	19.60	SHEEN	146.60	--	--	--	--	--	--	--	--	--	o
	11/18/2003	P	166.20	18.98	--	147.22	19,000	250	18	690	2,400	45	--	SEQM	6.8	o,p
	02/23/2004	P	166.20	13.91	--	152.29	91,000	<250	440	2,200	13,000	<250	--	SEQM	6.8	Sheen
	05/04/2004	P	166.20	18.11	--	148.09	39,000	230	44	1,100	4,200	<25	--	SEQM	6.9	Heavy sheen
	08/04/2004	**--**	**166.20**	**18.90**	**0.03**	**147.32**	--	--	--	--	--	--	--	--	--	
	09/22/2004	**NP**	**166.20**	**19.69**	**--**	**146.51**	--	--	--	--	--	--	--	--	--	
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	ND	ND	ND	ND	ND	--	--	--	--	
	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	--	--	--	--	

Table 1

Groundwater Elevation and Analytical Data

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

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-10	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	0.19	144.90	--	--	--	--	--	--	--	--	--	
	1/13/1993	--	167.01	14.43	0.03	152.55	--	--	--	--	--	--	--	--	--	
	4/23/1993	--	167.01	15.26	0.06	151.69	--	--	--	--	--	--	--	--	--	
	7/12/1993	--	167.01	19.78	0.45	146.78	--	--	--	--	--	--	--	--	--	
	10/21/1993	--	167.01	22.90	0.69	143.42	--	--	--	--	--	--	--	--	--	
	1/21/1994	--	167.01	20.25	0.06	146.70	--	--	--	--	--	--	--	--	--	
	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	0.28	144.73	--	--	--	--	--	--	--	--	--	
	12/23/1994	--	167.01	16.08	0.25	150.68	--	--	--	--	--	--	--	--	--	
	1/26/1995	--	167.01	13.68	0.80	152.53	--	--	--	--	--	--	--	--	--	
	6/8/1995	--	167.01	19.08	--	147.93	--	--	--	--	--	--	--	--	--	
	8/22/1995	--	167.01	20.73	0.70	145.58	--	--	--	--	--	--	--	--	--	
	10/27/1995	--	167.01	21.69	0.63	144.69	--	--	--	--	--	--	--	--	--	
	1/25/1996	--	167.01	15.05	0.81	151.15	--	--	--	--	--	--	--	--	--	
	4/19/1996	--	167.01	16.26	0.58	150.17	--	--	--	--	--	--	--	--	--	
	7/23/1996	--	167.01	20.18	0.62	146.21	--	--	--	--	--	--	--	--	--	
	11/11/1996	--	167.01	21.20	0.20	145.61	--	--	--	--	--	--	--	--	--	
	1/21/1997	--	167.01	13.66	0.14	153.21	--	--	--	--	--	--	--	--	--	
	4/29/1997	--	167.01	18.71	0.21	148.09	--	--	--	--	--	--	--	--	--	
	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	0.14	146.68	170,000	9,500	35,000	4,300	27,100	<5000	5.3	--	--	
	11/5/1997	--	167.01	20.52	0.02	146.47	80,000	3,800	12,000	2,700	15,700	<500	4.4	--	--	
	2/3/1998	--	167.01	10.62	0.01	156.38	--	--	--	--	--	--	--	--	--	
	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	--	--	--	

Table 1

Groundwater Elevation and Analytical Data

Former BP Station #11132

3201 35th Ave, Oakland, CA

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-10	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	SHEEN	150.69	13,000	2,100	850	630	1,600	300	--	--	--	
	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	SHEEN	146.58	--	--	--	--	--	--	--	--	--	o
	9/12/2003	--	167.01	20.41	--	146.60	--	--	--	--	--	--	--	--	--	o
	11/18/2003	P	167.01	19.55	--	147.46	9,900	2,200	530	320	860	<50	--	SEQM	6.8	o,p
	02/23/2004	P	167.01	15.45	--	151.56	46,000	1,900	2,000	1,800	9,000	180	--	SEQM	6.7	Sheen
	05/04/2004	P	167.01	18.81	--	148.20	35,000	3,100	3,600	1,400	5,600	<25	--	SEQM	7.1	Sheen
	08/04/2004	**--**	**167.01**	**18.90**	**0.08**	**148.17**	--	--	--	--	--	--	--	--	--	
	09/22/2004	**NP**	**167.01**	**20.60**	**--**	**146.41**	--	--	--	--	--	--	--	--	--	
QC-2	10/5/1992	--	168.01	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	f
	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

Table 1

Groundwater Elevation and Analytical Data

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

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
QC-2	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		1.21		--	--	--	--	--	--	--	--	--	
	12/21/1990	--	168.01		0.01		--	--	--	--	--	--	--	--	--	
	3/7/1991	--	168.01	17.62	SHEEN	150.39	--	--	--	--	--	--	--	--	--	
	4/1/1991	--	168.01	14.40	0.11	153.50	--	--	--	--	--	--	--	--	--	
	6/27/1991	--	168.01		0.04		--	--	--	--	--	--	--	--	--	
	9/27/1991	--	168.01		0.02		--	--	--	--	--	--	--	--	--	
	12/18/1991	--	168.01		0.02		--	--	--	--	--	--	--	--	--	
	7/3/1992	--	168.01	20.66	SHEEN	147.35	--	--	--	--	--	--	--	--	--	
	10/5/1992	--	168.01	23.34	0.08	144.59	--	--	--	--	--	--	--	--	--	
	1/13/1993	--	168.01	16.59	0.05	151.37	--	--	--	--	--	--	--	--	--	
	4/23/1993	--	168.01	16.17	0.18	151.66	--	--	--	--	--	--	--	--	--	
	7/12/1993	--	168.01	20.18	0.06	147.77	--	--	--	--	--	--	--	--	--	
	10/21/1993	--	168.01	25.70	0.56	141.75	--	--	--	--	--	--	--	--	--	
	1/21/1994	--	168.01	21.24	0.40	146.37	--	--	--	--	--	--	--	--	--	
	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
	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	--	--	--	<50	<0.5	<0.5	<0.5	<1	--	--	--	--	c
	1/26/1995	--	168.01	13.78	--	154.23	<50	<0.5	<0.5	<0.5	<1	--	--	--	--	
	6/8/1995	--	168.01	20.05	--	147.96	1,300	130	<1.0	<1.0	36	--	--	--	--	
	8/22/1995	--	168.01	--	--	--	2,800	210	9.3	4.3	250	<25	--	--	--	c
	8/22/1995	--	168.01	21.74	--	146.27	3,300	230	13	4.9	280	<25	6.6	--	--	
	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

Table 1

Groundwater Elevation and Analytical Data

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

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
RW-1	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	--	--	--	270	42	17	2.7	36	1,500	--	--	--	c
	1/21/1997	--	168.01	14.20	--	153.81	260	40	16	2.7	34	1,500	6.1	--	--	
	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	--	--	--	
	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	--		--	--	--	--	--	--	--	--	--	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	SHEEN	151.33	--	--	--	--	--	--	--	--	--	j
	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	SHEEN	146.60	--	--	--	--	--	--	--	--	--	o
	9/12/2003	--	168.01	21.10	0.07	146.84	--	--	--	--	--	--	--	--	--	o
	11/18/2003	P	168.01	20.10	--	147.91	12,000	770	<50	320	250	6,100	--	SEQM	6.6	o,p
	02/23/2004	--	168.01	14.35	0.01	153.67	--	--	--	--	--	--	--	--	--	
	05/04/2004	--	168.01	19.58	0.02	148.45	--	--	--	--	--	--	--	--	--	

Table 1

Groundwater Elevation and Analytical Data

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

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
RW-1	08/04/2004	--	168.01	22.05	0.05	146.00	--	--	--	--	--	--	--	--	--	
	09/22/2004	NP	168.01	21.28	0.06	146.78	--	--	--	--	--	--	--	--	--	

Table 1

Groundwater Elevation and Analytical Data

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

Abbreviations:
GRO = Gasoline Range Organics, range C4-C12
TPH-g = Total petroleum hydrocarbons as gasoline
MTBE = Methyl tert butyl ether
DO = Dissolved oxygen
DTW = Depth to Water
TOC = Top of casing
GWE = Groundwater elevation measured in feet above mean sea level
ug/L = Micrograms per liter
mg/L = Milligrams per liter
--- = Not analyzed/available/applicable/measurable
NS = Not sampled
ND = Not detected at or above reported detection limit
< = Not detected at or above reported detection limit
PACE = Pace, Inc.
ANA = Anametrix, Inc.
ATI = Analytical Technologies, Inc.
CEI = Ceimic Corporation
SPL = Southern Petroleum Laboratories

Notes:
(a)Casing elevations surveyed to the nearest 0.01 foot relative to mean sea level.
(b)Groundwater elevations adjusted assuming a specific gravity of 0.75 for free product.
(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 Peak @ C6-7
(n)TPH-g BTEX and MTBE analyzed by EPA method 8260 B beginning on 1st Quarter 2003 Sampling event (1/29/03)
(o)Groundwater samples are not collected during free product bailing event.
(p)Well not included in the monthly free product 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 top of casing elevation raised +0.47 ft during well repair, January 20, 2004

Note:Please note that beginning in the Fourth Quarter 2003, the laboratory modified the reported analyte list. Total Petroleum Hydrocarbons as Gasoline (TPHg) has been changed to Gasoline Range Organics(GRO). The resulting data may be impacted by the potential inclusion of non-TPHg analytes within the requested fuel range resulting in a higher concentration being reported. Also, beginnig the second quarter 2004, the carbon range for GRO has been changed from C-6-C10 to C4-C12.

Table 1

Groundwater Elevation and Analytical Data

Former BP Station #11132

3201 35th Ave, Oakland, CA

Source:The data within this table collected prior to June, 2002 was provided to URS by Atlantic Richfield Company and their previous consultants. URS has not verified the accuracy of this information.

Table 2

Fuel Additives Analytical Data

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

Well Number	Date Sampled	Ethanol (µg/L)	TBA (µg/L)	MtBE (µg/L)	DIPE (µg/L)	EtBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Comments
MW-1	1/29/2003	NS	NS	--	NS	NS	NS	NS	NS	
	5/22/2003	NS	NS	--	NS	NS	NS	NS	NS	
	7/28/2003	NS	NS	--	NS	NS	NS	NS	NS	
MW-2	1/29/2003	<4000	<2000	820	<50	<50	<50	<50	<50	
	5/22/2003	<10000	<2000	1,000	<50	<50	<50	NA	NA	
	7/28/2003	<20000	<4000 a	1,700	<100	<100	<100	<100	<100	
	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**	
MW-3	1/29/2003	<40	<20	0.76	<50	<50	<50	<50	<50	
	5/22/2003	NS	NS	--	NS	NS	NS	NS	NS	
	7/28/2003	NS	NS	--	NS	NS	NS	NS	NS	
	02/23/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-4	1/29/2003	<40	<20	66	<0.50	<0.50	<0.50	<0.50	<0.50	
	5/22/2003	NS	NS	--	NS	NS	NS	NS	NS	
	7/28/2003	NS	NS	--	NS	NS	NS	NS	NS	
	02/23/2004	<100	<20	65	<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	NA	NA	
	7/28/2003	<2000	<400	120	<10	<10	<10	<10	<10	
	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**	
MW-7	1/29/2003	NS	NS	--	NS	NS	NS	NS	NS	
	5/22/2003	NS	NS	--	NS	NS	NS	NS	NS	
	7/28/2003	NS	NS	--	NS	NS	NS	NS	NS	
MW-8	1/29/2003	<4000	<2000	<500	<50	<50	<50	<50	<50	
	5/22/2003	<5000	<1000	--	<25	<25	<25	NA	NA	
	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

Table 2

Fuel Additives Analytical Data

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

Well Number	Date Sampled	Ethanol (µg/L)	TBA (µg/L)	MtBE (µg/L)	DIPE (µg/L)	EtBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Comments
MW-8	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	
MW-9	1/29/2003	NS	NS	--	NS	NS	NS	NS	NS	
	5/22/2003	<10000	<2000	<50	<50	<50	<50	NA	NA	
	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	
MW-10	1/29/2003	NS	NS	--	NS	NS	NS	NS	NS	
	5/22/2003	<10000	<2000	300	<50	<50	<50	NA	NA	
	7/28/2003	NS	NS	--	NS	NS	NS	NS	NS	
	11/18/2003	<10,000	<2,000	<50	<50	<50	<50	--	--	a,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	
RW-1	1/29/2003	NS	NS	--	NS	NS	NS	NS	NS	
	5/22/2003	NS	NS	--	NS	NS	NS	NS	NS	
	7/28/2003	NS	NS	--	NS	NS	NS	NS	NS	
	11/18/2003	<10,000	11,000	6,100	<50	<50	160	--	--	a,b

Table 2

Fuel Additives Analytical Data

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

Abbreviations:
TBA = tert-Butyl alcohol
MTBE = Methyl tert-butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tert butyl ether
TAME = tert-Amyl methyl ether
1,2-DCA = 1,2-Dichloroethane
EDB = 1,2-Dibromoethane
mg/L = micrograms per liter
< = Not detected at or above the laboratory reporting limit
NA = Data not available, not analyzed, or not applicable
NS = Not Sampled

Notes:
(a) (TBA) The result was reported with a possible high bias due to the continuing calibration verification falling outside acceptance criteria
(b) (Ethanol) The continuing calibration verification was outside of client contractual acceptance limits. However, it was within method acceptance limits. The data should still be useful for its intended purpose.

1. All fuel oxygenate compounds analyzed using EPA Method 8260B

ATTACHMENT C

City of Oakland Excavation Permit and Alameda County Public Works Soil Boring Permit

CITY OF OAKLAND • Community and Economic Development Agency
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • FAX (510) 238-2263

Job Site 3201 35TH AV Parcel# 028 -0950-037-01 Appl# X0401987

Descr soil boring on 35th Avenue Permit Issued 05/11/04
Application must be routed to the Fire Department Hazardous
Materials Management Program for review and approval.
Work Type EXCAVATION-PRIVATE P

USA # Util Co. Job # Acctg#:
Util Fund #

		Applcnt	Phone#	Lic#	License Classes
Owner	FIRST INTERSTATE BANK OF CALIF				
Contractor	GREGG DRILLING & TESTING, INC	X	(925)313-5800	485165	C57
Arch/Engr					
Agent					

Applic Addr 950 HOWE RD, MARTINEZ, CA, 94553

$291.84 TOTAL FEES PAID AT ISSUANCE

$51.00	Applic	$205.00	Permit
$.00	Process	$23.04	Rec Mgmt
$.00	Gen Plan	$.00	Invstg
$.00	Other	$12.80	Tech Enh

JOB SITE

CITY OF OAKLAND

2

ADDRESS:

DIST:

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94544-1395
PHONE (510) 670-6633 James Yoo
FAX (510) 782-1939
APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS
DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 95 feet west of intersection of 35th Avenue and Suter Street, Oakland, CA

CLIENT
Name BP (contact- Paul Supple)
Address P.O. Box 6549 Phone 925-299-8891
City Moraga Zip 94570

APPLICANT
Name URS Corporation
Joe Gonzales Fax 510-874-3268
Address 1333 Broadway Suite 800 Phone 510-874-3252
City Oakland Zip 94612

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☒
Monitoring	☐	Well Destruction	☐

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other	☐

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	☐
Cable	☐	Other	☒ Direct Push		

DRILLER'S NAME Gregg Drilling & Testing

DRILLER'S LICENSE NO. C57 485165

WELL PROJECTS
Drill Hole Diameter ____ in. Maximum
Casing Diameter ____ in Depth ____ ft
Surface Seal Depth ____ ft. Owner's Well Number ____

GEOTECHNICAL PROJECTS
Number of Borings 6 Maximum
Hole Diameter 2 in. Depth 50 ft

STARTING DATE To be determined, pending approval of encroachment permit

COMPLETION DATE UB-4 through UB-6 (2 borings at each location)

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE [signature] DATE 3/18/04

PLEASE PRINT NAME Joe Gonzales

Rev 9-18-02

FOR OFFICE USE

PERMIT NUMBER W04-0422
WELL NUMBER
APN

PERMIT CONDITIONS
Circled Permit Requirements Apply

A. GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and Industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL (Contamination)
Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings

E. CATHODIC
Fill hole anode zone with concrete placed by tremie.

F. WELL DESTRUCTION
Send a map of work site. A separate permit is required for wells deeper than 45 feet.

G. SPECIAL CONDITIONS — BH 1

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations

4-6-04 9-16-04 9-23-04 4-21-04

APPROVED [signature] DATE 4/13/04

FAXED 4/13/04

ATTACHMENT D

Soil Boring Logs from April 19 and 20, 2004 and July 21 and 22, 2004

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							

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LOG OF BORING

Borehole ID: UB-2

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

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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							
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-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							

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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			
24		SILTY CLAY		CL			
		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			
34		SILT					
		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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Oakland, California 94612

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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1333 Broadway, Suite 800
Oakland, California 94612

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					
16					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			
26					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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Oakland, California 94612

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		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
2							

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Oakland, California 94612

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					Borehole grouted to grade with Portland neat cement
6		SANDY GRAVELLY SILT: brown, 50% silt, 20% fine to coarse sand, 30% fine subangular gravel, very stiff, damp		ML	0		UB-9-5
10		same as above, with more gravel			0		
12		increasing clay with depth					
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)					
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
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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1333 Broadway, Suite 800
Oakland, California 94612

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							
24		varying amounts of sand and gravel					
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 bailer)

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Oakland, California 94612

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							UB-11-35
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 (groundwater ⊻ grab with bailer); UB-11-37 (soil).

URS

1333 Broadway, Suite 800
Oakland, California 94612

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					
24		dark brown 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			

ATTACHMENT E
Cone Penetrometer Testing Supplemental Data

Cone Penetration Test Data & Interpretation

Soil behavior type and stratigraphic interpretation is based on relationships between cone bearing (q_c), sleeve friction (f_s), and pore water pressure (u_2). The friction ratio (R_f) is a calculated parameter defined by $100f_s/q_c$ and is used to infer soil behavior type. Generally:

Cohesive soils (clays)

- High friction ratio (R_f) due to small cone bearing (q_c)
- Generate large excess pore water pressures (u_2)

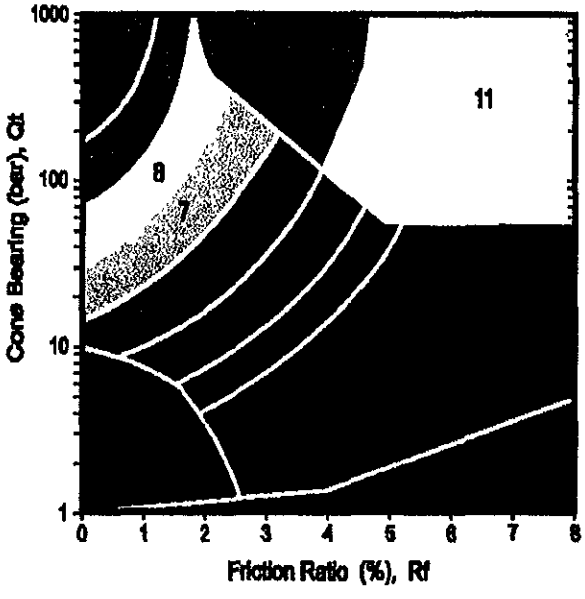
Cohesionless soils (sands)

- Low friction ratio (R_f) due to large cone bearing (q_c)
- Generate very little excess pore water pressures (u_2)

A complete set of baseline readings are taken prior to and at the completion of each sounding to determine temperature shifts and any zero load offsets. Corrections for temperature shifts and zero load offsets can be extremely important, especially when the recorded loads are relatively small. In sandy soils, however, these corrections are generally negligible.

The cone penetration test data collected from your site is presented in graphical form in Appendix CPT. The data includes CPT logs of measured soil parameters, computer calculations of interpreted soil behavior types (SBT), and additional geotechnical parameters. A summary of locations and depths is available in Table 1. Note that all penetration depths referenced in the data are with respect to the existing ground surface.

Soil interpretation for this project was conducted using recent correlations developed by Robertson et al, 1990, *Figure SBT*. Note that it is not always possible to clearly identify a soil type based solely on q_c, f_s, and u_2. In these situations, experience, judgment, and an assessment of the pore pressure dissipation data should be used to infer the soil behavior type.



ZONE	Qt/N	SBT
1	2	Sensitive, fine greained
2	1	Organic materials
3	1	Clay
4	1.5	Silty clay to clay
5	2	Clayey silt to silty clay
6	2.5	Sandy silt to clayey silt
7	3	Silty sand to sandy silt
8	4	Sand to silty sand
9	5	Sand
10	6	Gravely sand to sand
11	1	Very stiff fine grained*
12	2	Sand to clayey sand*

*over consolidated or cemented

Figure SBT

Soil Sampling (SS)

Gregg In Situ, Inc. uses a piston-type sampler to obtain relatively undisturbed soil samples without generating any soil cuttings, *Figure SS*. Two different types of samplers (12 and 18 inch) are used depending on the soil type and density. The soil sampler is initially pushed in a "closed" position to the desired sampling interval using our hydraulic rig. Keeping the sampler closed minimizes the potential of cross contamination caused by sloughing. The inner tip of the sampler is then retracted 12 inches (or 18 inches if using the longer sampler) leaving a hollow soil sampler with two inner 1¼ inch diameter by 6 inch or four 3 inch long soil sample tubes. If using the 18 inch sampler, two 1½ inch diameter by 6 inch long tubes will be exposed. The hollow sampler is then pushed in a locked "open" position to collect a soil sample. The filled sampler and push rods are then retrieved to the ground surface. Because the soil enters the sampler at a constant rate, the opportunity for 100% recovery is increased. For environmental analysis, the soil sample tube ends are sealed with Teflon and plastic caps. Often, a longer "split tube" can be used for geotechnical sampling.

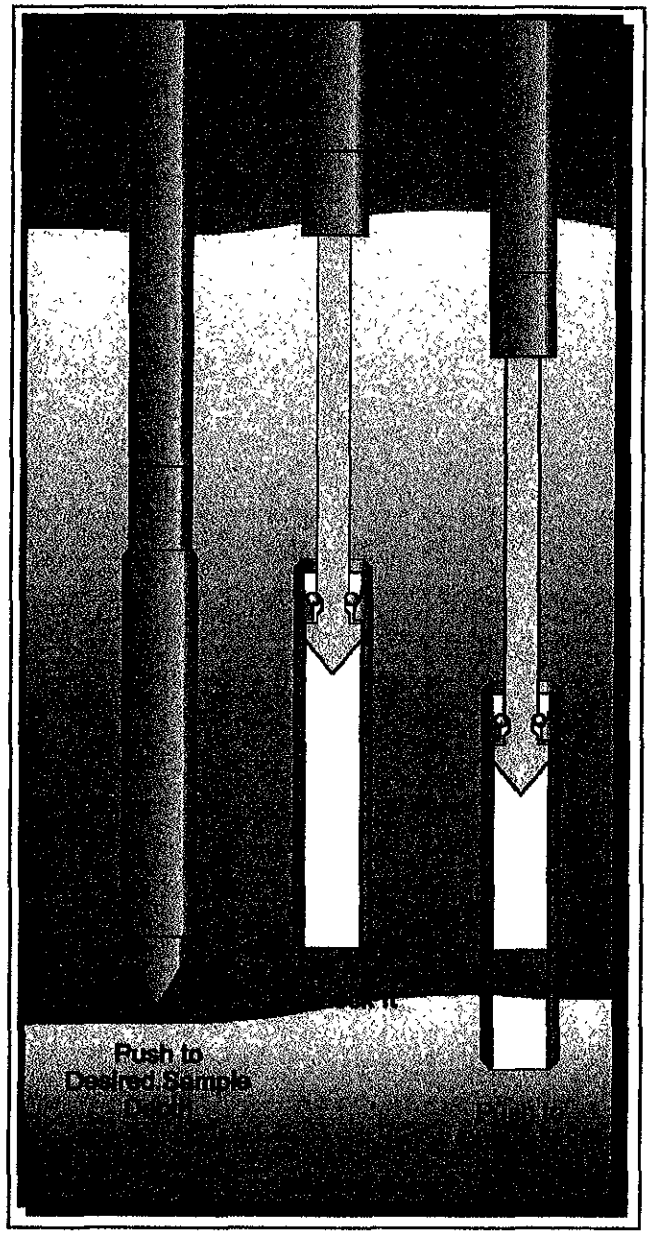


Figure SS

For a detailed reference on direct push soil sampling, refer to Robertson et al, 1998.

A summary of the soil samples collected, including the sampling date, depth and location identification, is presented in Table 1.

Pore Pressure Dissipation Tests (PPDT)

Pore Pressure Dissipation Tests (PPDT's) conducted at various intervals measured hydrostatic water pressures and determined the approximate depth of the ground water table. A PPDT is conducted when the cone is halted at specific intervals determined by the field representative. The variation of the penetration pore pressure (u) with time is measured behind the tip of the cone and recorded by a computer system.

Pore pressure dissipation data can be interpreted to provide estimates of:

- Equilibrium piezometric pressure
- Phreatic Surface
- In situ horizontal coefficient of consolidation (c_h)
- In situ horizontal coefficient of permability (k_h)

In order to correctly interpret the equilibrium piezometric pressure and/or the phreatic surface, the pore pressure must be monitored until such time as there is no variation in pore pressure with time (refer to Figure PPD). This time is commonly referred to as t_{100}, the point at which 100% of the excess pore pressure has dissipated.

Interpretation of either c_h and k_h from dissipation results can be most easily achieved using either of two analytical approaches: cavity-expansion theory or the strain-path approach. Comparisons of the available solutions and results from field studies suggest that the cavity-expansion method of Torstensson (1977) and the strain-path approaches of Levadous (1980) and Teh (1987) all provide similar predications of consolidation parameters from CPTU dissipation data (Gillespie 1981; Kabir and Lutenegger 1990; Robertson et al. (1991). Robertson et al. (1991) have shown that these methods, although developed for normally consolidated soils, can be equally applied to overconsolidated soils. Furthermore, comparisons of field and laboratory data indicate that the trends in the measured (laboratory) and predicated (CPTU) data are consistent provided the micro fabric and nature of the soils being tested are taken into consideration. (Danziger 1990; Robertson et al. 1991).

A complete reference on pore pressure dissipation tests is presented by Robertson et al. 1991.

A summary of the pore pressure dissipation tests is summarized in Table 1.
Pore pressure dissipation data is presented in graphical form in Appendix PPDT.

Cone Penetration Testing Procedure (CPT)

Gregg In Situ, Inc. carries out all Cone Penetration Tests (CPT) using an integrated electronic cone system, *Figure CPT*. The soundings were conducted using a 20 ton capacity cone with a tip area of 15 cm^2 and a friction sleeve area of 225 cm^2. The cone is designed with an equal end area friction sleeve and a tip end area ratio of 0.85.

The cone takes measurements of cone bearing (q_c), sleeve friction (f_s) and dynamic pore water pressure (u_2) at 5-cm intervals during penetration to provide a nearly continuous hydrogeologic log. CPT data reduction and interpretation is performed in real time facilitating on-site decision making. The above mentioned parameters are stored on disk for further analysis and reference. All CPT soundings are performed in accordance with revised (2002) ASTM standards (D 5778-95).

The cone also contains a porous filter element located directly behind the cone tip (u_2), *Figure CPT*. It consists of porous plastic and is 5.0mm thick. The filter element is used to obtain dynamic pore pressure as the cone is advanced as well as Pore Pressure Dissipation Tests (PPDT's) during appropriate pauses in penetration. It should be noted that prior to penetration, the element is fully saturated with silicon oil under vacuum pressure to ensure accurate and fast dissipation.

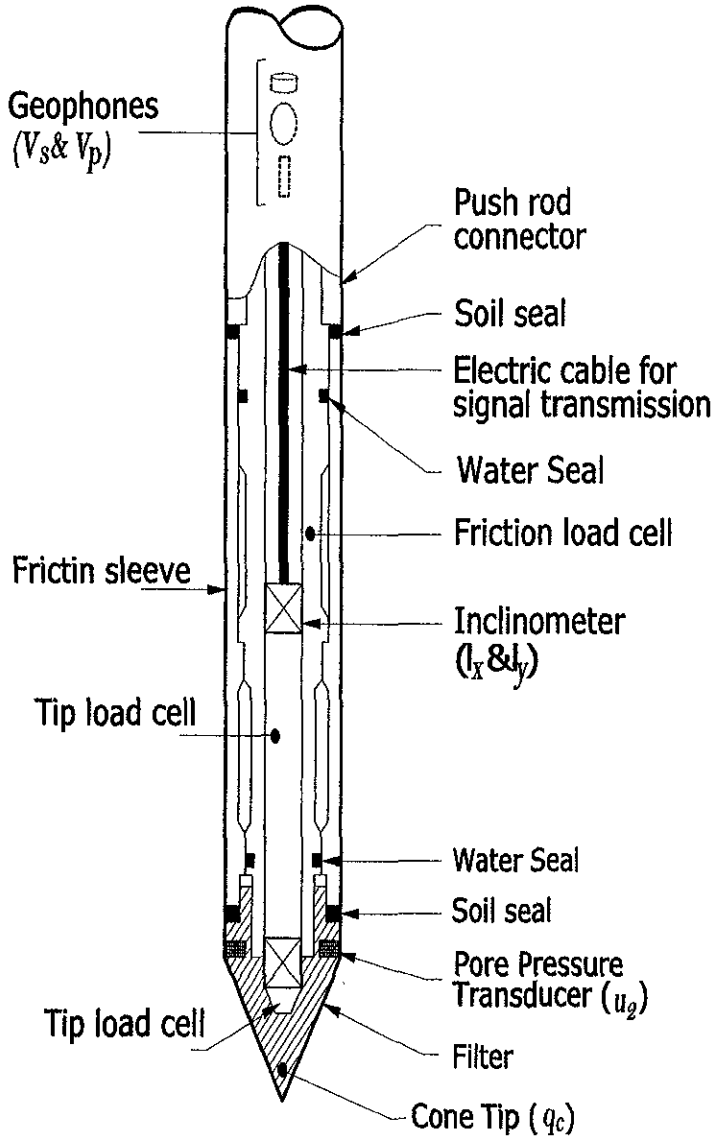
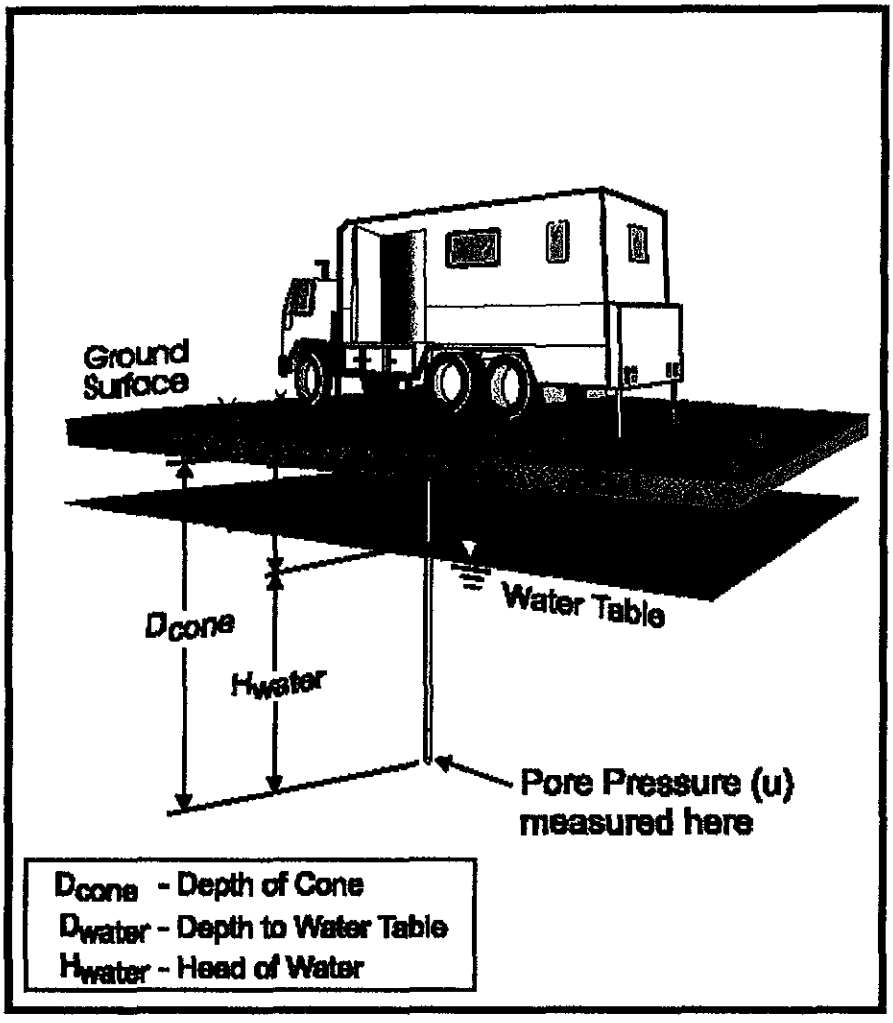
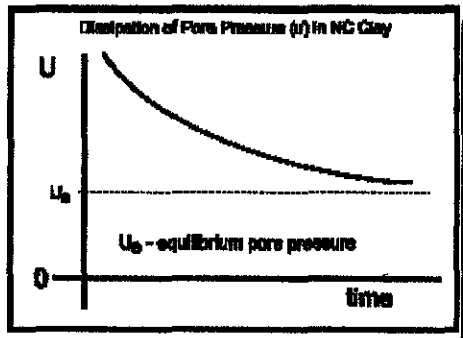
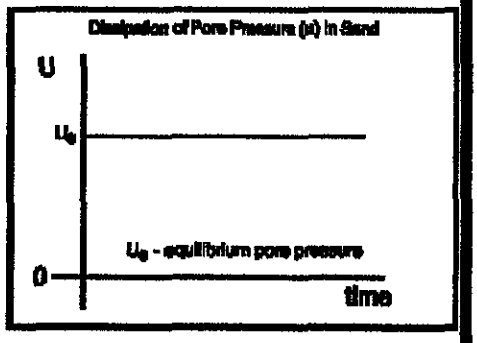


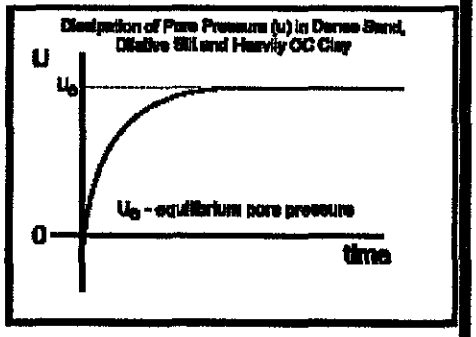
Figure CPT

When the soundings are complete, the test holes are grouted using a Gregg In Situ support rig. The grouting procedure consists of pushing a hollow CPT rod with a "knock out" plug to the termination depth of the test hole. Grout is then pumped under pressure as the tremie pipe is pulled from the hole. Disruption or further contamination to the site is therefore minimized.









Water Table Calculation

$$D_{water} = D_{cone} - H_{water}$$

where $H_{water} = U_e$ (depth units)

Useful Conversion Factors: 1psi = 0.704m = 2.31 feet (water)
1tsf = 0.958 bar = 13.9 psi
1m = 3.28 feet

Figure PPD

GREGG DRILLING AND TESTING, INC.
GREGG IN SITU, INC.
ENVIRONMENTAL AND GEOTECHNICAL INVESTIGATION SERVICES

July 26, 2004

URS
Attn: Kevin Uno
1333 Broadway, Suite 800
Oakland, California 94612

Subject: CPT Site Investigation
76 Station #11132
Oakland, California
GREGG Project Number: 04-247ma

Dear Mr. Uno:

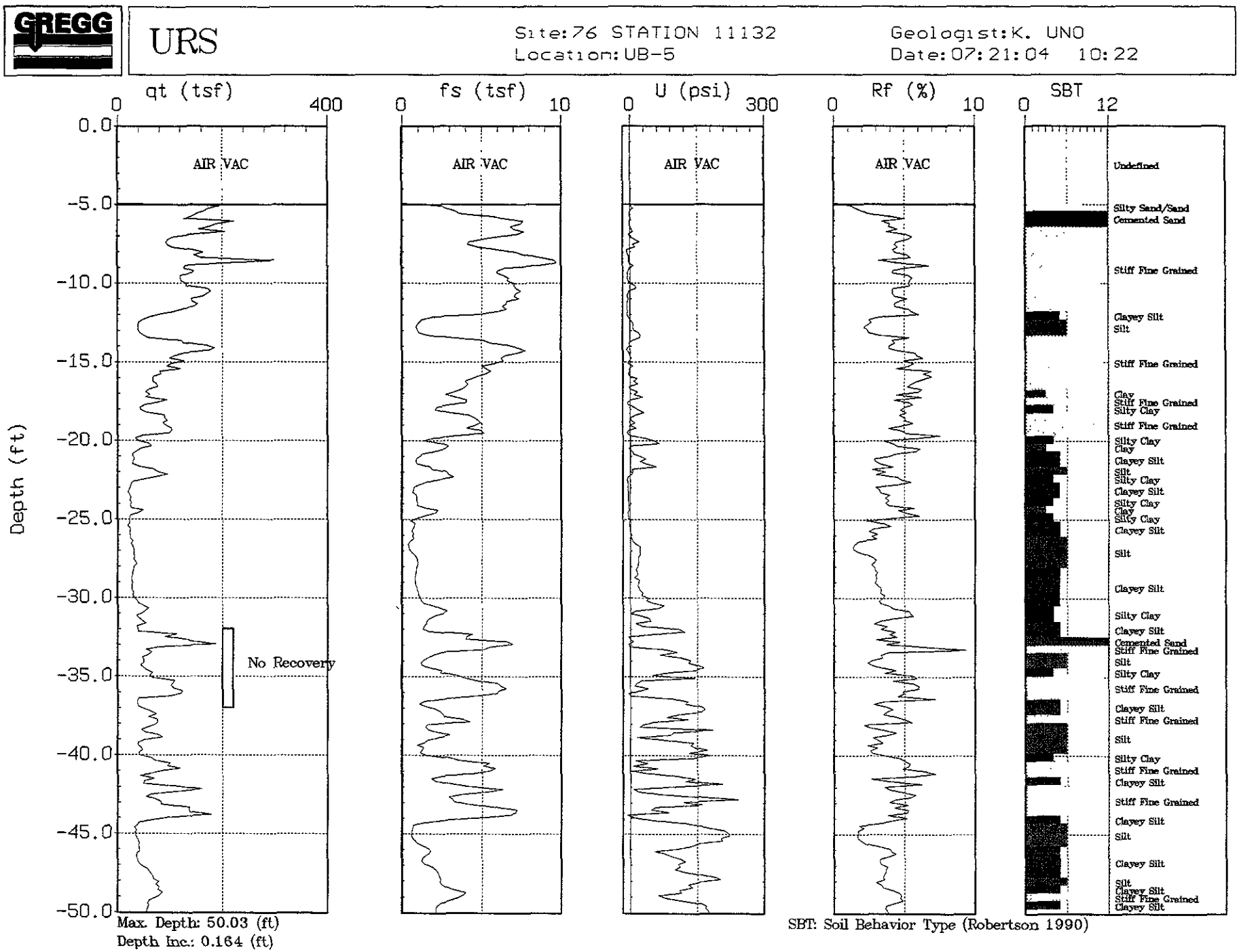
The following report presents the results of GREGG IN SITU's Cone Penetration Test investigation for the above referenced site. The following testing services were performed:

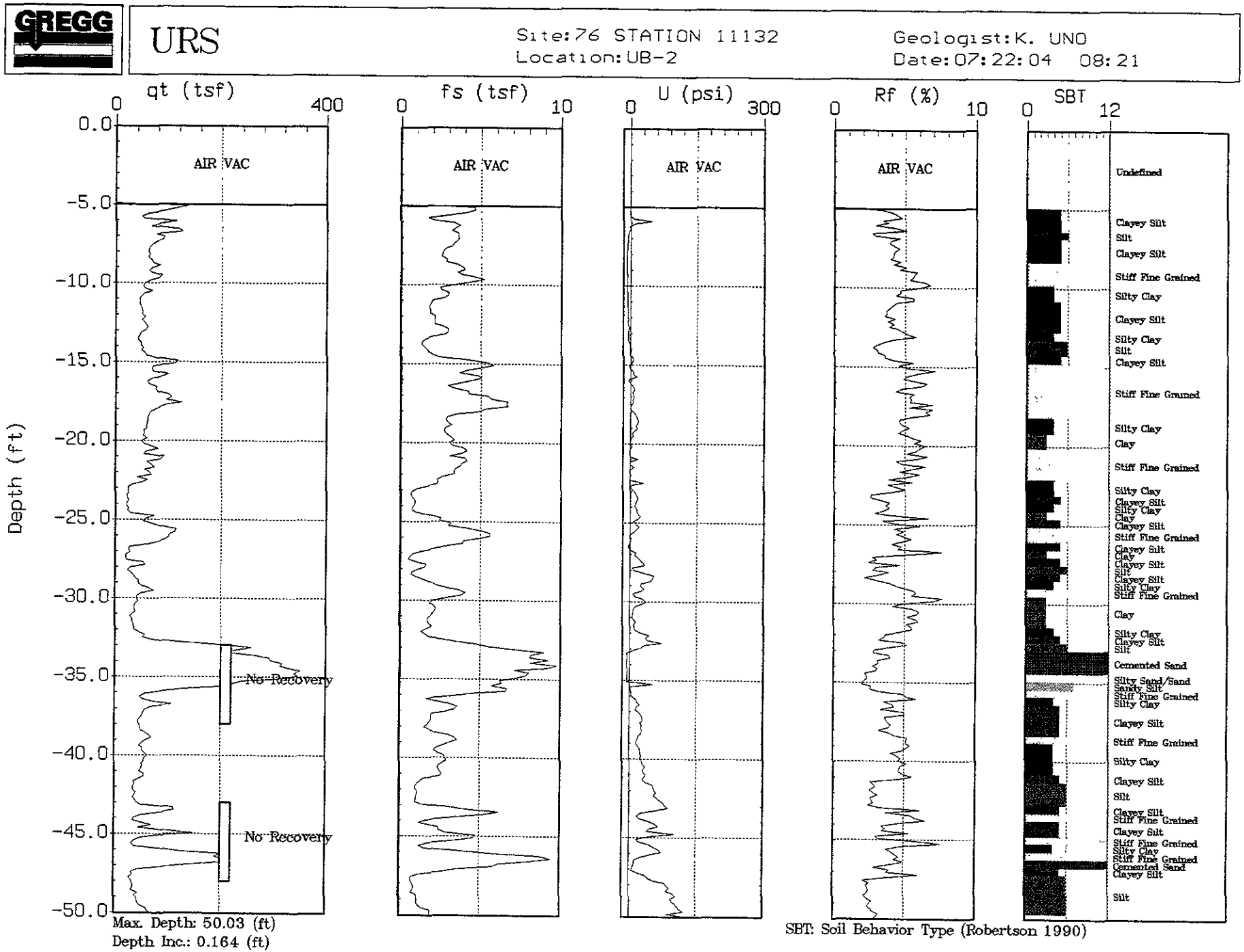
1	Cone Penetration Tests	(CPTU)	x
2	Pore Pressure Dissipation Tests	(PPD)	x
3	Seismic Cone Penetration Tests	(SCPTU)	☐
4	Resistivity Cone Penetration Tests	(RCPTU)	☐
5	UVIF Cone Penetration Tests	(UVIFCPTU)	☐
6	Groundwater Sampling	(GWS)	x
7	Soil Sampling	(SS)	☐
8	Vapor Sampling	(VS)	☐
9	Vane Shear Testing	(VST)	☐
10	SPT Energy Calibration	(SPTE)	☐

A list of reference papers providing additional background on the specific tests conducted is provided in the bibliography following the text of the report. If you would like a copy of any of these publications or should you have any questions or comments regarding the contents of this report, please do not hesitate to contact our office at (562) 427-6899.

Sincerely,
GREGG IN SITU, Inc.

Mary Walden
Operations Manager


GREGG
URS
Site:76 STATION 11132
Location:UB-5
Geologist:K. UNO
Date:07:21:04 10:22
qt (tsf)
0
400
fs (tsf)
0
10
U (psi)
0
300
Rf (%)
0
10
SBT
0
12
AIR VAC
AIR VAC
AIR VAC
AIR VAC
Depth (ft)
0.0
-5.0
-10.0
-15.0
-20.0
-25.0
-30.0
-35.0
-40.0
-45.0
-50.0
No Recovery
Undefined
Silty Sand/Sand
Cemented Sand
Stiff Fine Grained
Clayey Silt
Silt
Stiff Fine Grained
Clay
Stiff Fine Grained
Silty Clay
Stiff Fine Grained
Silty Clay
Clay
Clayey Silt
Silt
Silty Clay
Clayey Silt
Silty Clay
Clay
Silty Clay
Clayey Silt
Silt
Clayey Silt
Silty Clay
Clayey Silt
Cemented Sand
Stiff Fine Grained
Silt
Silty Clay
Stiff Fine Grained
Clayey Silt
Stiff Fine Grained
Silt
Silty Clay
Stiff Fine Grained
Clayey Silt
Stiff Fine Grained
Clayey Silt
Silt
Clayey Silt
Silt
Clayey Silt
Stiff Fine Grained
Clayey Silt
Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)
SBT: Soil Behavior Type (Robertson 1990)


GREGG
URS
Site:76 STATION 11132
Location:UB-2
Geologist:K. UNO
Date:07:22:04 08:21
qt (tsf)
0
400
fs (tsf)
0
10
U (psi)
0
300
Rf (%)
0
10
SBT
0
12
AIR VAC
Depth (ft)
0.0
-5.0
-10.0
-15.0
-20.0
-25.0
-30.0
-35.0
-40.0
-45.0
-50.0
No Recovery
No Recovery
Undefined
Clayey Silt
Silt
Clayey Silt
Stiff Fine Grained
Silty Clay
Clayey Silt
Silty Clay
Silt
Clayey Silt
Stiff Fine Grained
Silty Clay
Clay
Stiff Fine Grained
Silty Clay
Clayey Silt
Silty Clay
Clay
Clayey Silt
Stiff Fine Grained
Clayey Silt
Clay
Clayey Silt
Silt
Clayey Silt
Silty Clay
Stiff Fine Grained
Clay
Silty Clay
Clayey Silt
Silt
Cemented Sand
Silty Sand/Sand
Sandy Silt
Stiff Fine Grained
Silty Clay
Clayey Silt
Stiff Fine Grained
Silty Clay
Clayey Silt
Silt
Clayey Silt
Stiff Fine Grained
Clayey Silt
Stiff Fine Grained
Silty Clay
Stiff Fine Grained
Cemented Sand
Clayey Silt
Silt
Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)
SBT: Soil Behavior Type (Robertson 1990)

Cone Penetration Test Sounding Summary

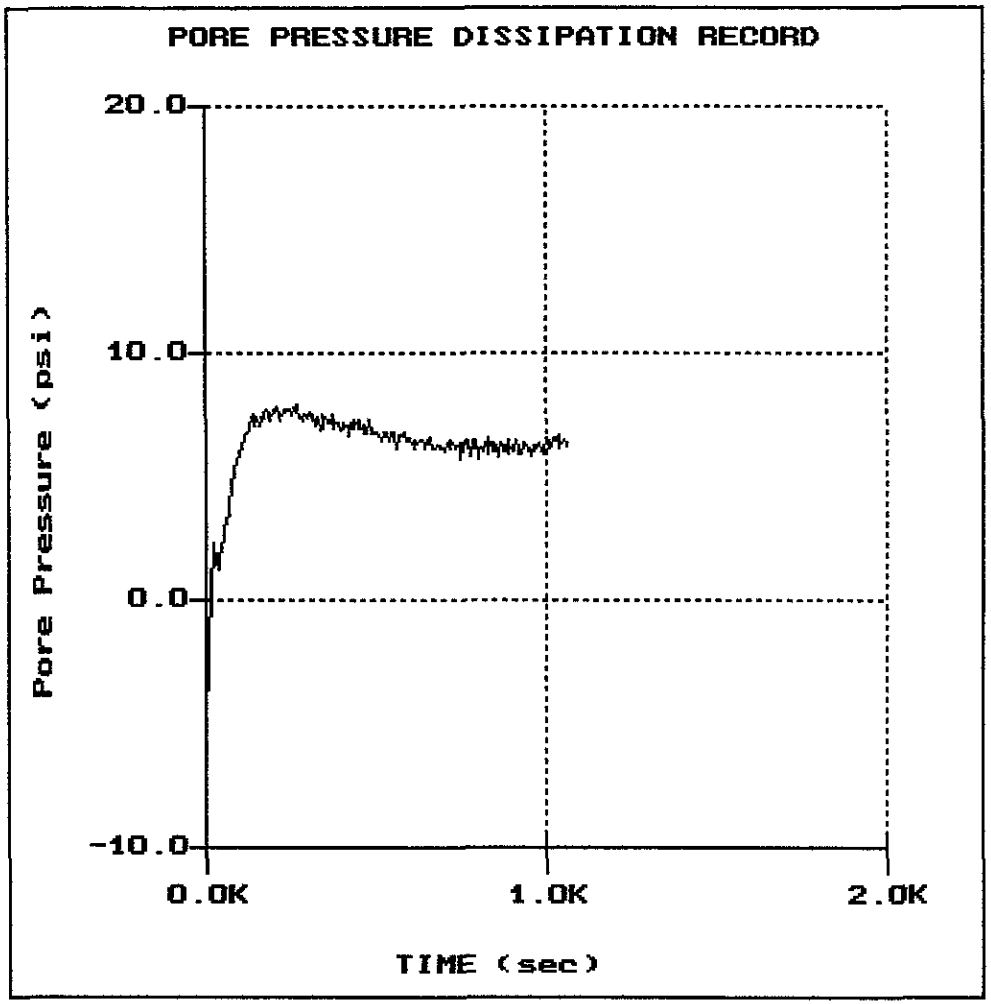
-Table 1-

CPT Sounding Identification	Date	Termination Depth (Feet)	Depths of Groundwater Samples	Depths of Soil Samples	Depth of Pore Pressure Dissipation Tests
UB-2	7/22	50	38 (NR)/48 (NR)	-	-
UB-5	7/21	50	37 (NR)	-	32.6

URS

Site: 76 STATION 11132
Location: UB-5

Geologist: K. UNO
Date:07:21:04 10:22



File: 247C05.PPC
Depth (m): 9.95
(ft): 32.64
Duration : 1060.0s
U-min: -3.64 5.0s
U-max: 7.87 265.0s

ATTACHMENT F

Historical Soil Boring and Well 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)
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

SAMPLER | UNCONFINED COMPRESSIVE STRENGTH (KSF) | WATER CONTENT (%) | DRY DENSITY (PCF) | PENETRATION RESISTANCE (BLOWS/FT.)

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					
TOTAL DEPTH = 35.0 feet				35					

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 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 with rock fragments	tan	stiff	CL						
Large angular cobbles		dense	CL-GC	5					
SILTY CLAY, damp	tan to light brown	stiff	CL						
				10					
Trace of gravel; moisture in fissures (No product odor)			CL-GC	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

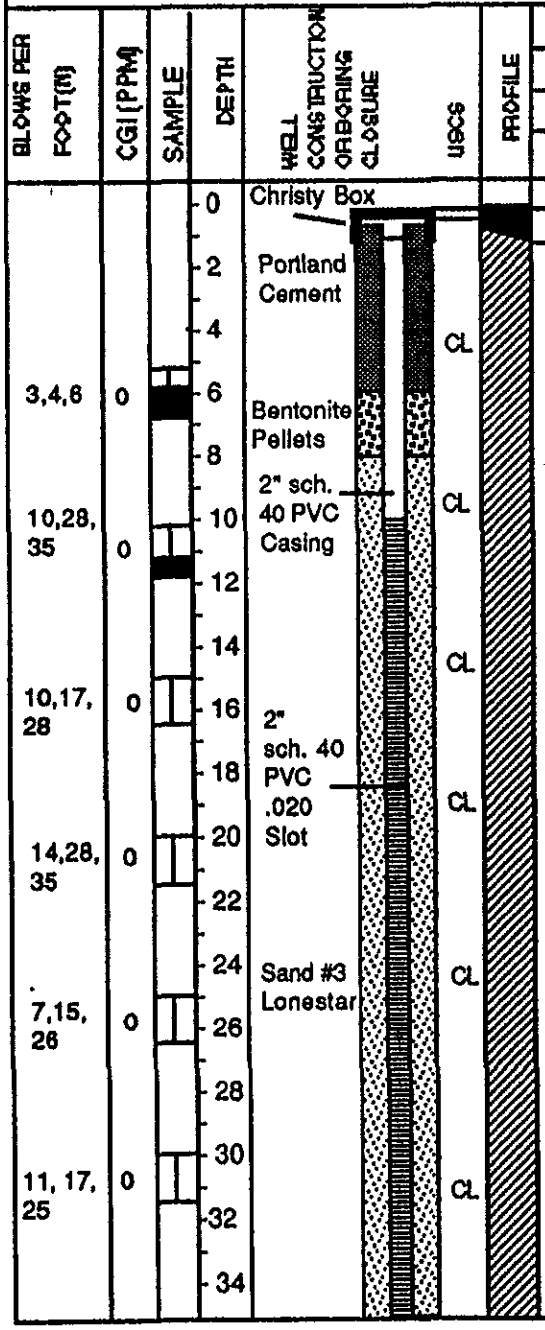
BORING NO.
WELL NO. MW-4

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



DESCRIPTION
ASPHALT
SILTY CLAY; greenish brown; damp, high plasticity stiff
SILTY CLAY; gravelly, greenish brown with rust stain residue, dry to damp, low to medium plasticity , hard
SILTY CLAY; gravelly, brown, dry to damp, low to medium plasticity hard
SILTY CLAY; gravelly, brown rust residue, dry to damp, low plasticity, hard
SILTY CLAY; gravelly, brown, moist medium plasticity, hard
SILTY CLAY; very gravelly, brown wet, medium plasticity

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(M)	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(ft)	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

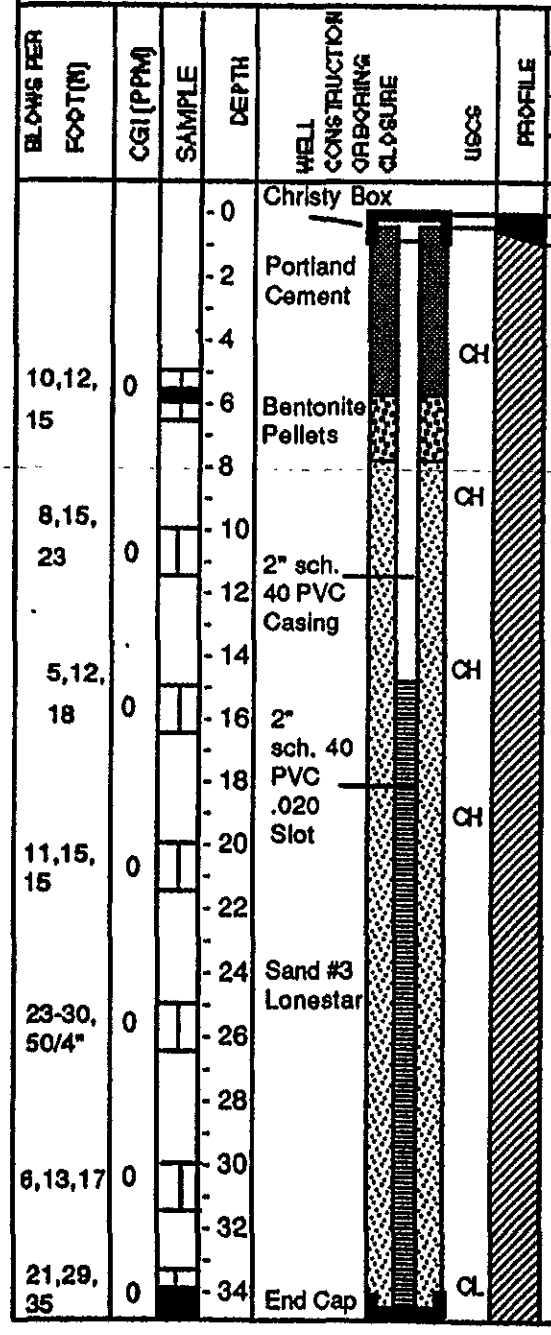
BORING NO.
WELL NO. MW-6

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



DESCRIPTION
ASPHALT
SILTY CLAY; gravelly, redish brown, damp, high plasticity , very stiff
SILTY CLAY; gravelly, reddish brown moist, high plasticity, hard
SILTY CLAY; gravelly, brown, moist medium high plasticity, very stiff
SILTY CLAY; gravelly, brown, moist to saturated very stiff
▽ NO RECOVERY; large cobble or rock obstruction
NO RECOVERY; same
drilled to 35' w/o sample recovery
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

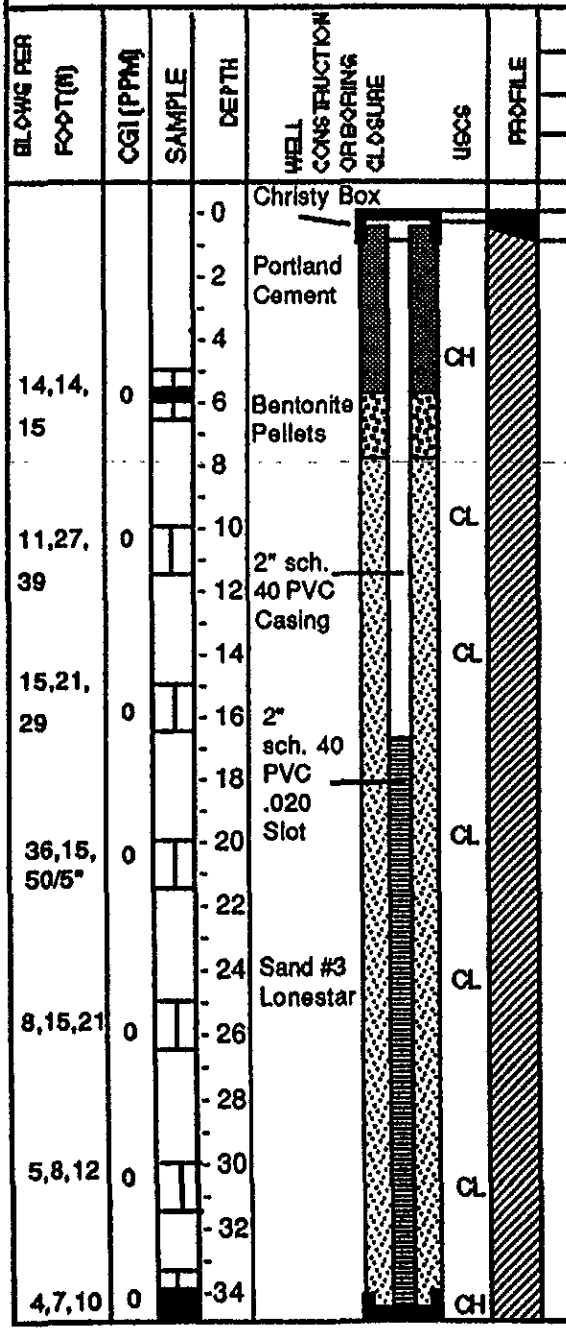
BORING NO.
WELL NO. MW-7

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



DESCRIPTION

ASPHALT

SILTY CLAY; brown, damp, high plasticity , very stiff

SILTY CLAY; gravelly, reddish brown damp medium plasticity, hard

SILTY CLAY; gravelly, reddish brown, damp, hard

SILTY CLAY; gravelly, brown, moist medium plasticity, hard

SILTY CLAY; gravelly, brown, moist medium plasticity, hard

SILTY CLAY; gravelly, brown, saturated medium plasticity, very stiff

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(ft)	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)	OGI (PPM)	SAMPLE	DEPTH	WELL CONSTRUCTION OR BORING CLOSURE	USCS	PROFILE	WATER LEVEL / DATE / TIME	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.

WATER LEVEL			
DATE			
TIME			

BLOWS PER FOOT(ft)	OVA (PPM)	SAMPLE	DEPTH	WELL CONSTRUCTION OR BORING CLOSURE	USCS	PROFILE	DESCRIPTION
			0	Christy Box			6" Asphalt (street)
6,11,14			6	2" sch. 40 PVC Casing	ML		SANDY SILT: reddish brown, damp, very stiff, low plasticity, with gravel
4,5,13			10				Same, becomes brown, no gravel
5,12,14			16		CL		SILTY CLAY: brown with green streaks, moist, very stiff, medium plasticity
2,6,9			22				Same, becomes moist to wet, stiff
5,8,10			26	2" sch. 40 PVC 0.020" Slot			Same, becomes brown, wet to saturated, very stiff ▽ 26'
3,5,10			32				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
Page 2 of 2

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)	OVA (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			

BLOWS PER FOOT (ft)	OVA (PPM)	SAMPLE	DEPTH	WELL CONSTRUCTION OR BORING CLOSURE	USCS	PROFILE	DESCRIPTION
			0	Christy Box			10" Concrete
			2				
			4				
6,12,17			6				SILTY CLAY: tan, damp, very stiff, low plasticity, with gravel
			8	2" sch. 40 PVC Casing			
6,14,17			10				
			12		CL		Same, becomes tan to brown
			14				
7,10,14			16				Same, becomes brown with green streaks, moist, medium plasticity, with gravel
			18				
4,8,13			20				
			22				Same, becomes moist to wet, with fine sand and gravel
			24				
3,8,18			26	2" sch. 40 PVC 0.020" Slot			▽ 25'
			28				SANDY CLAY: brownish white, wet to saturated, very stiff, low to medium plasticity, with slight gravel
			30		CL		
11,19, 25			32				Same, becomes brown, wet, hard, medium plasticity, with slight gravel
			34	End Cap			

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)	OVA (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

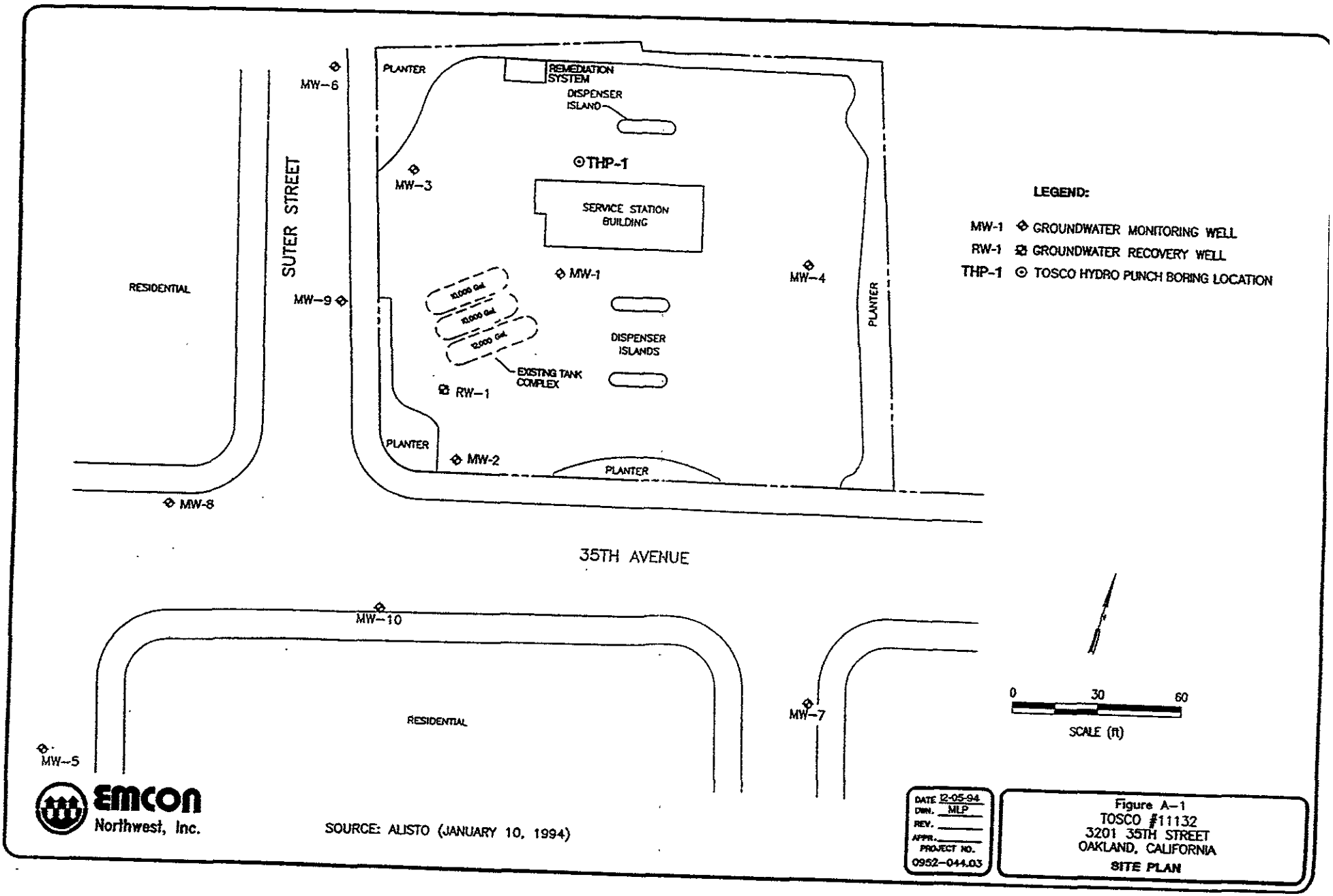
FIELD SKETCH OF BORING LOCATION

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)	OVA (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



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

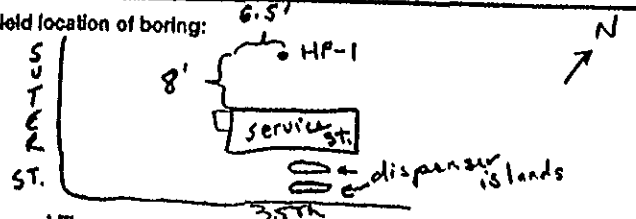
FIELD LOG OF EXPLORATORY BORING

EMCON ASSOCIATES

PROJECT No. 0152-044.02 DATE 11/22/94
CLIENT TOSCO 11132
LOCATION 3201 35th St, Oakland, CA
LOGGED BY D. Galasso

BORING No. HP-1
Sheet 1 of 2

Field location of boring:



Ground Elev. Datum

Drilling Co. Precision
Drill rig model XO 1
Drilling method CPT
Hole dia. 2 3/9"

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)
				0.5/5		1					
						2					
						3					
						4					
0.3				0.5/3	4-4.5				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					
						8					
						9					
0.6					9.5-10						
				1/3		10					
						11			SM		Silty Sand light olv. brn (2.5Y, 5/4) 35% med. fines, 55% fine to coarse sand, 10% fine grav, mottling 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					
				3/3		16					@ 25-30% low-med fines 70-75% fine to coarse sand (1:2:4) damp, no odor
						17					
						18					
				3/3		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. MP-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

Ground Elev. see pg. 1 Datum

Boring completion data Grouted hole to surface adding asphalt patch to top of 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/in)	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					
				1/3		22					Clay (CL) olive (5Y, 5/3)
1.3					22.5-23				CL		95% high-plast. clay, 5% fine sand, damp
						23					orange mottling, iron-staining, gray veining, no odor
											Refusal at 23.0'
						24					Boring terminated
						25					

Reviewed by: _____ Date: _____

Form F-9 Rev. 10/90

ATTACHMENT G

Laboratory Analytical Reports and Chain-of-Custody Records

LABORATORY PROCEDURES

Laboratory Procedures

The groundwater and soil samples were analyzed for the presence of the chemicals mentioned in the chain of custody using standard EPA methods. The methods of analysis for the groundwater and soil samples are documented in the certified analytical report. The certified analytical reports and chain-of-custody record are presented in this attachment. The analytical data provided by the laboratory approved by Atlantic Richfield Company have been reviewed and verified by that laboratory.

Sequoia
Analytical

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
www.sequoialabs.com

10 August, 2004

Leonard Niles
URS Corporation [Arco]
1333 Broadway, Suite 800
Oakland, CA 94612

RE: BP Heritage #11132, Oakland, CA
Work Order: MNG0597

Enclosed are the results of analyses for samples received by the laboratory on 07/23/04 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race
Senior Project Manager

CA ELAP Certificate #1210

Sequoia Analytical

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
www.sequoialabs.com

URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0597
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/10/04 13:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
UB-1-48	MNG0597-01	Water	07/23/04 09:30	07/23/04 17:00

The carbon range for the TPH-GRO has been changed from C6-C10 to C4-C12. The carbon range for TPH-DRO has been changed from C10-C28 to C10-C36. EPA 8015B has been modified to better meet the requirements of California regulatory agencies.

These samples were received with no custody seals.

Sequoia Analytical

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
www.sequoialabs.com

URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0597
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/10/04 13:45

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-1-48 (MNG0597-01) Water Sampled: 07/23/04 09:30 Received: 07/23/04 17:00									
Ethanol	ND	100	ug/l	1	4H05001	08/05/04	08/05/04	EPA 8260B	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	**0.81**	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	50	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*90 %*	*78-129*		"	"	"	"	

Sequoia Analytical

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0597
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager Leonard Niles	08/10/04 13:45

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H05001 - EPA 5030B P/T										
Blank (4H05001-BLK1)				Prepared & Analyzed: 08/05/04						
Ethanol	ND	100	ug/l							
tert-Butyl alcohol	ND	20	"							
Methyl tert-butyl ether	ND	0.50	"							
Di-isopropyl ether	ND	0.50	"							
Ethyl tert-butyl ether	ND	0.50	"							
tert-Amyl methyl ether	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C4-C12)	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	*2.31*		"	*2.50*		*92*	*78-129*			
Laboratory Control Sample (4H05001-BS1)				Prepared & Analyzed: 08/05/04						
Ethanol	133	100	ug/l	200		66	31-186			
tert-Butyl alcohol	45.6	20	"	50.0		91	0-206			
Methyl tert-butyl ether	10.2	0.50	"	10.0		102	63-137			
Di-isopropyl ether	10.1	0.50	"	10.0		101	76-130			
Ethyl tert-butyl ether	10.2	0.50	"	10.0		102	61-141			
tert-Amyl methyl ether	10.3	0.50	"	10.0		103	56-140			
1,2-Dichloroethane	10.3	0.50	"	10.0		103	77-136			
1,2-Dibromoethane (EDB)	9.83	0.50	"	10.0		98	77-132			
Benzene	9.99	0.50	"	10.0		100	78-124			
Toluene	9.69	0.50	"	10.0		97	78-129			
Ethylbenzene	9.98	0.50	"	10.0		100	84-117			
Xylenes (total)	30.8	0.50	"	30.0		103	83-125			
Surrogate: 1,2-Dichloroethane-d4	*2.18*		"	*2.50*		*87*	*78-129*			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0597
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/10/04 13:45

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H05001 - EPA 5030B P/T										
Laboratory Control Sample (4H05001-BS2)				Prepared & Analyzed: 08/05/04						
Methyl tert-butyl ether	9.41	0.50	ug/l	9.92		95	63-137			
Benzene	5.44	0.50	"	6.40		85	78-124			
Toluene	30.5	0.50	"	29.7		103	78-129			
Ethylbenzene	7.76	0.50	"	6.96		111	84-117			
Xylenes (total)	38.3	0.50	"	33.7		114	83-125			
Gasoline Range Organics (C4-C12)	371	50	"	440		84	70-124			
Surrogate: 1,2-Dichloroethane-d4	*2.28*		"	*2.50*		*91*	*78-129*			
Laboratory Control Sample Dup (4H05001-BSD1)				Prepared & Analyzed: 08/05/04						
Ethanol	112	100	ug/l	200		56	31-186	17	37	
tert-Butyl alcohol	46.9	20	"	50.0		94	0-206	3	22	
Methyl tert-butyl ether	10.4	0.50	"	10.0		104	63-137	2	13	
Di-isopropyl ether	9.92	0.50	"	10.0		99	76-130	2	9	
Ethyl tert-butyl ether	10.3	0 50	"	10.0		103	61-141	1	9	
tert-Amyl methyl ether	10.3	0.50	"	10.0		103	56-140	0	12	
1,2-Dichloroethane	10 2	0 50	"	10.0		102	77-136	1	13	
1,2-Dibromoethane (EDB)	10 0	0.50	"	10.0		100	77-132	2	9	
Benzene	9.78	0.50	"	10.0		98	78-124	2	12	
Toluene	9.75	0.50	"	10.0		98	78-129	0.6	10	
Ethylbenzene	10.0	0.50	"	10.0		100	84-117	0.2	10	
Xylenes (total)	30.9	0.50	"	30.0		103	83-125	0.3	11	
Surrogate: 1,2-Dichloroethane-d4	*2.11*		"	*2.50*		*84*	*78-129*			
Matrix Spike (4H05001-MS1)	**Source: MNG0630-04**			Prepared & Analyzed: 08/05/04						
Methyl tert-butyl ether	553	5.0	ug/l	99.2	470	84	63-137			
Benzene	52.0	5.0	"	64.0	ND	81	78-124			
Toluene	300	5.0	"	297	1.1	101	78-129			
Ethylbenzene	76.5	5.0	"	69.6	ND	110	84-117			
Xylenes (total)	378	5.0	"	337	ND	112	83-125			
Gasoline Range Organics (C4-C12)	3860	500	"	4400	ND	88	70-124			
Surrogate: 1,2-Dichloroethane-d4	*2.22*		"	*2.50*		*89*	*78-129*			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0597
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/10/04 13:45

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H05001 - EPA 5030B P/T										
Matrix Spike Dup (4H05001-MSD1)	**Source: MNG0630-04**			Prepared & Analyzed: 08/05/04						
Methyl tert-butyl ether	543	5 0	ug/l	99.2	470	74	63-137	2	13	
Benzene	49.8	5.0	"	64.0	ND	78	78-124	4	12	
Toluene	282	5.0	"	297	1.1	95	78-129	6	10	
Ethylbenzene	70.8	5.0	"	69.6	ND	102	84-117	8	10	
Xylenes (total)	356	5.0	"	337	ND	106	83-125	6	11	
Gasoline Range Organics (C4-C12)	3490	500	"	4400	ND	79	70-124	10	20	
Surrogate: 1,2-Dichloroethane-d4	*2.12*		"	*2.50*		*85*	*78-129*			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0597
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/10/04 13:45

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Chain of Custody Record

Project Name 11132 Soil and Water Investigation
Business Unit Atlantic Richfield Company/Central CA Portfolio
BP Laboratory Contract Number: 4 6 1 0 0 0
Requested Due Date: 2 weeks from sampling date

Date: 7/23/2004

On-site Time: 0900	Temp: ~64°F
Off-site Time:	Temp:
Sky Conditions: OVERCAST, CN	
Meteorological Events:	
Wind Speed: —	Direction: —

Send To:
Lab Name: Sequoia Analytical - MORGAN HILL
Lab Address: 885 JARVIS DR. MORGAN HILL, CA 95037
Lab PM: Lisa Race
Tele/Fax: 408-776-9600 / 408-782.6308
Report Type & QC Level: Normal (LEVEL 1 REP w/EDF
BP/GEM Account No.:
Lab Bottle Order No:

BP/GEM Facility No.: 11132
BP/GEM Facility Address: 3201 35TH AVE, OAKLAND, CA
Site ID No. Station: 11132
Site Lat/Long:
California Global ID #:
BP/GEM PM Contact: ~~Lori Pillas~~ PAUL SUPPLE (EBM)
Address: ~~1332 Broadway, Ste. 800~~ PO. BOX 6549
~~Oakalnd, CA 94612~~ MORAGA, CA 94570
Tele/Fax: ~~510.874.1720/510.874.3268~~ 925.299.8891

Consultantr: URS Oakland
Address: 1333 Broadway, Ste. 800
Oakalnd, CA 94612
e-mail EDD: donna_cospere/kevin_uno@urscorp.com
Consultant Project No.: 38486822
Consultant Tele/Fax: 510-893-3600/510-874-3268
Consultant PM: LEN NILES 510.874.1720
Invoice to: Consultant
BP/GEM Work Release No:

MW 0597

Item No.	Sample Description	Time	Matrix: Soil/Solid	Water/Liquid	Sediments	Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	Requested Analysis: 8260B for: GRO	BTEX	MTBE	Fuel Add.	Sample Point Lat/Long and Comments
1	UB-1-48	0930		X				3				X	X				
2	TB	0830		X				1					X				HOLD.
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

SAME DAY PICKUP

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: K. UNO						
Sampler's Company: URS Oakland						
Shipment Date: 7/23/04		7/23/04	1253	SOG MH	7/23/04	1253
Shipment Method: Hand Deliver		7/24/04	1700	Laboratory	7/23/04	17:00
Shipment Tracking No:						

Special Instructions:

Seals In Place Yes ___ No x Temperature Blank Yes ___ No x Cooler Temperature on Receipt 4.7 °F/C Trip Blank Yes X No ___

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: URS / Oakland
REC. BY (PRINT): Laguanita
WORKORDER: 4VG0597

DATE REC'D AT LAB: 07/23/04
TIME REC'D AT LAB: 17:00
DATE LOGGED IN: 7-27-04

For Regulatory Purposes?
DRINKING WATER YES / (NO)
WASTE WATER YES / (NO)

(For clients requiring preservation checks at receipt, document here ⬇)

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) Present / (Absent) Intact / Broken*			UB-1-48	3) VOA	HCl	—	W	07/23/04	
2. Chain-of-Custody (Present) / Absent*									
3. Traffic Reports or Packing List: Present / (Absent)									
4. Airbill: Airbill / Sticker Present / (Absent)									
5. Airbill #:									
6. Sample Labels: (Present) / Absent									
7. Sample IDs: (Listed) / Not Listed on Chain-of-Custody									
8. Sample Condition: (Intact) / Broken* / Leaking*									
9. Does information on chain-of-custody, traffic reports and sample labels agree? (Yes) / No*									
10. Sample received within hold time? (Yes) / No*									
11. Adequate sample volume received? (Yes) / No*									
12. Proper Preservatives used? (Yes) / No*									
13. Trip Blank / Temp Blank Received? (circle which, if yes) Yes / (No*)									
14. Temp Rec. at Lab: 4.1°C Is temp 4 +/-2°C? (Yes) / No**									

(Acceptance range for samples requiring thermal pres.)

**Exception (if any): METALS / DFF ON ICE or Problem COC

07/23/04 A.L

*IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION.

Sequoia
Analytical

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10 August, 2004

Leonard Niles
URS Corporation [Arco]
1333 Broadway, Suite 800
Oakland, CA 94612

RE: BP Heritage #11132, Oakland, CA
Work Order: MNG0475

Enclosed are the results of analyses for samples received by the laboratory on 07/22/04 18:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race
Senior Project Manager

CA ELAP Certificate #1210

Sequoia Analytical

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0475
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/10/04 13:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
UB-2-48	MNG0475-01	Water	07/22/04 11:10	07/22/04 18:40
UB-3-30.0	MNG0475-02	Soil	07/22/04 10:35	07/22/04 18:40
UB-3-30.5	MNG0475-03	Soil	07/22/04 10:35	07/22/04 18:40
UB-1-32.0	MNG0475-04	Soil	07/22/04 12:15	07/22/04 18:40
UB-1-32.5	MNG0475-05	Soil	07/22/04 12:15	07/22/04 18:40
UB-3-48	MNG0475-06	Water	07/22/04 12:30	07/22/04 18:40

The carbon range for the TPH-GRO has been changed from C6-C10 to C4-C12. The carbon range for TPH-DRO has been changed from C10-C28 to C10-C36. EPA 8015B has been modified to better meet the requirements of California regulatory agencies.

These samples were received with no custody seals.

Sequoia Analytical

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0475
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/10/04 13:37

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-1-32.5 (MNG0475-05) Soil Sampled: 07/22/04 12:15 Received: 07/22/04 18:40									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	4H03004	08/03/04	08/03/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	0.020	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.10	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*78-136*		"	"	"	"	
UB-3-48 (MNG0475-06) Water Sampled: 07/22/04 12:30 Received: 07/22/04 18:40									**BZ,BU**
Ethanol	ND	100	ug/l	1	4H04005	08/04/04	08/05/04	EPA 8260B	IC
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	**1.0**	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	50	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*92 %*	*78-129*		"	"	"	"	

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0475
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/10/04 13:37

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-2-48 (MNG0475-01) Water Sampled: 07/22/04 11:10 Received: 07/22/04 18:40									**BZ,BU**
Ethanol	ND	100	ug/l	1	4H04005	08/04/04	08/04/04	EPA 8260B	IC
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	50	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*89 %*	*78-129*		"	"	"	"	
UB-3-30.0 (MNG0475-02) Soil Sampled: 07/22/04 10:35 Received: 07/22/04 18:40									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	4H03004	08/03/04	08/03/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	0.020	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.10	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*98 %*	*78-136*		"	"	"	"	

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0475
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/10/04 13:37

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-3-30.5 (MNG0475-03) Soil Sampled: 07/22/04 10:35 Received: 07/22/04 18:40									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	4H03004	08/03/04	08/03/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	0.020	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.10	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*99 %*	*78-136*		"	"	"	"	
UB-1-32.0 (MNG0475-04) Soil Sampled: 07/22/04 12:15 Received: 07/22/04 18:40									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	4H03004	08/03/04	08/03/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	0.020	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.10	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*93 %*	*78-136*		"	"	"	"	

Sequoia Analytical

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0475
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/10/04 13:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H03004 - EPA 5030B Modified										
Blank (4H03004-BLK1)				Prepared & Analyzed: 08/03/04						
tert-Amyl methyl ether	ND	0.0050	mg/kg							
Benzene	ND	0.0050	"							
tert-Butyl alcohol	ND	0.020	"							
Di-isopropyl ether	ND	0.0050	"							
1,2-Dibromoethane (EDB)	ND	0.0050	"							
1,2-Dichloroethane	ND	0.0050	"							
Ethanol	ND	0.10	"							
Ethyl tert-butyl ether	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Methyl tert-butyl ether	ND	0.0050	"							
Toluene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Organics (C4-C12)	ND	0.10	"							
Surrogate: 1,2-Dichloroethane-d4	*0.00541*		"	*0.00500*		*108*	*78-136*			
Laboratory Control Sample (4H03004-BS1)				Prepared & Analyzed: 08/03/04						
tert-Amyl methyl ether	0.0108	0.0050	mg/kg	0.0100		108	78-135			
Benzene	0.0108	0.0050	"	0.0100		108	59-126			
tert-Butyl alcohol	0 0581	0.020	"	0.0500		116	20-164			
Di-isopropyl ether	0.0105	0.0050	"	0.0100		105	72-127			
1,2-Dibromoethane (EDB)	0.0118	0.0050	"	0.0100		118	83-138			
1,2-Dichloroethane	0.0115	0.0050	"	0.0100		115	83-130			
Ethanol	0.212	0.10	"	0.200		106	51-130			
Ethyl tert-butyl ether	0 0108	0.0050	"	0.0100		108	77-129			
Ethylbenzene	0.0117	0.0050	"	0.0100		117	60-145			
Methyl tert-butyl ether	0.0105	0 0050	"	0.0100		105	47-149			
Toluene	0.0110	0.0050	"	0.0100		110	66-142			
Xylenes (total)	0 0349	0.0050	"	0 0300		116	83-135			
Surrogate: 1,2-Dichloroethane-d4	*0.00470*		"	*0.00500*		*94*	*78-136*			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0475
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/10/04 13:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H03004 - EPA 5030B Modified										
Laboratory Control Sample (4H03004-BS2)				Prepared & Analyzed: 08/03/04						
Benzene	0.00558	0.0050	mg/kg	0.00640		87	59-126			
Ethylbenzene	0.00852	0.0050	"	0.00696		122	60-145			
Methyl tert-butyl ether	0.00912	0.0050	"	0.00992		92	47-149			
Toluene	0.0334	0.0050	"	0.0297		112	66-142			
Xylenes (total)	0.0407	0.0050	"	0.0337		121	83-135			
Gasoline Range Organics (C4-C12)	0.419	0.10	"	0.440		95	53-126			
Surrogate: 1,2-Dichloroethane-d4	*0.00505*		"	*0.00500*		*101*	*78-136*			
Laboratory Control Sample Dup (4H03004-BSD1)				Prepared & Analyzed: 08/03/04						
tert-Amyl methyl ether	0.00891	0.0050	mg/kg	0.0100		89	78-135	19	25	
Benzene	0.00888	0.0050	"	0.0100		89	59-126	20	25	
tert-Butyl alcohol	0.0505	0.020	"	0.0500		101	20-164	14	25	
Di-isopropyl ether	0.00882	0.0050	"	0.0100		88	72-127	17	25	
1,2-Dibromoethane (EDB)	0.0103	0 0050	"	0.0100		103	83-138	14	25	
1,2-Dichloroethane	0.00949	0 0050	"	0.0100		95	83-130	19	25	
Ethanol	0.172	0.10	"	0.200		86	51-130	21	25	
Ethyl tert-butyl ether	0 00895	0 0050	"	0.0100		90	77-129	19	25	
Ethylbenzene	0.00944	0.0050	"	0.0100		94	60-145	21	25	
Methyl tert-butyl ether	0.00874	0.0050	"	0.0100		87	47-149	18	25	
Toluene	0.00905	0.0050	"	0.0100		91	66-142	19	25	
Xylenes (total)	0.0278	0.0050	"	0.0300		93	83-135	23	25	
Surrogate: 1,2-Dichloroethane-d4	*0.00479*		"	*0.00500*		*96*	*78-136*			
Matrix Spike (4H03004-MS1)	**Source: MNH0029-01**			Prepared & Analyzed: 08/03/04						
Benzene	0 0173	0.015	mg/kg	0.0197	0.00036	86	59-126			
Ethylbenzene	0 0218	0.015	"	0.0215	ND	101	60-145			
Methyl tert-butyl ether	0.0303	0 015	"	0.0306	ND	99	47-149			
Toluene	0.0910	0.015	"	0.0916	0.00062	99	66-142			
Xylenes (total)	0.108	0 015	"	0.104	0.0020	102	83-135			
Gasoline Range Organics (C4-C12)	1.09	0.31	"	1.36	ND	80	53-126			
Surrogate: 1,2-Dichloroethane-d4	*0.00594*		"	*0.00500*		*119*	*78-136*			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0475
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/10/04 13:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H03004 - EPA 5030B Modified										
Matrix Spike Dup (4H03004-MSD1)	**Source: MNH0029-01**			Prepared & Analyzed: 08/03/04						
Benzene	0.0163	0.015	mg/kg	0.0189	0.00036	84	59-126	6	25	
Ethylbenzene	0.0235	0.015	"	0.0206	ND	114	60-145	8	25	
Methyl tert-butyl ether	0.0260	0.015	"	0.0294	ND	88	47-149	15	25	
Toluene	0.0912	0.015	"	0.0879	0.00062	103	66-142	0.2	25	
Xylenes (total)	0.114	0.015	"	0.0997	0.0020	112	83-135	5	25	
Gasoline Range Organics (C4-C12)	1.04	0.30	"	1.30	ND	80	53-126	5	25	
Surrogate: 1,2-Dichloroethane-d4	*0.00477*		"	*0.00500*		*95*	*78-136*			
Batch 4H04005 - EPA 5030B P/T										
Blank (4H04005-BLK1)				Prepared & Analyzed: 08/04/04						
Ethanol	ND	100	ug/l							
tert-Butyl alcohol	ND	20	"							
Methyl tert-butyl ether	ND	0.50	"							
Di-isopropyl ether	ND	0.50	"							
Ethyl tert-butyl ether	ND	0.50	"							
tert-Amyl methyl ether	ND	0.50	"							
1,2-Dichloroethane	ND	0 50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
Benzene	ND	0 50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0 50	"							
Gasoline Range Organics (C4-C12)	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	*2.56*		"	*2.50*		*102*	*78-129*			
Laboratory Control Sample (4H04005-BS1)				Prepared & Analyzed: 08/04/04						
Ethanol	128	100	ug/l	200		64	31-186			
tert-Butyl alcohol	44.5	20	"	50.0		89	0-206			
Methyl tert-butyl ether	10.3	0.50	"	10.0		103	63-137			
Di-isopropyl ether	9 85	0.50	"	10 0		98	76-130			
Ethyl tert-butyl ether	10.0	0 50	"	10.0		100	61-141			
tert-Amyl methyl ether	10.1	0.50	"	10.0		101	56-140			
1,2-Dichloroethane	10.2	0.50	"	10.0		102	77-136			
1,2-Dibromoethane (EDB)	9.66	0.50	"	10.0		97	77-132			
Benzene	9.79	0.50	"	10 0		98	78-124			
Toluene	9.40	0.50	"	10.0		94	78-129			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0475
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager. Leonard Niles	08/10/04 13:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H04005 - EPA 5030B P/T										
Laboratory Control Sample (4H04005-BS1)				Prepared & Analyzed: 08/04/04						
Ethylbenzene	9 88	0.50	ug/l	10.0		99	84-117			
Xylenes (total)	29.8	0.50	"	30.0		99	83-125			
Surrogate: 1,2-Dichloroethane-d4	*2.28*		"	*2.50*		*91*	*78-129*			
Laboratory Control Sample (4H04005-BS2)				Prepared & Analyzed: 08/04/04						
Methyl tert-butyl ether	8.95	0.50	ug/l	9.92		90	63-137			
Benzene	5.09	0.50	"	6.40		80	78-124			
Toluene	29.4	0.50	"	29.7		99	78-129			
Ethylbenzene	7.55	0.50	"	6.96		108	84-117			
Xylenes (total)	36.9	0.50	"	33.7		109	83-125			
Gasoline Range Organics (C4-C12)	370	50	"	440		84	70-124			
Surrogate: 1,2-Dichloroethane-d4	*2.26*		"	*2.50*		*90*	*78-129*			
Laboratory Control Sample Dup (4H04005-BSD1)				Prepared: 08/04/04 Analyzed: 08/05/04						
Ethanol	170	100	ug/l	200		85	31-186	28	37	IC
tert-Butyl alcohol	48.2	20	"	50.0		96	0-206	8	22	
Methyl tert-butyl ether	10.6	0.50	"	10.0		106	63-137	3	13	
Di-isopropyl ether	10.4	0.50	"	10.0		104	76-130	5	9	
Ethyl tert-butyl ether	10.6	0.50	"	10.0		106	61-141	6	9	
tert-Amyl methyl ether	10.4	0.50	"	10.0		104	56-140	3	12	
1,2-Dichloroethane	10 5	0.50	"	10.0		105	77-136	3	13	
1,2-Dibromoethane (EDB)	9.92	0 50	"	10 0		99	77-132	3	9	
Benzene	10.4	0.50	"	10.0		104	78-124	6	12	
Toluene	9.75	0.50	"	10.0		98	78-129	4	10	
Ethylbenzene	10.4	0.50	"	10.0		104	84-117	5	10	
Xylenes (total)	31.3	0.50	"	30.0		104	83-125	5	11	
Surrogate: 1,2-Dichloroethane-d4	*2.12*		"	*2.50*		*85*	*78-129*			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0475
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/10/04 13:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H04005 - EPA 5030B P/T										
Matrix Spike (4H04005-MS1)	**Source: MNG0491-05**			Prepared: 08/04/04		Analyzed: 08/05/04				
Methyl tert-butyl ether	10100	50	ug/l	992	9400	71	63-137			
Benzene	1440	50	"	640	940	78	78-124			
Toluene	3040	50	"	2970	12	102	78-129			
Ethylbenzene	972	50	"	696	190	112	84-117			
Xylenes (total)	4430	50	"	3370	590	114	83-125			
Gasoline Range Organics (C4-C12)	49700	5000	"	44000	8600	93	70-124			
Surrogate: 1,2-Dichloroethane-d4	*2.37*		"	*2.50*		*95*	*78-129*			
Matrix Spike Dup (4H04005-MSD1)	**Source: MNG0491-05**			Prepared: 08/04/04		Analyzed: 08/05/04				
Methyl tert-butyl ether	10000	50	ug/l	992	9400	60	63-137	1	13	LN
Toluene	3040	50	"	2970	12	102	78-129	0	10	
Ethylbenzene	964	50	"	696	190	111	84-117	0.8	10	
Xylenes (total)	4330	50	"	3370	590	111	83-125	2	11	
Gasoline Range Organics (C4-C12)	46600	5000	"	44000	8600	86	70-124	6	20	
Surrogate: 1,2-Dichloroethane-d4	*2.16*		"	*2.50*		*86*	*78-129*			

Sequoia Analytical

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0475
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/10/04 13:37

Notes and Definitions

LN	MS and/or MSD below acceptance limits. See Blank Spike(LCS).
IC	Calib. verif. is within method limits but outside contract limits
BZ,BU	Sample preserved improperly. Sample analyzed after holding time expired.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Chain of Custody Record

Project Name 11132 Soil and Water Investigation
Business Unit Atlantic Richfield Company/Central CA Portfolio
BP Laboratory Contract Number: 4 6 1 0 0 0
Requested Due Date: 2 weeks from sampling date

Date: 7/22/2004

On-site Time: 0800	Temp: ~60° F
Off-site Time:	Temp:
Sky Conditions: OVERCAST / CN	
Meteorological Events:	
Wind Speed: 0-10	Direction: VAR.

Send To:	BP/GBM Facility No.: 11132	Consultant: URS Oakland
Lab Name: Sequoia Analytical	BP/GBM Facility Address 3201 35th AVE.	Address: 1333 Broadway, Ste. 800
Lab Address:	Site ID No. Station: 11132	Oakland, CA 94612
	Site Lat/Long:	e-mail EDD: dana_cooper@; kevin_vno@urscorp.com
	California Global ID #:	Consultant Project No.:
Lab PM: Lisa Race	BP/GBM PM Contact: Len Niles	Consultant Tele/Fax: 510-893-3600/510-874-3268
Tele/Fax:	Address: 1333 Broadway, Ste. 800	Consultant PM: LEN NILES (510.874.1720)
Report Type & QC Level: Normal	Oakland, CA 94612	Invoice to: Consultant
BP/GBM Account No.:	Tele/Fax: 510-874-1720/510-874-3268	BP/GBM Work Release No:

Lab Bottle Order No:

Item No.	Sample Description	Time 7/22	Matrix: Soil/Solid	Water/Liquid	Sediments	Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	Requested Analysis: 8260B Full	8260B (GRO)	8260B (BTEX)	8260B (MTBE)	8260B (Fuel Oxy)	Sample Point Lat/Long and Comments
1	UB-2-48	1110		X			01	3					X					
2	UB-3-30.0	1035	X				02	1					X					
3	UB-3-30.5	1035	X				03	1					X					
4	UB-1-32.0	1215	X				04	1					X					
5	UB-1-32.5	1215	X				05	1					X					
6	UB-3-48	1230		X			06	3					X					
7																		
8																		
9																		
10																		

MK0975

Sampler's Name: KEVIN VNO	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: URS Oakland	[signature] / URS	7/22/04	1600	[signature]	7/22/04	18:40
Shipment Date: 7/22/04						
Shipment Method: Hand Deliver						
Shipment Tracking No:						

Special Instructions:

Custody Seals Intact? Yes ___ No X Temperature Blank Yes ___ No X Cooler Temperature on Receipt 6 °F/C Trip Blank Yes ___ No X

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: URS Oakland
REC. BY (PRINT): LA
WORKORDER: MLG0474

DATE REC'D AT LAB: 07/22/04
TIME REC'D AT LAB: 18:40
DATE LOGGED IN: 7-22-04

For Regulatory Purposes?
DRINKING WATER YES (NO)
WASTE WATER YES (NO)

(For clients requiring preservation checks at receipt, document here ↓)

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) Present / (Absent) Intact / Broken*			UB-2-48	3) Voa	—	—	L	07/22/04	
2. Chain-of-Custody (Present) / Absent*			UB-3-30.0	1) metal core	—	—	Soil		
3. Traffic Reports or Packing List: Present / (Absent)			UB-3-30.5	↓	↓	↓	↓	↓	
4. Airbill: Airbill / Sticker Present / (Absent)			UB-1-32.0						
5. Airbill #:			UB-1-32.5						
6. Sample Labels: (Present) / Absent			UB-3-48	3) Voa	↓	↓	L	↓	
7. Sample IDs: (Listed) / Not Listed on Chain-of-Custody									
8. Sample Condition: (Intact) / Broken* / Leaking*									
9. Does information on chain-of-custody, traffic reports and sample labels agree? (Yes) / No*									
10. Sample received within hold time? (Yes) / No*									
11. Adequate sample volume received? (Yes) / No*									
12. Proper Preservatives used? (Yes) / No*									
13. Trip Blank / Temp Blank Received? (circle which, if yes) Yes / (No*)									
14. Temp Rec. at Lab: 6°C Is temp 4 +/-2°C? (Yes) / No**									

(Acceptance range for samples requiring thermal pres.)

*Exception (if any): METALS / OFF ON ICE or Problem COC

07/22/04

**IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION.

Sequoia
Analytical

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6 August, 2004

Leonard Niles
URS Corporation [Arco]
1333 Broadway, Suite 800
Oakland, CA 94612

RE: BP Heritage #11132, Oakland, CA
Work Order: MNG0460

Enclosed are the results of analyses for samples received by the laboratory on 07/21/04 19:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race
Senior Project Manager

CA ELAP Certificate #1210

Sequoia Analytical

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0460
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/06/04 11:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
UB-4-30.0	MNG0460-01	Soil	07/21/04 14:15	07/21/04 19:00
UB-4-30.5	MNG0460-02	Soil	07/21/04 14:15	07/21/04 19:00
UB-6-30.0	MNG0460-03	Soil	07/21/04 12:20	07/21/04 19:00
UB-6-30.5	MNG0460-04	Soil	07/21/04 12:20	07/21/04 19:00
UB-5	MNG0460-05	Water	07/21/04 15:15	07/21/04 19:00
UB-6	MNG0460-06	Water	07/21/04 16:20	07/21/04 19:00
UB-4	MNG0460-07	Water	07/21/04 16:45	07/21/04 19:00
TB	MNG0460-08	Water	07/21/04 09:00	07/21/04 19:00

The carbon range for the TPH-GRO has been changed from C6-C10 to C4-C12. The carbon range for TPH-DRO has been changed from C10-C28 to C10-C36. EPA 8015B has been modified to better meet the requirements of California regulatory agencies.

These samples were received with no custody seals.

Sequoia Analytical

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0460
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/06/04 11:40

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-4-30.0 (MNG0460-01) Soil Sampled: 07/21/04 14:15 Received: 07/21/04 19:00									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	4G26004	07/26/04	07/26/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	0.020	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.0056**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.10	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*88 %*	*78-136*		"	"	"	"	
UB-4-30.5 (MNG0460-02) Soil Sampled: 07/21/04 14:15 Received: 07/21/04 19:00									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	4G26004	07/26/04	07/26/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	0.020	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.018**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.10	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*87 %*	*78-136*		"	"	"	"	

Sequoia Analytical

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0460
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/06/04 11:40

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-6-30.0 (MNG0460-03) Soil Sampled: 07/21/04 12:20 Received: 07/21/04 19:00									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	4G26004	07/26/04	07/26/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	0.020	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.10	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*87 %*	*78-136*		"	"	"	"	
UB-6-30.5 (MNG0460-04) Soil Sampled: 07/21/04 12:20 Received: 07/21/04 19:00									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	4G26004	07/26/04	07/26/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	0.020	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.10	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*95 %*	*78-136*		"	"	"	"	

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0460
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/06/04 11:40

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-5 (MNG0460-05) Water Sampled: 07/21/04 15:15 Received: 07/21/04 19:00									
Ethanol	ND	100	ug/l	1	4G30006	07/30/04	07/31/04	EPA 8260B	BZ,BU
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	BZ,BU
Methyl tert-butyl ether	**75**	0.50	"	"	"	"	"	"	BZ,BU
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	BZ,BU
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	BZ,BU
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	BZ,BU
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	BZ,BU
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	BZ,BU
Benzene	**9.5**	0.50	"	"	"	"	"	"	BZ,BU
Toluene	ND	0.50	"	"	"	"	"	"	BZ,BU
Ethylbenzene	**6.7**	0.50	"	"	"	"	"	"	BZ,BU
Xylenes (total)	**8.1**	0.50	"	"	"	"	"	"	BZ,BU
Gasoline Range Organics (C4-C12)	**190**	50	"	"	"	"	"	"	BZ,BU
Surrogate: 1,2-Dichloroethane-d4		*89 %*	*78-129*		"	"	"	"	*BZ,BU*
UB-6 (MNG0460-06) Water Sampled: 07/21/04 16:20 Received: 07/21/04 19:00									
Ethanol	ND	100	ug/l	1	4G30006	07/30/04	07/31/04	EPA 8260B	BZ,BU
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	BZ,BU
Methyl tert-butyl ether	**1.2**	0.50	"	"	"	"	"	"	BZ,BU
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	BZ,BU
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	BZ,BU
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	BZ,BU
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	BZ,BU
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	BZ,BU
Benzene	**9.1**	0.50	"	"	"	"	"	"	BZ,BU
Toluene	**1.2**	0.50	"	"	"	"	"	"	BZ,BU
Ethylbenzene	**21**	0.50	"	"	"	"	"	"	BZ,BU
Xylenes (total)	**8.3**	0.50	"	"	"	"	"	"	BZ,BU
Gasoline Range Organics (C4-C12)	**260**	50	"	"	"	"	"	"	BZ,BU
Surrogate: 1,2-Dichloroethane-d4		*90 %*	*78-129*		"	"	"	"	*BZ,BU*

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1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/06/04 11:40

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-4 (MNG0460-07) Water Sampled: 07/21/04 16:45 Received: 07/21/04 19:00									
Ethanol	ND	100	ug/l	1	4G30006	07/30/04	07/31/04	EPA 8260B	BZ,BU
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	BZ,BU
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	BZ,BU
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	BZ,BU
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	BZ,BU
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	BZ,BU
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	BZ,BU
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	BZ,BU
Benzene	ND	0.50	"	"	"	"	"	"	BZ,BU
Toluene	ND	0.50	"	"	"	"	"	"	BZ,BU
Ethylbenzene	ND	0.50	"	"	"	"	"	"	BZ,BU
Xylenes (total)	ND	0.50	"	"	"	"	"	"	BZ,BU
Gasoline Range Organics (C4-C12)	ND	50	"	"	"	"	"	"	BZ,BU
Surrogate: 1,2-Dichloroethane-d4		*92 %*	*78-129*		"	"	"	"	*BZ,BU*

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0460
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/06/04 11:40

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4G26004 - EPA 5030B Modified										
Blank (4G26004-BLK1)				Prepared & Analyzed: 07/26/04						
tert-Amyl methyl ether	ND	0.0050	mg/kg							
Benzene	ND	0.0050	"							
tert-Butyl alcohol	ND	0 020	"							
Di-isopropyl ether	ND	0 0050	"							
1,2-Dibromoethane (EDB)	ND	0.0050	"							
1,2-Dichloroethane	ND	0.0050	"							
Ethanol	ND	0.10	"							
Ethyl tert-butyl ether	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Methyl tert-butyl ether	ND	0.0050	"							
Toluene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Organics (C4-C12)	ND	0.10	"							
Surrogate: 1,2-Dichloroethane-d4	*0.00446*		"	*0.00500*		*89*	*78-136*			
Laboratory Control Sample (4G26004-BS1)				Prepared & Analyzed: 07/26/04						
tert-Amyl methyl ether	0.00931	0.0050	mg/kg	0.0100		93	78-135			
Benzene	0.0113	0.0050	"	0.0100		113	59-126			
tert-Butyl alcohol	0.0423	0.020	"	0.0500		85	20-164			
Di-isopropyl ether	0.00990	0.0050	"	0.0100		99	72-127			
1,2-Dibromoethane (EDB)	0.0100	0.0050	"	0.0100		100	83-138			
1,2-Dichloroethane	0.0111	0.0050	"	0.0100		111	83-130			
Ethanol	0.188	0.10	"	0.200		94	51-130			
Ethyl tert-butyl ether	0.00996	0 0050	"	0.0100		100	77-129			
Ethylbenzene	0.0113	0.0050	"	0 0100		113	60-145			
Methyl tert-butyl ether	0.00996	0.0050	"	0.0100		100	47-149			
Toluene	0.0118	0.0050	"	0.0100		118	66-142			
Xylenes (total)	0.0330	0.0050	"	0.0300		110	83-135			
Surrogate: 1,2-Dichloroethane-d4	*0.00441*		"	*0.00500*		*88*	*78-136*			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0460
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/06/04 11:40

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4G26004 - EPA 5030B Modified										
Laboratory Control Sample (4G26004-BS2)				Prepared & Analyzed: 07/26/04						
Benzene	0.00641	0.0050	mg/kg	0.00640		100	59-126			
Ethylbenzene	0.00881	0.0050	"	0.00696		127	60-145			
Methyl tert-butyl ether	0.00858	0.0050	"	0.00992		86	47-149			
Toluene	0.0416	0.0050	"	0.0297		140	66-142			
Xylenes (total)	0 0424	0.0050	"	0.0337		126	83-135			
Gasoline Range Organics (C4-C12)	0.446	0.10	"	0.440		101	53-126			
Surrogate: 1,2-Dichloroethane-d4	*0.00435*		"	*0.00500*		*87*	*78-136*			
Laboratory Control Sample Dup (4G26004-BSD1)				Prepared & Analyzed: 07/26/04						
tert-Amyl methyl ether	0.00830	0.0050	mg/kg	0.0100		83	78-135	11	25	
Benzene	0.00955	0.0050	"	0.0100		96	59-126	17	25	
tert-Butyl alcohol	0.0388	0 020	"	0.0500		78	20-164	9	25	
Di-isopropyl ether	0.00854	0.0050	"	0.0100		85	72-127	15	25	
1,2-Dibromoethane (EDB)	0.00912	0.0050	"	0.0100		91	83-138	9	25	
1,2-Dichloroethane	0.00993	0.0050	"	0.0100		99	83-130	11	25	
Ethanol	0 198	0.10	"	0.200		99	51-130	5	25	
Ethyl tert-butyl ether	0 00865	0.0050	"	0.0100		87	77-129	14	25	
Ethylbenzene	0.00932	0.0050	"	0.0100		93	60-145	19	25	
Methyl tert-butyl ether	0.00836	0.0050	"	0.0100		84	47-149	17	25	
Toluene	0.00943	0.0050	"	0.0100		94	66-142	22	25	
Xylenes (total)	0.0269	0.0050	"	0.0300		90	83-135	20	25	
Surrogate: 1,2-Dichloroethane-d4	*0.00435*		"	*0.00500*		*87*	*78-136*			
Laboratory Control Sample Dup (4G26004-BSD2)				Prepared & Analyzed: 07/26/04						
Benzene	0.00570	0.0050	mg/kg	0.00640		89	59-126	12	25	
Ethylbenzene	0 00799	0.0050	"	0.00696		115	60-145	10	25	
Methyl tert-butyl ether	0.00814	0.0050	"	0.00992		82	47-149	5	25	
Toluene	0.0364	0.0050	"	0.0297		123	66-142	13	25	
Xylenes (total)	0.0390	0.0050	"	0.0337		116	83-135	8	25	
Gasoline Range Organics (C4-C12)	0.351	0.10	"	0 440		80	53-126	24	25	
Surrogate: 1,2-Dichloroethane-d4	*0.00462*		"	*0.00500*		*92*	*78-136*			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0460
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/06/04 11:40

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4G30006 - EPA 5030B P/T										
Blank (4G30006-BLK1)				Prepared & Analyzed: 07/30/04						
Ethanol	ND	100	ug/l							
tert-Butyl alcohol	ND	20	"							
Methyl tert-butyl ether	ND	0.50	"							
Di-isopropyl ether	ND	0.50	"							
Ethyl tert-butyl ether	ND	0.50	"							
tert-Amyl methyl ether	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C4-C12)	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	*4.68*		"	*5.00*		*94*	*78-129*			
Laboratory Control Sample (4G30006-BS1)				Prepared & Analyzed: 07/30/04						
Ethanol	180	100	ug/l	200		90	31-186			
tert-Butyl alcohol	45 4	20	"	50 0		91	0-206			
Methyl tert-butyl ether	8.77	0.50	"	10.0		88	63-137			
Di-isopropyl ether	8.81	0.50	"	10 0		88	76-130			
Ethyl tert-butyl ether	9 17	0 50	"	10.0		92	61-141			
tert-Amyl methyl ether	8.53	0.50	"	10.0		85	56-140			
1,2-Dichloroethane	9.34	0.50	"	10.0		93	77-136			
1,2-Dibromoethane (EDB)	9.46	0.50	"	10.0		95	77-132			
Benzene	9.67	0.50	"	10.0		97	78-124			
Toluene	8.95	0.50	"	10.0		90	78-129			
Ethylbenzene	10.8	0 50	"	10.0		108	84-117			
Xylenes (total)	31.6	0.50	"	30.0		105	83-125			
Surrogate: 1,2-Dichloroethane-d4	*4.67*		"	*5.00*		*93*	*78-129*			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0460
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/06/04 11:40

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4G30006 - EPA 5030B P/T										
Laboratory Control Sample (4G30006-BS2)				Prepared & Analyzed: 07/30/04						
Gasoline Range Organics (C4-C12)	427	50	ug/l	440		97	70-124			
Surrogate: 1,2-Dichloroethane-d4	*4.76*		"	*5.00*		*95*	*78-129*			
Laboratory Control Sample Dup (4G30006-BSD1)				Prepared & Analyzed: 07/30/04						
Ethanol	168	100	ug/l	200		84	31-186	7	37	
tert-Butyl alcohol	45.1	20	"	50.0		90	0-206	0.7	22	
Methyl tert-butyl ether	9.04	0.50	"	10.0		90	63-137	3	13	
Di-isopropyl ether	8.98	0.50	"	10.0		90	76-130	2	9	
Ethyl tert-butyl ether	8.96	0.50	"	10.0		90	61-141	2	9	
tert-Amyl methyl ether	8.53	0.50	"	10.0		85	56-140	0	12	
1,2-Dichloroethane	9.32	0.50	"	10.0		93	77-136	0.2	13	
1,2-Dibromoethane (EDB)	9.56	0.50	"	10.0		96	77-132	1	9	
Benzene	9.11	0.50	"	10.0		91	78-124	6	12	
Toluene	9.17	0.50	"	10.0		92	78-129	2	10	
Ethylbenzene	10.3	0.50	"	10.0		103	84-117	5	10	
Xylenes (total)	30.6	0.50	"	30.0		102	83-125	3	11	
Surrogate: 1,2-Dichloroethane-d4	*4.58*		"	*5.00*		*92*	*78-129*			
Laboratory Control Sample Dup (4G30006-BSD2)				Prepared & Analyzed: 07/30/04						
Gasoline Range Organics (C4-C12)	432	50	ug/l	440		98	70-124	1	20	
Surrogate: 1,2-Dichloroethane-d4	*4.58*		"	*5.00*		*92*	*78-129*			
Matrix Spike (4G30006-MS1)	**Source: MNG0487-03**			Prepared & Analyzed: 07/30/04						
Ethanol	16100	10000	ug/l	20000	ND	80	31-186			
tert-Butyl alcohol	4470	2000	"	5000	ND	89	0-206			
Methyl tert-butyl ether	901	50	"	1000	ND	90	63-137			
Di-isopropyl ether	860	50	"	1000	ND	86	76-130			
Ethyl tert-butyl ether	927	50	"	1000	ND	93	61-141			
tert-Amyl methyl ether	895	50	"	1000	21	87	56-140			
1,2-Dichloroethane	919	50	"	1000	ND	92	77-126			
1,2-Dibromoethane (EDB)	989	50	"	1000	ND	99	77-132			
Benzene	938	50	"	1000	ND	94	78-124			
Toluene	934	50	"	1000	17	92	78-129			
Ethylbenzene	1050	50	"	1000	ND	105	84-117			
Xylenes (total)	2980	50	"	3000	ND	99	83-125			
Surrogate: 1,2-Dichloroethane-d4	*4.88*		"	*5.00*		*98*	*78-129*			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0460
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/06/04 11:40

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4G30006 - EPA 5030B P/T										
Matrix Spike Dup (4G30006-MSD1)	**Source: MNG0487-03**			Prepared & Analyzed: 07/30/04						
Ethanol	18400	10000	ug/l	20000	ND	92	31-186	13	37	
tert-Butyl alcohol	4790	2000	"	5000	ND	96	0-206	7	22	
Methyl tert-butyl ether	896	50	"	1000	ND	90	63-137	0.6	13	
Di-isopropyl ether	915	50	"	1000	ND	92	76-130	6	9	
Ethyl tert-butyl ether	941	50	"	1000	ND	94	61-141	1	9	
tert-Amyl methyl ether	899	50	"	1000	21	88	56-140	0.4	12	
1,2-Dichloroethane	940	50	"	1000	ND	94	77-126	2	13	
1,2-Dibromoethane (EDB)	932	50	"	1000	ND	93	77-132	6	9	
Benzene	1020	50	"	1000	ND	102	78-124	8	12	
Toluene	959	50	"	1000	17	94	78-129	3	10	
Ethylbenzene	1100	50	"	1000	ND	110	84-117	5	10	
Xylenes (total)	3180	50	"	3000	ND	106	83-125	6	11	
Surrogate: 1,2-Dichloroethane-d4	*4.74*		"	*5.00*		*95*	*78-129*			

Sequoia Analytical

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MNG0460
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	08/06/04 11:40

Notes and Definitions

BZ,BU	Sample preserved improperly. Sample analyzed after holding time expired.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Chain of Custody Record

bp

Project Name: 11132 Soil and Water Investigation
Business Unit: Atlantic Richfield Company/Central CA Portfolio
BP Laboratory Contract Number: 4 6 1 0 0 0
Requested Due Date: 2 weeks from sampling date

Date: 7/21/2004

On-site Time: 0900	Temp: ~68°F
Off-site Time: 1700	Temp: ~80°F
Sky Conditions: CLEAR	
Meteorological Events: —	
Wind Speed: VAR 0-5 mph	Direction:

Send To:	
Lab Name: Sequoia Analytical	
Lab Address:	
Lab PM: Lisa Race	
Tele/Fax: 408-782-3156	
Report Type & QC Level: Normal	
BP/GEM Account No.:	

BP/GEM Facility No.: 11132	
BP/GEM Facility Address: 3201 35th AVE	
Site ID No. Station: 11132	
Site Lat/Long:	
California Global ID #:	
BP/GEM PM Contact: Len Niles	
Address: 1333 Broadway, Ste. 800	
Oakland, CA 94612	
Tele/Fax: 510-874-1720/510-874-3268	

Consultant: URS Oakland	
Address: 1333 Broadway, Ste. 800	
Oakland, CA 94612	
e-mail EDD: donna.cosperc@urscorp.com/kevin_uno@	
Consultant Project No.: 38486872	
Consultant Tele/Fax: 510-893-3600/510-874-3268	
Consultant PM: LEN NILES	
Invoice to: Consultant	
BP/GEM Work Release No:	

Lab Bottle Order No:

Item No.	Sample Description	Time	Matrix: Soil/Solid	Water/Liquid	Sediments	Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	8260B full	8260B TPH/GRO	BTEX	MTBE	Fuel Oxy						Sample Point Lat/Long and Comments
1	UB-4-30.0	1115	X				01	1					X										MW0460
2	UB-4-30.5	[illegible]	X				02	1					X										
3	UB-6-30.0	1220	X				03	1					X										
4	UB-6-30.5	1220	X				04	1					X										
5	UB-5	1515		X			05	3					X										
6	UB-6	[illegible] 1220		X			06	2					X										
7	UB-4	1645		X			07	3					X										
8	TB	0900		X			08	1					X										HOLD
9																							
10																							

Sampler's Name: KEVIN UNO	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: URS Oakland	K. Uno	7/21	1710	[illegible]		
Shipment Date: ~~7/21~~ 7/21/04	[illegible]	7-21	1900	[illegible]	7/21	19:00
Shipment Method: Hand Deliver						
Shipment Tracking No:						
Special Instructions:						

Custody Seals In Place Yes / No x Temperature Blank Yes No x Cooler Temperature on Receipt 6.0 °F/°C Trip Blank Yes X No

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: URS
REC. BY (PRINT): EP
WORKORDER: MVG0440

DATE REC'D AT LAB: 7-21-04
TIME REC'D AT LAB: 1905
DATE LOGGED IN: 7-22-04

For Regulatory Purposes?
DRINKING WATER YES / (NO)
WASTE WATER YES / (NO)

(For clients requiring preservation checks at receipt, document here ↓)

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) Present / (Absent) Intact / Broken*			MB-4-30.0	1 liter	—	—	S	7-21-04	
2. Chain-of-Custody (Present) / Absent*			MB-4-30.5	↓					
3. Traffic Reports or Packing List: Present / (Absent)			MB-4-30.0						
4. Airbill: Airbill / Sticker (Present) / Absent			MB-4-30.5						
			MB-5	3 VOA					
			4	1					
			4	3					
5. Airbill #:			TB	1					
6. Sample Labels: (Present) / Absent									
7. Sample IDs: (Listed) / Not Listed on Chain-of-Custody									
8. Sample Condition: (Intact) / Broken* / Leaking*									
9. Does information on chain-of-custody, traffic reports and sample labels agree? (Yes) / No*									
10. Sample received within hold time? (Yes) / No*									
11. Adequate sample volume received? (Yes) / No*									
12. Proper Preservatives used? (Yes) / No*									
13. Trip Blank / Temp Blank Received? (circle which, if yes) Yes / No*									
14. Temp Rec. at Lab: 4 C Is temp 4 +/-2°C? (Yes) / No**									

(Acceptance range for samples requiring thermal pres.)

*Exception (if any): METALS / DFF ON ICE or Problem COC

**IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION.

Revision 6
Rev 5 (06/07/04)
7/13/04

Sequoia Analytical

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21 May, 2004

Leonard Niles
URS Corporation [Arco]
1333 Broadway, Suite 800
Oakland, CA 94612

RE: BP Heritage #11132, Oakland, CA
Work Order: MND0473

Enclosed are the results of analyses for samples received by the laboratory on 04/20/04 19:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race
Senior Project Manager

CA ELAP Certificate #1210

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
UB-12	MND0473-01	Water	04/19/04 10:50	04/20/04 19:10
UB-9	MND0473-02	Water	04/19/04 12:45	04/20/04 19:10
UB-7	MND0473-03	Water	04/19/04 15:10	04/20/04 19:10
UB-12-5	MND0473-04	Soil	04/19/04 09:30	04/20/04 19:10
UB-12-10	MND0473-05	Soil	04/19/04 09:40	04/20/04 19:10
UB-12-15	MND0473-06	Soil	04/19/04 10:00	04/20/04 19:10
UB-12-24.5	MND0473-07	Soil	04/19/04 10:40	04/20/04 19:10
UB-9-5	MND0473-08	Soil	04/19/04 11:10	04/20/04 19:10
UB-9-15	MND0473-09	Soil	04/19/04 11:35	04/20/04 19:10
UB-9-25	MND0473-10	Soil	04/19/04 12:05	04/20/04 19:10
UB-9-35	MND0473-11	Soil	04/19/04 12:45	04/20/04 19:10
UB-9-42	MND0473-12	Soil	04/19/04 13:00	04/20/04 19:10
UB-7-5	MND0473-13	Soil	04/19/04 13:40	04/20/04 19:10
UB-7-15	MND0473-14	Soil	04/19/04 14:00	04/20/04 19:10
UB-7-25	MND0473-15	Soil	04/19/04 14:45	04/20/04 19:10
UB-7-35	MND0473-16	Soil	04/19/04 15:10	04/20/04 19:10
UB-7-41	MND0473-17	Soil	04/19/04 15:15	04/20/04 19:10
Trip Blank	MND0473-18	Water	04/19/04 00:00	04/20/04 19:10
UB-10	MND0473-19	Water	04/20/04 11:40	04/20/04 19:10
UB-11	MND0473-20	Water	04/20/04 10:15	04/20/04 19:10
UB-10-5	MND0473-21	Soil	04/20/04 10:45	04/20/04 19:10
UB-10-15	MND0473-22	Soil	04/20/04 11:15	04/20/04 19:10
UB-10-25	MND0473-23	Soil	04/20/04 11:30	04/20/04 19:10
UB-10-35	MND0473-24	Soil	04/20/04 11:50	04/20/04 19:10
UB-10-37	MND0473-25	Soil	04/20/04 11:55	04/20/04 19:10
UB-11-5	MND0473-26	Soil	04/20/04 08:35	04/20/04 19:10
UB-11-15	MND0473-27	Soil	04/20/04 09:10	04/20/04 19:10
UB-11-25	MND0473-28	Soil	04/20/04 09:45	04/20/04 19:10
UB-11-35	MND0473-29	Soil	04/20/04 10:10	04/20/04 19:10

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
UB-11-37	MND0473-30	Soil	04/20/04 10:15	04/20/04 19:10

The carbon range for the TPH-GRO has been changed from C6-C10 to C4-C12. The carbon range for TPH-DRO has been changed from C10-C28 to C10-C36. EPA 8015B has been modified to better meet the requirements of California regulatory agencies.

These samples were received with no custody seals.

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1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Purgeable Hydrocarbons by EPA 8015B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-12 (MND0473-01) Water Sampled: 04/19/04 10:50 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	**120**	50	ug/l	1	4050007	05/01/04	05/01/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*99 %*	*65-135*		"	"	"	"	
UB-9 (MND0473-02) Water Sampled: 04/19/04 12:45 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	**25000**	5000	ug/l	100	4050007	05/01/04	05/01/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*98 %*	*65-135*		"	"	"	"	
UB-7 (MND0473-03) Water Sampled: 04/19/04 15:10 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	**32000**	5000	ug/l	100	4050007	05/01/04	05/01/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*101 %*	*65-135*		"	"	"	"	
UB-12-5 (MND0473-04) Soil Sampled: 04/19/04 09:30 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg	2	4040762	04/29/04	04/30/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*83 %*	*65-135*		"	"	"	"	
UB-12-10 (MND0473-05) Soil Sampled: 04/19/04 09:40 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg	2	4040799	04/30/04	04/30/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*77 %*	*65-135*		"	"	"	"	
UB-12-15 (MND0473-06) Soil Sampled: 04/19/04 10:00 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg	2	4040799	04/30/04	04/30/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*88 %*	*65-135*		"	"	"	"	
UB-12-24.5 (MND0473-07) Soil Sampled: 04/19/04 10:40 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg	2	4040799	04/30/04	04/30/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*88 %*	*65-135*		"	"	"	"	

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Purgeable Hydrocarbons by EPA 8015B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-9-5 (MND0473-08) Soil Sampled: 04/19/04 11:10 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg	2	4040799	04/30/04	04/30/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*81 %*	*65-135*		"	"	"	"	
UB-9-15 (MND0473-09) Soil Sampled: 04/19/04 11:35 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg	2	4040799	04/30/04	04/30/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*90 %*	*65-135*		"	"	"	"	
UB-9-25 (MND0473-10) Soil Sampled: 04/19/04 12:05 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	**22**	5.0	mg/kg	10	4040799	04/30/04	04/30/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*102 %*	*65-135*		"	"	"	"	
UB-9-35 (MND0473-11) Soil Sampled: 04/19/04 12:45 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg	2	4040799	04/30/04	04/30/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*91 %*	*65-135*		"	"	"	"	
UB-9-42 (MND0473-12) Soil Sampled: 04/19/04 13:00 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg	2	4040799	04/30/04	04/30/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*92 %*	*65-135*		"	"	"	"	
UB-7-5 (MND0473-13) Soil Sampled: 04/19/04 13:40 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg	2	4040799	04/30/04	04/30/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*93 %*	*65-135*		"	"	"	"	
UB-7-15 (MND0473-14) Soil Sampled: 04/19/04 14:00 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	**6.9**	1.0	mg/kg	2	4040799	04/30/04	04/30/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*86 %*	*65-135*		"	"	"	"	

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Purgeable Hydrocarbons by EPA 8015B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-7-25 (MND0473-15) Soil Sampled: 04/19/04 14:45 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	**19**	5.0	mg/kg	10	4050005	05/01/04	05/01/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*101 %*	*65-135*		"	"	"	"	
UB-7-35 (MND0473-16) Soil Sampled: 04/19/04 15:10 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg	2	4040799	04/30/04	05/01/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*92 %*	*65-135*		"	"	"	"	
UB-7-41 (MND0473-17) Soil Sampled: 04/19/04 15:15 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg	2	4050005	05/01/04	05/01/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*98 %*	*65-135*		"	"	"	"	
UB-10 (MND0473-19) Water Sampled: 04/20/04 11:40 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	**31000**	10000	ug/l	200	4050007	05/01/04	05/01/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*99 %*	*65-135*		"	"	"	"	
UB-11 (MND0473-20) Water Sampled: 04/20/04 10:15 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	**1200**	500	ug/l	10	4050007	05/01/04	05/01/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*100 %*	*65-135*		"	"	"	"	
UB-10-5 (MND0473-21) Soil Sampled: 04/20/04 10:45 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg	2	4050005	05/01/04	05/01/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*97 %*	*65-135*		"	"	"	"	
UB-10-15 (MND0473-22) Soil Sampled: 04/20/04 11:15 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	**72**	10	mg/kg	10	4040799	04/30/04	05/01/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*106 %*	*65-135*		"	"	"	"	

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Purgeable Hydrocarbons by EPA 8015B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-10-25 (MND0473-23) Soil Sampled: 04/20/04 11:30 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	**820**	200	mg/kg	100	4050085	05/04/04	05/04/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*120 %*	*65-135*		"	"	"	"	*PES2*
UB-10-35 (MND0473-24) Soil Sampled: 04/20/04 11:50 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg	1	4050059	05/04/04	05/04/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*96 %*	*65-135*		"	"	"	"	
UB-10-37 (MND0473-25) Soil Sampled: 04/20/04 11:55 Received: 04/20/04 19:10									
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg	1	4050059	05/04/04	05/04/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*97 %*	*65-135*		"	"	"	"	
UB-11-5 (MND0473-26) Soil Sampled: 04/20/04 08:35 Received: 04/20/04 19:10									**HT-10**
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg	1	4050059	05/04/04	05/04/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*92 %*	*65-135*		"	"	"	"	
UB-11-15 (MND0473-27) Soil Sampled: 04/20/04 09:10 Received: 04/20/04 19:10									**HT-10**
Gasoline Range Organics (C4-C12)	**64**	5.0	mg/kg	5	4050059	05/04/04	05/04/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*106 %*	*65-135*		"	"	"	"	
UB-11-25 (MND0473-28) Soil Sampled: 04/20/04 09:45 Received: 04/20/04 19:10									**HT-10**
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg	1	4050059	05/04/04	05/04/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*94 %*	*65-135*		"	"	"	"	
UB-11-35 (MND0473-29) Soil Sampled: 04/20/04 10:10 Received: 04/20/04 19:10									**HT-10**
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg	1	4050059	05/04/04	05/04/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*93 %*	*65-135*		"	"	"	"	

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Purgeable Hydrocarbons by EPA 8015B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-11-37 (MND0473-30) Soil Sampled: 04/20/04 10:15 Received: 04/20/04 19:10									**HT-10**
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg	1	4050059	05/04/04	05/04/04	EPA 8015B-VOA	
Surrogate: 4-Bromofluorobenzene		*100 %*	*65-135*		"	"	"	"	

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Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Total Metals by EPA 6000/7000 Series Methods

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-10-25 (MND0473-23) Soil Sampled: 04/20/04 11:30 Received: 04/20/04 19:10									
Lead	**7.9**	7.1	mg/kg	1	4050351	05/19/04	05/20/04	EPA 6010B	

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Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-12 (MND0473-01) Water Sampled: 04/19/04 10:50 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	1.0	ug/l	1	4050008	05/01/04	05/01/04	EPA 8260B	
Benzene	**5.9**	0.50	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethylbenzene	**0.99**	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.77**	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	**2.1**	0.50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*101 %*		*84-122*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*94 %*		*74-135*	"	"	"	"	
Surrogate: Toluene-d8		*102 %*		*84-119*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*		*86-119*	"	"	"	"	
UB-9 (MND0473-02) Water Sampled: 04/19/04 12:45 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	1000	ug/l	1000	4050008	05/01/04	05/01/04	EPA 8260B	
Benzene	**11000**	500	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20000	"	"	"	"	"	"	
Di-isopropyl ether	ND	1000	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	500	"	"	"	"	"	"	
1,2-Dichloroethane	ND	500	"	"	"	"	"	"	
Ethanol	ND	100000	"	"	"	"	"	"	
Ethylbenzene	**1200**	500	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1000	"	"	"	"	"	"	
Methyl tert-butyl ether	**2700**	500	"	"	"	"	"	"	
Toluene	**1500**	500	"	"	"	"	"	"	
Xylenes (total)	**2400**	500	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*97 %*		*84-122*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*93 %*		*74-135*	"	"	"	"	
Surrogate: Toluene-d8		*103 %*		*84-119*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*		*86-119*	"	"	"	"	

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Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-7 (MND0473-03) Water Sampled: 04/19/04 15:10 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	1000	ug/l	1000	4050008	05/01/04	05/01/04	EPA 8260B	
Benzene	**7300**	500	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20000	"	"	"	"	"	"	
Di-isopropyl ether	ND	1000	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	500	"	"	"	"	"	"	
1,2-Dichloroethane	ND	500	"	"	"	"	"	"	
Ethanol	ND	100000	"	"	"	"	"	"	
Ethylbenzene	***1300***	*500*	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1000	"	"	"	"	"	"	
Methyl tert-butyl ether	**28000**	500	"	"	"	"	"	"	
Toluene	**960**	500	"	"	"	"	"	"	
Xylenes (total)	**4000**	500	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*102 %*	*84-122*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*93 %*	*74-135*		"	"	"	"	
Surrogate: Toluene-d8		*102 %*	*84-119*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*86-119*		"	"	"	"	
UB-12-5 (MND0473-04) Soil Sampled: 04/19/04 09:30 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	0.0050	mg/kg	1	4040751	04/29/04	04/29/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Tert-butyl alcohol	ND	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.20	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*114 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*102 %*	*82-129*		"	"	"	"	

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Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-12-10 (MND0473-05) Soil Sampled: 04/19/04 09:40 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	0.0050	mg/kg	1	4040751	04/29/04	04/29/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Tert-butyl alcohol	ND	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.20	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	**0.0072**	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*107 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*102 %*	*82-129*		"	"	"	"	
UB-12-15 (MND0473-06) Soil Sampled: 04/19/04 10:00 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	0.0050	mg/kg	1	4040751	04/29/04	04/29/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Tert-butyl alcohol	ND	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.20	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*109 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*100 %*	*82-129*		"	"	"	"	

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Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-12-24.5 (MND0473-07) Soil Sampled: 04/19/04 10:40 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	0.0050	mg/kg	1	4040751	04/29/04	04/29/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Tert-butyl alcohol	ND	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.20	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*113 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*115 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*103 %*	*82-129*		"	"	"	"	
UB-9-5 (MND0473-08) Soil Sampled: 04/19/04 11:10 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	0.0050	mg/kg	1	4040751	04/29/04	04/29/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Tert-butyl alcohol	ND	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.20	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*108 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*109 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*101 %*	*82-129*		"	"	"	"	

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Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-9-15 (MND0473-09) Soil Sampled: 04/19/04 11:35 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	0.0050	mg/kg	1	4040751	04/29/04	04/29/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Tert-butyl alcohol	ND	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.20	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*106 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*109 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*102 %*	*82-129*		"	"	"	"	
UB-9-25 (MND0473-10) Soil Sampled: 04/19/04 12:05 Received: 04/20/04 19:10									**R-05**
Tert-amyl methyl ether	ND	5.0	mg/kg	500	4050009	05/03/04	05/03/04	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethanol	ND	200	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	**20**	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*108 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*108 %*	*82-129*		"	"	"	"	

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Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-9-35 (MND0473-11) Soil Sampled: 04/19/04 12:45 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	0.0050	mg/kg	1	4040789	04/30/04	04/30/04	EPA 8260B	
Benzene	**0.17**	0.0050	"	"	"	"	"	"	
Tert-butyl alcohol	**0.14**	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.20	"	"	"	"	"	"	
Ethylbenzene	**0.031**	0.0050	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.061**	0.0050	"	"	"	"	"	"	
Toluene	**0.014**	0.0050	"	"	"	"	"	"	
Xylenes (total)	**0.020**	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*107 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*109 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*113 %*	*82-129*		"	"	"	"	
UB-9-42 (MND0473-12) Soil Sampled: 04/19/04 13:00 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	0.0050	mg/kg	1	4040789	04/30/04	04/30/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Tert-butyl alcohol	ND	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.20	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	**0.011**	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*106 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*108 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*111 %*	*82-129*		"	"	"	"	

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1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
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Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-7-5 (MND0473-13) Soil Sampled: 04/19/04 13:40 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	0.0050	mg/kg	1	4040789	04/30/04	04/30/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Tert-butyl alcohol	ND	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.20	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.0075**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	**0.0055**	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*107 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*114 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*111 %*	*82-129*		"	"	"	"	
UB-7-15 (MND0473-14) Soil Sampled: 04/19/04 14:00 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	0.025	mg/kg	5	4050019	05/03/04	05/03/04	EPA 8260B	
Benzene	ND	0.025	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.025	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.025	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.025	"	"	"	"	"	"	
Ethylbenzene	**0.067**	0.025	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
Toluene	ND	0.025	"	"	"	"	"	"	
Xylenes (total)	**0.62**	0.025	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*98 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*97 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*101 %*	*82-129*		"	"	"	"	

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-7-15 (MND0473-14RE1) Soil Sampled: 04/19/04 14:00 Received: 04/20/04 19:10									
Tert-butyl alcohol	ND	0.10	mg/kg	1	4040789	04/30/04	04/30/04	EPA 8260B	
Ethanol	ND	0.20	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*106 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*115 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*113 %*	*82-129*		"	"	"	"	
UB-7-25 (MND0473-15) Soil Sampled: 04/19/04 14:45 Received: 04/20/04 19:10									**R-05**
Tert-amyl methyl ether	ND	2.0	mg/kg	200	4050009	05/03/04	05/03/04	EPA 8260B	
Benzene	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	40	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Ethanol	ND	80	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Xylenes (total)	**4.2**	2.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*94 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*100 %*	*82-129*		"	"	"	"	
UB-7-35 (MND0473-16) Soil Sampled: 04/19/04 15:10 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	0.025	mg/kg	5	4050019	05/03/04	05/03/04	EPA 8260B	
Benzene	ND	0.025	"	"	"	"	"	"	
Tert-butyl alcohol	**0.76**	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.025	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.025	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.025	"	"	"	"	"	"	
Ethanol	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	0.025	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.036**	0.025	"	"	"	"	"	"	
Toluene	ND	0.025	"	"	"	"	"	"	
Xylenes (total)	ND	0.025	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*98 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*92 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*99 %*	*82-129*		"	"	"	"	

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-7-41 (MND0473-17) Soil Sampled: 04/19/04 15:15 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	0.0050	mg/kg	1	4040789	04/30/04	04/30/04	EPA 8260B	
Benzene	**0.0093**	0.0050	"	"	"	"	"	"	
Tert-butyl alcohol	**0.56**	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.20	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.20**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	**0.013**	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*106 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*111 %*	*82-129*		"	"	"	"	
UB-10 (MND0473-19) Water Sampled: 04/20/04 11:40 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	2000	ug/l	2000	4050008	05/01/04	05/01/04	EPA 8260B	
Benzene	**3700**	1000	"	"	"	"	"	"	
Tert-butyl alcohol	ND	40000	"	"	"	"	"	"	
Di-isopropyl ether	ND	2000	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1000	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1000	"	"	"	"	"	"	
Ethanol	ND	200000	"	"	"	"	"	"	
Ethylbenzene	**1000**	1000	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2000	"	"	"	"	"	"	
Methyl tert-butyl ether	**35000**	1000	"	"	"	"	"	"	
Toluene	**2400**	1000	"	"	"	"	"	"	
Xylenes (total)	**4000**	1000	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*102 %*	*84-122*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*90 %*	*74-135*		"	"	"	"	
Surrogate: Toluene-d8		*99 %*	*84-119*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*100 %*	*86-119*		"	"	"	"	

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1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-11 (MND0473-20) Water Sampled: 04/20/04 10:15 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	100	ug/l	100	4050008	05/01/04	05/01/04	EPA 8260B	
Benzene	ND	50	"	"	"	"	"	"	
Tert-butyl alcohol	ND	2000	"	"	"	"	"	"	
Di-isopropyl ether	ND	100	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	50	"	"	"	"	"	"	
Ethanol	ND	10000	"	"	"	"	"	"	
Ethylbenzene	ND	50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	100	"	"	"	"	"	"	
Methyl tert-butyl ether	**2400**	50	"	"	"	"	"	"	
Toluene	ND	50	"	"	"	"	"	"	
Xylenes (total)	**51**	50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*97 %*	*84-122*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*98 %*	*74-135*		"	"	"	"	
Surrogate: Toluene-d8		*101 %*	*84-119*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*100 %*	*86-119*		"	"	"	"	
UB-10-5 (MND0473-21) Soil Sampled: 04/20/04 10:45 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	0.0050	mg/kg	1	4040789	04/30/04	04/30/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Tert-butyl alcohol	ND	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.20	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.0058**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*108 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*113 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*110 %*	*82-129*		"	"	"	"	

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1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-10-15 (MND0473-22) Soil Sampled: 04/20/04 11:15 Received: 04/20/04 19:10									**R-05**
Tert-amyl methyl ether	ND	2.0	mg/kg	200	4050009	05/03/04	05/03/04	EPA 8260B	
Benzene	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	40	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Ethanol	ND	80	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Xylenes (total)	**3.0**	2.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*101 %*		*81-126*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*106 %*		*73-131*		"	"	"	
Surrogate: Toluene-d8		*104 %*		*82-129*		"	"	"	
UB-10-25 (MND0473-23) Soil Sampled: 04/20/04 11:30 Received: 04/20/04 19:10									**R-05**
Tert-amyl methyl ether	ND	5.0	mg/kg	500	4050009	05/03/04	05/03/04	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethanol	ND	200	"	"	"	"	"	"	
Ethylbenzene	**5.7**	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	**37**	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*101 %*		*81-126*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*105 %*		*73-131*		"	"	"	
Surrogate: Toluene-d8		*104 %*		*82-129*		"	"	"	

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1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-10-35 (MND0473-24) Soil Sampled: 04/20/04 11:50 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	0.0050	mg/kg	1	4040789	04/30/04	04/30/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Tert-butyl alcohol	**0.85**	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.20	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.016**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	**0.0061**	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*109 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*115 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*82-129*		"	"	"	"	
UB-10-37 (MND0473-25) Soil Sampled: 04/20/04 11:55 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	0.0050	mg/kg	1	4040789	04/30/04	04/30/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Tert-butyl alcohol	**0.24**	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.20	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.0062**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	**0.0099**	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*106 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*113 %*	*82-129*		"	"	"	"	

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1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-11-5 (MND0473-26) Soil Sampled: 04/20/04 08:35 Received: 04/20/04 19:10									**HT-10**
Tert-amyl methyl ether	ND	0.0050	mg/kg	1	4040789	04/30/04	04/30/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Tert-butyl alcohol	ND	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.20	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.0083**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*109 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*116 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*82-129*		"	"	"	"	
UB-11-15 (MND0473-27) Soil Sampled: 04/20/04 09:10 Received: 04/20/04 19:10									
Tert-amyl methyl ether	ND	2.0	mg/kg	200	4050050	05/04/04	05/04/04	EPA 8260B	
Benzene	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	40	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Ethanol	ND	80	"	"	"	"	"	"	
Ethylbenzene	**2.6**	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Xylenes (total)	**13**	2.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*102 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*100 %*	*82-129*		"	"	"	"	

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1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-11-25 (MND0473-28) Soil Sampled: 04/20/04 09:45 Received: 04/20/04 19:10									**HT-10**
Tert-amyl methyl ether	ND	0.0050	mg/kg	1	4050019	05/03/04	05/03/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Tert-butyl alcohol	ND	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.20	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.0093**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*95 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*95 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*99 %*	*82-129*		"	"	"	"	
UB-11-35 (MND0473-29) Soil Sampled: 04/20/04 10:10 Received: 04/20/04 19:10									**HT-10**
Tert-amyl methyl ether	ND	0.0050	mg/kg	1	4050019	05/03/04	05/03/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Tert-butyl alcohol	ND	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.20	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.054**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*97 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*96 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*98 %*	*82-129*		"	"	"	"	

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
UB-11-37 (MND0473-30) Soil Sampled: 04/20/04 10:15 Received: 04/20/04 19:10									**HT-10**
Tert-amyl methyl ether	ND	0.0050	mg/kg	1	4050019	05/03/04	05/03/04	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
Tert-butyl alcohol	ND	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.20	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.034**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*99 %*	*81-126*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*97 %*	*73-131*		"	"	"	"	
Surrogate: Toluene-d8		*99 %*	*82-129*		"	"	"	"	

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1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Purgeable Hydrocarbons by EPA 8015B - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4040762 - EPA 5030, soils										
Blank (4040762-BLK1)				Prepared & Analyzed: 04/29/04						
Gasoline Range Organics (C4-C12)	ND	0.50	mg/kg							
Surrogate: 4-Bromofluorobenzene	*0.314*		"	*0.300*		*105*	*65-135*			
Laboratory Control Sample (4040762-BS1)				Prepared & Analyzed: 04/29/04						
Gasoline Range Organics (C4-C12)	2.44	0.50	mg/kg	2.75		89	65-135			
Surrogate: 4-Bromofluorobenzene	*0.318*		"	*0.300*		*106*	*65-135*			
Matrix Spike (4040762-MS1)	**Source: P404478-03**			Prepared & Analyzed: 04/29/04						
Gasoline Range Organics (C4-C12)	3.99	1.0	mg/kg	5.50	ND	73	65-135			
Surrogate: 4-Bromofluorobenzene	*0.242*		"	*0.300*		*81*	*65-135*			
Matrix Spike Dup (4040762-MSD1)	**Source: P404478-03**			Prepared & Analyzed: 04/29/04						
Gasoline Range Organics (C4-C12)	3.86	1.0	mg/kg	5.50	ND	70	65-135	3	20	
Surrogate: 4-Bromofluorobenzene	*0.236*		"	*0.300*		*79*	*65-135*			
Batch 4040799 - EPA 5030, soils										
Blank (4040799-BLK1)				Prepared & Analyzed: 04/30/04						
Gasoline Range Organics (C4-C12)	ND	0.50	mg/kg							
Surrogate: 4-Bromofluorobenzene	*0.300*		"	*0.300*		*100*	*65-135*			
Laboratory Control Sample (4040799-BS1)				Prepared & Analyzed: 04/30/04						
Gasoline Range Organics (C4-C12)	2.35	0.50	mg/kg	2.75		85	65-135			
Surrogate: 4-Bromofluorobenzene	*0.307*		"	*0.300*		*102*	*65-135*			
Matrix Spike (4040799-MS1)	**Source: MND0473-10**			Prepared & Analyzed: 04/30/04						
Gasoline Range Organics (C4-C12)	71.5	5.0	mg/kg	27.5	22	180	65-135			QM01
Surrogate: 4-Bromofluorobenzene	*0.315*		"	*0.300*		*105*	*65-135*			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Purgeable Hydrocarbons by EPA 8015B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4040799 - EPA 5030, soils										
Matrix Spike Dup (4040799-MSD1)	**Source: MND0473-10**			Prepared & Analyzed: 04/30/04						
Gasoline Range Organics (C4-C12)	57.6	5.0	mg/kg	27.5	22	129	65-135	22	20	QC20
Surrogate: 4-Bromofluorobenzene	*0.304*		"	*0.300*		*101*	*65-135*			
Batch 4050005 - EPA 5030, soils										
Blank (4050005-BLK1)				Prepared & Analyzed: 05/01/04						
Gasoline Range Organics (C4-C12)	ND	0.50	mg/kg							
Surrogate: 4-Bromofluorobenzene	*0.301*		"	*0.300*		*100*	*65-135*			
Laboratory Control Sample (4050005-BS1)				Prepared & Analyzed: 05/01/04						
Gasoline Range Organics (C4-C12)	2.06	0.50	mg/kg	2.75		75	65-135			
Surrogate: 4-Bromofluorobenzene	*0.279*		"	*0.300*		*93*	*65-135*			
Laboratory Control Sample Dup (4050005-BSD1)				Prepared & Analyzed: 05/01/04						
Gasoline Range Organics (C4-C12)	2.23	0.50	mg/kg	2.75		81	65-135	8	20	
Surrogate: 4-Bromofluorobenzene	*0.312*		"	*0.300*		*104*	*65-135*			
Batch 4050007 - EPA 5030B, waters										
Blank (4050007-BLK1)				Prepared & Analyzed: 05/01/04						
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 4-Bromofluorobenzene	*292*		"	*300*		*97*	*65-135*			
Laboratory Control Sample (4050007-BS1)				Prepared & Analyzed: 05/01/04						
Gasoline Range Organics (C4-C12)	2340	50	ug/l	2750		85	65-135			
Surrogate: 4-Bromofluorobenzene	*318*		"	*300*		*106*	*65-135*			

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1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Purgeable Hydrocarbons by EPA 8015B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4050007 - EPA 5030B, waters										
Matrix Spike (4050007-MS1)	**Source: MND0473-01**			Prepared & Analyzed: 05/01/04						
Gasoline Range Organics (C4-C12)	2480	50	ug/l	2750	120	86	65-135			
Surrogate: 4-Bromofluorobenzene	*316*		"	*300*		*105*	*65-135*			
Matrix Spike Dup (4050007-MSD1)	**Source: MND0473-01**			Prepared & Analyzed: 05/01/04						
Gasoline Range Organics (C4-C12)	2530	50	ug/l	2750	120	88	65-135	2	20	
Surrogate: 4-Bromofluorobenzene	*313*		"	*300*		*104*	*65-135*			
Batch 4050059 - EPA 5030, (pres 48h)										
Blank (4050059-BLK1)				Prepared & Analyzed: 05/04/04						
Gasoline Range Organics (C4-C12)	ND	1.0	mg/kg							
Surrogate: 4-Bromofluorobenzene	*0.626*		"	*0.600*		*104*	*65-135*			
Laboratory Control Sample (4050059-BS1)				Prepared & Analyzed: 05/04/04						
Gasoline Range Organics (C4-C12)	5.02	1.0	mg/kg	5.50		91	65-135			
Surrogate: 4-Bromofluorobenzene	*0.636*		"	*0.600*		*106*	*65-135*			
Matrix Spike (4050059-MS1)	**Source: P404511-01**			Prepared & Analyzed: 05/04/04						
Gasoline Range Organics (C4-C12)	4.63	1.0	mg/kg	5.50	ND	84	65-135			
Surrogate: 4-Bromofluorobenzene	*0.581*		"	*0.600*		*97*	*65-135*			
Matrix Spike Dup (4050059-MSD1)	**Source: P404511-01**			Prepared & Analyzed: 05/04/04						
Gasoline Range Organics (C4-C12)	4.65	1.0	mg/kg	5.50	ND	85	65-135	0.4	20	
Surrogate: 4-Bromofluorobenzene	*0.579*		"	*0.600*		*96*	*65-135*			
Batch 4050085 - EPA 5030B,soils MeOH										
Blank (4050085-BLK1)				Prepared & Analyzed: 05/04/04						
Gasoline Range Organics (C4-C12)	ND	100	mg/kg							
Surrogate: 4-Bromofluorobenzene	*0.598*		"	*0.600*		*100*	*65-135*			*PES2*

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1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Purgeable Hydrocarbons by EPA 8015B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4050085 - EPA 5030B,soils MeOH										
Laboratory Control Sample (4050085-BS1)				Prepared & Analyzed: 05/04/04						
Gasoline Range Organics (C4-C12)	5.14	2.0	mg/kg	5.50		93	65-135			
Surrogate: 4-Bromofluorobenzene	*0.645*		"	*0.600*		*108*	*65-135*			
Laboratory Control Sample Dup (4050085-BSD1)				Prepared & Analyzed: 05/04/04						
Gasoline Range Organics (C4-C12)	5.16	2.0	mg/kg	5.50		94	65-135	0.4	20	
Surrogate: 4-Bromofluorobenzene	*0.652*		"	*0.600*		*109*	*65-135*			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4050351 - EPA 3050B										
Blank (4050351-BLK1)				Prepared: 05/14/04 Analyzed: 05/20/04						
Lead	ND	7.5	mg/kg							
Laboratory Control Sample (4050351-BS1)				Prepared: 05/14/04 Analyzed: 05/20/04						
Lead	41.5	7.5	mg/kg	50.0		83	80-120			
Matrix Spike (4050351-MS1)	**Source: MND0473-23**			Prepared: 05/14/04 Analyzed: 05/20/04						
Lead	44.2	6.9	mg/kg	46.3	7.9	78	80-120			QM02
Matrix Spike Dup (4050351-MSD1)	**Source: MND0473-23**			Prepared: 05/14/04 Analyzed: 05/20/04						
Lead	48.1	7.1	mg/kg	47.2	7.9	85	80-120	8	20	

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1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4040751 - EPA 5030 soils										
Blank (4040751-BLK1)				Prepared & Analyzed: 04/29/04						
Tert-amyl methyl ether	ND	0.0050	mg/kg							
Benzene	ND	0.0050	"							
Tert-butyl alcohol	ND	0.10	"							
Di-isopropyl ether	ND	0.0050	"							
1,2-Dibromoethane (EDB)	ND	0.0050	"							
1,2-Dichloroethane	ND	0.0050	"							
Ethanol	ND	0.20	"							
Ethylbenzene	ND	0.0050	"							
Ethyl tert-butyl ether	ND	0.0050	"							
Methyl tert-butyl ether	ND	0.0050	"							
Toluene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Surrogate: Dibromofluoromethane	*0.0521*		"	*0.0500*		*104*	*81-126*			
Surrogate: 1,2-Dichloroethane-d4	*0.0525*		"	*0.0500*		*105*	*73-131*			
Surrogate: Toluene-d8	*0.0501*		"	*0.0500*		*100*	*82-129*			
Laboratory Control Sample (4040751-BS1)				Prepared & Analyzed: 04/29/04						
Tert-amyl methyl ether	0.0560	0.0050	mg/kg	0.0500		112	74-126			
Benzene	0.0569	0.0050	"	0.0500		114	75-123			
Tert-butyl alcohol	0.944	0.10	"	1.00		94	66-129			
Di-isopropyl ether	0.0566	0.0050	"	0.0500		113	71-127			
1,2-Dibromoethane (EDB)	0.0580	0.0050	"	0.0500		116	88-118			
1,2-Dichloroethane	0.0569	0.0050	"	0.0500		114	79-119			
Ethanol	0.882	0.20	"	1.00		88	70-140			
Ethylbenzene	0.0553	0.0050	"	0.0500		111	65-135			
Ethyl tert-butyl ether	0.0566	0.0050	"	0.0500		113	72-123			
Methyl tert-butyl ether	0.0573	0.0050	"	0.0500		115	70-125			
Toluene	0.0570	0.0050	"	0.0500		114	76-123			
Surrogate: Dibromofluoromethane	*0.0516*		"	*0.0500*		*103*	*81-126*			
Surrogate: 1,2-Dichloroethane-d4	*0.0508*		"	*0.0500*		*102*	*73-131*			
Surrogate: Toluene-d8	*0.0516*		"	*0.0500*		*103*	*82-129*			

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1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4040751 - EPA 5030 soils										
Matrix Spike (4040751-MS1)	**Source: P404510-03**			Prepared & Analyzed: 04/29/04						
Tert-amyl methyl ether	0.0518	0.0050	mg/kg	0.0500	ND	104	74-126			
Benzene	0.0530	0.0050	"	0.0500	0.028	50	75-123			QM02
Tert-butyl alcohol	0.880	0.10	"	1.00	0.0096	87	66-129			
Di-isopropyl ether	0.0542	0.0050	"	0.0500	ND	108	71-127			
1,2-Dibromoethane (EDB)	0.0560	0.0050	"	0.0500	ND	112	88-118			
1,2-Dichloroethane	0.0533	0.0050	"	0.0500	ND	107	79-119			
Ethanol	0.789	0.20	"	1.00	0.14	65	70-140			QM02
Ethylbenzene	0.0510	0.0050	"	0.0500	0.0023	97	65-135			
Ethyl tert-butyl ether	0.0545	0.0050	"	0.0500	ND	109	72-123			
Methyl tert-butyl ether	0.0537	0.0050	"	0.0500	ND	107	70-125			
Toluene	0.0501	0.0050	"	0.0500	0.0027	95	76-123			
Surrogate: Dibromofluoromethane	*0.0538*		"	*0.0500*		*108*	*81-126*			
Surrogate: 1,2-Dichloroethane-d4	*0.0546*		"	*0.0500*		*109*	*73-131*			
Surrogate: Toluene-d8	*0.0497*		"	*0.0500*		*99*	*82-129*			
Matrix Spike Dup (4040751-MSD1)	**Source: P404510-03**			Prepared & Analyzed: 04/29/04						
Tert-amyl methyl ether	0.0522	0.0050	mg/kg	0.0500	ND	104	74-126	0.8	35	
Benzene	0.0539	0.0050	"	0.0500	0.028	52	75-123	2	35	QM02
Tert-butyl alcohol	0.976	0.10	"	1.00	0.0096	97	66-129	10	35	
Di-isopropyl ether	0.0515	0.0050	"	0.0500	ND	103	71-127	5	35	
1,2-Dibromoethane (EDB)	0.0538	0.0050	"	0.0500	ND	108	88-118	4	35	
1,2-Dichloroethane	0.0557	0.0050	"	0.0500	ND	111	79-119	4	35	
Ethanol	1.17	0.20	"	1.00	0.14	103	70-140	39	35	QC20
Ethylbenzene	0.0501	0.0050	"	0.0500	0.0023	96	65-135	2	35	
Ethyl tert-butyl ether	0.0518	0.0050	"	0.0500	ND	104	72-123	5	35	
Methyl tert-butyl ether	0.0510	0.0050	"	0.0500	ND	102	70-125	5	35	
Toluene	0.0516	0.0050	"	0.0500	0.0027	98	76-123	3	35	
Surrogate: Dibromofluoromethane	*0.0536*		"	*0.0500*		*107*	*81-126*			
Surrogate: 1,2-Dichloroethane-d4	*0.0544*		"	*0.0500*		*109*	*73-131*			
Surrogate: Toluene-d8	*0.0522*		"	*0.0500*		*104*	*82-129*			

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1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4040789 - EPA 5030 (pres 48h)										
Blank (4040789-BLK1)				Prepared & Analyzed: 04/30/04						
Tert-amyl methyl ether	ND	0.0050	mg/kg							
Benzene	ND	0.0050	"							
Tert-butyl alcohol	ND	0.10	"							
Di-isopropyl ether	ND	0.0050	"							
1,2-Dibromoethane (EDB)	ND	0.0050	"							
1,2-Dichloroethane	ND	0.0050	"							
Ethanol	ND	0.20	"							
Ethylbenzene	ND	0.0050	"							
Ethyl tert-butyl ether	ND	0.0050	"							
Methyl tert-butyl ether	ND	0.0050	"							
Toluene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Surrogate: Dibromofluoromethane	*0.0473*		"	*0.0450*		*105*	*81-126*			
Surrogate: 1,2-Dichloroethane-d4	*0.0494*		"	*0.0450*		*110*	*73-131*			
Surrogate: Toluene-d8	*0.0490*		"	*0.0450*		*109*	*82-129*			
Laboratory Control Sample (4040789-BS1)				Prepared & Analyzed: 04/30/04						
Tert-amyl methyl ether	0.0509	0.0050	mg/kg	0.0500		102	74-126			
Benzene	0.0533	0.0050	"	0.0500		107	75-123			
Tert-butyl alcohol	1.10	0.10	"	1.00		110	66-129			
Di-isopropyl ether	0.0542	0.0050	"	0.0500		108	71-127			
1,2-Dibromoethane (EDB)	0.0553	0.0050	"	0.0500		111	88-118			
1,2-Dichloroethane	0.0618	0.0050	"	0.0500		124	79-119			QC01
Ethanol	1.04	0.20	"	1.00		104	70-140			
Ethylbenzene	0.0592	0.0050	"	0.0500		118	65-135			
Ethyl tert-butyl ether	0.0528	0.0050	"	0.0500		106	72-123			
Methyl tert-butyl ether	0.0542	0.0050	"	0.0500		108	70-125			
Toluene	0.0601	0.0050	"	0.0500		120	76-123			
Surrogate: Dibromofluoromethane	*0 0502*		"	*0.0450*		*112*	*81-126*			
Surrogate: 1,2-Dichloroethane-d4	*0.0532*		"	*0.0450*		*118*	*73-131*			
Surrogate: Toluene-d8	*0.0521*		"	*0.0450*		*116*	*82-129*			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4040789 - EPA 5030 (pres 48h)										
Matrix Spike (4040789-MS1)	**Source: MND0473-26**			Prepared & Analyzed: 04/30/04						
Tert-amyl methyl ether	0.0513	0.0050	mg/kg	0.0500	ND	103	74-126			
Benzene	0.0544	0.0050	"	0.0500	ND	109	75-123			
Tert-butyl alcohol	1.06	0.10	"	1.00	ND	106	66-129			
Di-isopropyl ether	0.0502	0.0050	"	0.0500	ND	100	71-127			
1,2-Dibromoethane (EDB)	0.0540	0.0050	"	0.0500	ND	108	88-118			
1,2-Dichloroethane	0.0604	0.0050	"	0.0500	ND	121	79-119			QM01
Ethanol	0.968	0.20	"	1.00	ND	97	70-140			
Ethylbenzene	0.0620	0.0050	"	0.0500	ND	124	65-135			
Ethyl tert-butyl ether	0.0505	0.0050	"	0.0500	ND	101	72-123			
Methyl tert-butyl ether	0.0647	0.0050	"	0.0500	0.0083	113	70-125			
Toluene	0.0627	0.0050	"	0.0500	0.0013	123	76-123			
Surrogate: Dibromofluoromethane	*0.0473*		"	*0.0450*		*105*	*81-126*			
Surrogate: 1,2-Dichloroethane-d4	*0.0495*		"	*0.0450*		*110*	*73-131*			
Surrogate: Toluene-d8	*0.0497*		"	*0.0450*		*110*	*82-129*			
Matrix Spike Dup (4040789-MSD1)	**Source: MND0473-26**			Prepared & Analyzed: 04/30/04						
Tert-amyl methyl ether	0.0534	0.0050	mg/kg	0.0500	ND	107	74-126	4	35	
Benzene	0.0571	0.0050	"	0.0500	ND	114	75-123	5	35	
Tert-butyl alcohol	1.10	0.10	"	1.00	ND	110	66-129	4	35	
Di-isopropyl ether	0.0532	0.0050	"	0.0500	ND	106	71-127	6	35	
1,2-Dibromoethane (EDB)	0.0563	0.0050	"	0.0500	ND	113	88-118	4	35	
1,2-Dichloroethane	0.0627	0.0050	"	0.0500	ND	125	79-119	4	35	QM01
Ethanol	0.986	0.20	"	1.00	ND	99	70-140	2	35	
Ethylbenzene	0.0641	0.0050	"	0.0500	ND	128	65-135	3	35	
Ethyl tert-butyl ether	0.0532	0.0050	"	0.0500	ND	106	72-123	5	35	
Methyl tert-butyl ether	0.0611	0.0050	"	0.0500	0.0083	106	70-125	6	35	
Toluene	0.0648	0.0050	"	0.0500	0.0013	127	76-123	3	35	QM01
Surrogate: Dibromofluoromethane	*0.0494*		"	*0.0450*		*110*	*81-126*			
Surrogate: 1,2-Dichloroethane-d4	*0.0514*		"	*0.0450*		*114*	*73-131*			
Surrogate: Toluene-d8	*0.0506*		"	*0.0450*		*112*	*82-129*			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4050008 - EPA 5030B waters										
Blank (4050008-BLK1)				Prepared & Analyzed: 05/01/04						
Tert-amyl methyl ether	ND	1.0	ug/l							
Benzene	ND	0.50	"							
Tert-butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	1.0	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	100	"							
Ethylbenzene	ND	0.50	"							
Ethyl tert-butyl ether	ND	1.0	"							
Methyl tert-butyl ether	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Surrogate: Dibromofluoromethane	*5.70*		"	*6.00*		*95*	*84-122*			
Surrogate: 1,2-Dichloroethane-d4	*5.41*		"	*6.00*		*90*	*74-135*			
Surrogate: Toluene-d8	*6.15*		"	*6.00*		*102*	*84-119*			
Surrogate: 4-Bromofluorobenzene	*6.00*		"	*6.00*		*100*	*86-119*			
Laboratory Control Sample (4050008-BS1)				Prepared & Analyzed: 05/01/04						
Tert-amyl methyl ether	5.43	1.0	ug/l	5.00		109	78-117			
Benzene	5.28	0.50	"	5.00		106	81-118			
Tert-butyl alcohol	108	20	"	100		108	60-147			
Di-isopropyl ether	5.73	1.0	"	5.00		115	70-125			
1,2-Dibromoethane (EDB)	5.44	0.50	"	5.00		109	85-125			
1,2-Dichloroethane	5.63	0.50	"	5.00		113	77-126			
Ethanol	188	100	"	100		188	55-200			
Ethylbenzene	5.15	0.50	"	5.00		103	89-122			
Ethyl tert-butyl ether	5.66	1.0	"	5.00		113	71-120			
Methyl tert-butyl ether	5.62	0.50	"	5.00		112	70-122			
Toluene	4.84	0.50	"	5.00		97	84-119			
Xylenes (total)	15.5	0.50	"	15.0		103	86-132			
Surrogate: Dibromofluoromethane	*6.13*		"	*6.00*		*102*	*84-122*			
Surrogate: 1,2-Dichloroethane-d4	*5.83*		"	*6.00*		*97*	*74-135*			
Surrogate: Toluene-d8	*5.83*		"	*6.00*		*97*	*84-119*			
Surrogate: 4-Bromofluorobenzene	*6.16*		"	*6.00*		*103*	*86-119*			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4050008 - EPA 5030B waters										
Matrix Spike (4050008-MS1)	**Source: MND0473-02**			Prepared & Analyzed: 05/01/04						
Tert-amyl methyl ether	5360	1000	ug/l	5000	ND	107	78-117			
Benzene	16500	500	"	5000	11000	110	81-118			
Tert-butyl alcohol	95700	20000	"	100000	ND	96	60-147			
Di-isopropyl ether	5790	1000	"	5000	ND	116	70-125			
1,2-Dibromoethane (EDB)	5080	500	"	5000	ND	102	85-125			
1,2-Dichloroethane	5890	500	"	5000	ND	118	77-126			
Ethanol	92800	100000	"	100000	ND	93	55-200			
Ethylbenzene	6210	500	"	5000	1200	100	89-122			
Ethyl tert-butyl ether	5660	1000	"	5000	ND	113	71-120			
Methyl tert-butyl ether	8480	500	"	5000	2700	116	70-122			
Toluene	6390	500	"	5000	1500	98	84-119			
Xylenes (total)	17000	500	"	15000	2400	97	86-132			
Surrogate: Dibromofluoromethane	*6.08*		"	*6.00*		*101*	*84-122*			
Surrogate: 1,2-Dichloroethane-d4	*5.67*		"	*6.00*		*94*	*74-135*			
Surrogate: Toluene-d8	*5.96*		"	*6.00*		*99*	*84-119*			
Surrogate: 4-Bromofluorobenzene	*6.07*		"	*6.00*		*101*	*86-119*			
Matrix Spike Dup (4050008-MSD1)	**Source: MND0473-02**			Prepared & Analyzed: 05/01/04						
Tert-amyl methyl ether	5280	1000	ug/l	5000	ND	106	78-117	2	20	
Benzene	16400	500	"	5000	11000	108	81-118	0.6	20	
Tert-butyl alcohol	114000	20000	"	100000	ND	114	60-147	17	20	
Di-isopropyl ether	5790	1000	"	5000	ND	116	70-125	0	20	
1,2-Dibromoethane (EDB)	5150	500	"	5000	ND	103	85-125	1	20	
1,2-Dichloroethane	5650	500	"	5000	ND	113	77-126	4	20	
Ethanol	141000	100000	"	100000	ND	141	55-200	41	20	QC21
Ethylbenzene	6030	500	"	5000	1200	97	89-122	3	20	
Ethyl tert-butyl ether	5440	1000	"	5000	ND	109	71-120	4	20	
Methyl tert-butyl ether	8300	500	"	5000	2700	112	70-122	2	20	
Toluene	6290	500	"	5000	1500	96	84-119	2	20	
Xylenes (total)	17300	500	"	15000	2400	99	86-132	2	20	
Surrogate: Dibromofluoromethane	*5.94*		"	*6.00*		*99*	*84-122*			
Surrogate: 1,2-Dichloroethane-d4	*5.65*		"	*6.00*		*94*	*74-135*			
Surrogate: Toluene-d8	*6.10*		"	*6.00*		*102*	*84-119*			
Surrogate: 4-Bromofluorobenzene	*6.22*		"	*6.00*		*104*	*86-119*			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4050009 - EPA 5030B soils MeOH										
Blank (4050009-BLK1)				Prepared & Analyzed: 05/03/04						
Tert-amyl methyl ether	ND	1.0	mg/kg							
Benzene	ND	1.0	"							
Tert-butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	1.0	"							
1,2-Dibromoethane (EDB)	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
Ethanol	ND	40	"							
Ethylbenzene	ND	1.0	"							
Ethyl tert-butyl ether	ND	1.0	"							
Methyl tert-butyl ether	ND	1.0	"							
Toluene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: Dibromofluoromethane	*2.10*		"	*2.00*		*105*	*81-126*			
Surrogate: 1,2-Dichloroethane-d4	*2.27*		"	*2.00*		*114*	*73-131*			
Surrogate: Toluene-d8	*2.02*		"	*2.00*		*101*	*82-129*			
Laboratory Control Sample (4050009-BS1)				Prepared & Analyzed: 05/03/04						
Tert-amyl methyl ether	2.20	1.0	mg/kg	2.00		110	74-126			
Benzene	2.21	1.0	"	2.00		110	75-123			
Tert-butyl alcohol	44.8	20	"	40.0		112	66-129			
Di-isopropyl ether	2.27	1.0	"	2.00		114	71-127			
1,2-Dibromoethane (EDB)	2.18	1.0	"	2.00		109	88-118			
1,2-Dichloroethane	2.33	1.0	"	2.00		116	79-119			
Ethanol	42.5	40	"	40.0		106	70-140			
Ethylbenzene	2.14	1.0	"	2.00		107	65-135			
Ethyl tert-butyl ether	2.36	1.0	"	2.00		118	72-123			
Methyl tert-butyl ether	2.10	1.0	"	2.00		105	70-125			
Toluene	2.18	1.0	"	2.00		109	76-123			
Surrogate: Dibromofluoromethane	*2.16*		"	*2.00*		*108*	*81-126*			
Surrogate: 1,2-Dichloroethane-d4	*2.38*		"	*2.00*		*119*	*73-131*			
Surrogate: Toluene-d8	*2.15*		"	*2.00*		*108*	*82-129*			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4050009 - EPA 5030B soils MeOH										
Laboratory Control Sample Dup (4050009-BSD1)				Prepared & Analyzed: 05/03/04						
Tert-amyl methyl ether	2.16	1.0	mg/kg	2.00		108	74-126	2	35	
Benzene	2.18	1.0	"	2.00		109	75-123	1	35	
Tert-butyl alcohol	43.4	20	"	40.0		108	66-129	3	35	
Di-isopropyl ether	2.19	1.0	"	2.00		110	71-127	4	35	
1,2-Dibromoethane (EDB)	2.17	1.0	"	2.00		108	88-118	0.5	35	
1,2-Dichloroethane	2.29	1.0	"	2.00		114	79-119	2	35	
Ethanol	43.0	40	"	40.0		108	70-140	1	35	
Ethylbenzene	2.13	1.0	"	2.00		106	65-135	0.5	35	
Ethyl tert-butyl ether	2.27	1.0	"	2.00		114	72-123	4	35	
Methyl tert-butyl ether	2.18	1.0	"	2.00		109	70-125	4	35	
Toluene	2.16	1.0	"	2.00		108	76-123	0.9	35	
Surrogate: Dibromofluoromethane	*2.10*		"	*2.00*		*105*	*81-126*			
Surrogate: 1,2-Dichloroethane-d4	*2.23*		"	*2.00*		*112*	*73-131*			
Surrogate: Toluene-d8	*2.12*		"	*2.00*		*106*	*82-129*			
Batch 4050019 - EPA 5030 (pres 48h)										
Blank (4050019-BLK1)				Prepared & Analyzed: 05/03/04						
Tert-amyl methyl ether	ND	0.0050	mg/kg							
Benzene	ND	0.0050	"							
Tert-butyl alcohol	ND	0.10	"							
Di-isopropyl ether	ND	0.0050	"							
1,2-Dibromoethane (EDB)	ND	0.0050	"							
1,2-Dichloroethane	ND	0.0050	"							
Ethanol	ND	0.20	"							
Ethylbenzene	ND	0.0050	"							
Ethyl tert-butyl ether	ND	0.0050	"							
Methyl tert-butyl ether	ND	0.0050	"							
Toluene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Surrogate: Dibromofluoromethane	*0.0501*		"	*0.0500*		*100*	*81-126*			
Surrogate: 1,2-Dichloroethane-d4	*0.0500*		"	*0.0500*		*100*	*73-131*			
Surrogate: Toluene-d8	*0.0503*		"	*0.0500*		*101*	*82-129*			

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URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4050019 - EPA 5030 (pres 48h)										
Laboratory Control Sample (4050019-BS1)				Prepared & Analyzed: 05/03/04						
Tert-amyl methyl ether	0.0482	0.0050	mg/kg	0.0500		96	74-126			
Benzene	0.0495	0.0050	"	0.0500		99	75-123			
Tert-butyl alcohol	0.900	0.10	"	1.00		90	66-129			
Di-isopropyl ether	0.0494	0.0050	"	0.0500		99	71-127			
1,2-Dibromoethane (EDB)	0.0505	0.0050	"	0.0500		101	88-118			
1,2-Dichloroethane	0.0459	0.0050	"	0.0500		92	79-119			
Ethanol	1.28	0.20	"	1.00		128	70-140			
Ethylbenzene	0.0507	0.0050	"	0.0500		101	65-135			
Ethyl tert-butyl ether	0.0501	0.0050	"	0.0500		100	72-123			
Methyl tert-butyl ether	0.0474	0.0050	"	0.0500		95	70-125			
Toluene	0.0491	0.0050	"	0.0500		98	76-123			
Surrogate: Dibromofluoromethane	*0.0488*		"	*0.0500*		*98*	*81-126*			
Surrogate: 1,2-Dichloroethane-d4	*0.0472*		"	*0.0500*		*94*	*73-131*			
Surrogate: Toluene-d8	*0.0506*		"	*0.0500*		*101*	*82-129*			
Matrix Spike (4050019-MS1)	**Source: P404658-01**			Prepared & Analyzed: 05/03/04						
Tert-amyl methyl ether	0.283	0.025	mg/kg	0.250	ND	113	74-126			
Benzene	0.287	0.025	"	0.250	ND	115	75-123			
Tert-butyl alcohol	4.90	0.50	"	5.00	ND	98	66-129			
Di-isopropyl ether	0.285	0.025	"	0.250	ND	114	71-127			
1,2-Dibromoethane (EDB)	0.299	0.025	"	0.250	ND	120	88-118			QC01
1,2-Dichloroethane	0.275	0.025	"	0.250	ND	110	79-119			
Ethanol	6.04	1.0	"	5.00	ND	121	70-140			
Ethylbenzene	0.285	0.025	"	0.250	ND	114	65-135			
Ethyl tert-butyl ether	0.287	0.025	"	0.250	ND	115	72-123			
Methyl tert-butyl ether	0.468	0.025	"	0.250	0.16	123	70-125			
Toluene	0.278	0.025	"	0.250	ND	111	76-123			
Surrogate: Dibromofluoromethane	*0.0477*		"	*0.0500*		*95*	*81-126*			
Surrogate: 1,2-Dichloroethane-d4	*0.0465*		"	*0.0500*		*93*	*73-131*			
Surrogate: Toluene-d8	*0.0490*		"	*0.0500*		*98*	*82-129*			

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1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4050019 - EPA 5030 (pres 48h)										
Matrix Spike Dup (4050019-MSD1)	**Source: P404658-01**			Prepared & Analyzed: 05/03/04						
Tert-amyl methyl ether	0.240	0.025	mg/kg	0.250	ND	96	74-126	16	35	
Benzene	0.238	0.025	"	0.250	ND	95	75-123	19	35	
Tert-butyl alcohol	3.95	0.50	"	5.00	ND	79	66-129	21	35	
Di-isopropyl ether	0.228	0.025	"	0.250	ND	91	71-127	22	35	
1,2-Dibromoethane (EDB)	0.242	0.025	"	0.250	ND	97	88-118	21	35	
1,2-Dichloroethane	0.235	0.025	"	0.250	ND	94	79-119	16	35	
Ethanol	3.26	1.0	"	5.00	ND	65	70-140	60	35	QC02, QC20
Ethylbenzene	0.235	0.025	"	0.250	ND	94	65-135	19	35	
Ethyl tert-butyl ether	0.241	0.025	"	0.250	ND	96	72-123	17	35	
Methyl tert-butyl ether	0.350	0.025	"	0.250	0.16	76	70-125	29	35	
Toluene	0.229	0.025	"	0.250	ND	92	76-123	19	35	
Surrogate: Dibromofluoromethane	*0.0504*		"	*0.0500*		*101*	*81-126*			
Surrogate: 1,2-Dichloroethane-d4	*0.0491*		"	*0.0500*		*98*	*73-131*			
Surrogate: Toluene-d8	*0.0493*		"	*0.0500*		*99*	*82-129*			
Batch 4050050 - EPA 5030B soils MeOH										
Blank (4050050-BLK1)				Prepared & Analyzed: 05/04/04						
Tert-amyl methyl ether	ND	1.0	mg/kg							
Benzene	ND	1.0	"							
Tert-butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	1.0	"							
1,2-Dibromoethane (EDB)	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
Ethanol	ND	40	"							
Ethylbenzene	ND	1.0	"							
Ethyl tert-butyl ether	ND	1.0	"							
Methyl tert-butyl ether	ND	1.0	"							
Toluene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: Dibromofluoromethane	*2.06*		"	*2.00*		*103*	*81-126*			
Surrogate: 1,2-Dichloroethane-d4	*2.25*		"	*2.00*		*112*	*73-131*			
Surrogate: Toluene-d8	*2.08*		"	*2.00*		*104*	*82-129*			

Sequoia Analytical

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
www.sequoialabs.com

URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4050050 - EPA 5030B soils MeOH										
Laboratory Control Sample (4050050-BS1)				Prepared & Analyzed: 05/04/04						
Tert-amyl methyl ether	2.20	1.0	mg/kg	2.00		110	74-126			
Benzene	2.24	1.0	"	2.00		112	75-123			
Tert-butyl alcohol	43.5	20	"	40.0		109	66-129			
Di-isopropyl ether	2.30	1.0	"	2.00		115	71-127			
1,2-Dibromoethane (EDB)	2.20	1.0	"	2.00		110	88-118			
1,2-Dichloroethane	2.37	1.0	"	2.00		118	79-119			
Ethanol	39.7	40	"	40.0		99	70-140			
Ethylbenzene	2.19	1.0	"	2.00		110	65-135			
Ethyl tert-butyl ether	2.34	1.0	"	2.00		117	72-123			
Methyl tert-butyl ether	2.25	1.0	"	2.00		112	70-125			
Toluene	2.19	1.0	"	2.00		110	76-123			
Surrogate: Dibromofluoromethane	*2.21*		"	*2.00*		*110*	*81-126*			
Surrogate: 1,2-Dichloroethane-d4	*2.38*		"	*2.00*		*119*	*73-131*			
Surrogate: Toluene-d8	*2.18*		"	*2.00*		*109*	*82-129*			
Laboratory Control Sample Dup (4050050-BSD1)				Prepared & Analyzed: 05/04/04						
Tert-amyl methyl ether	2.18	1.0	mg/kg	2.00		109	74-126	0.9	35	
Benzene	2.24	1.0	"	2.00		112	75-123	0	35	
Tert-butyl alcohol	46.6	20	"	40.0		116	66-129	7	35	
Di-isopropyl ether	2.30	1.0	"	2.00		115	71-127	0	35	
1,2-Dibromoethane (EDB)	2.19	1.0	"	2.00		110	88-118	0.5	35	
1,2-Dichloroethane	2.34	1.0	"	2.00		117	79-119	1	35	
Ethanol	43.8	40	"	40.0		110	70-140	10	35	
Ethylbenzene	2.20	1.0	"	2.00		110	65-135	0.5	35	
Ethyl tert-butyl ether	2.35	1.0	"	2.00		118	72-123	0.4	35	
Methyl tert-butyl ether	2.24	1.0	"	2.00		112	70-125	0.4	35	
Toluene	2.21	1.0	"	2.00		110	76-123	0.9	35	
Surrogate: Dibromofluoromethane	*2.15*		"	*2.00*		*108*	*81-126*			
Surrogate: 1,2-Dichloroethane-d4	*2.29*		"	*2.00*		*114*	*73-131*			
Surrogate: Toluene-d8	*2.17*		"	*2.00*		*108*	*82-129*			

Sequoia Analytical

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www.sequoialabs.com

URS Corporation [Arco]	Project: BP Heritage #11132, Oakland, CA	MND0473
1333 Broadway, Suite 800	Project Number: N/P	**Reported:**
Oakland CA, 94612	Project Manager: Leonard Niles	05/21/04 16:12

Notes and Definitions

R-05	The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.
QM02	The spike recovery was below control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM01	The spike recovery was above control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QC21	The RPD result exceeded the control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QC20	The RPD was outside control limits. The results may still be useful for their intended purpose.
QC02	The percent recovery was below the control limits. The sample results may still be useful for their intended purpose.
QC01	The percent recovery was above the control limits. The sample results may still be useful for their intended purpose.
PES2	The recovery for this analyte reflects a post-extraction addition of the spiking solution.
HT-10	This sample was received with insufficient time to meet the 48 hour hold time dictated by GCLN protocol.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

MW0473

Page 1 of 2

Chain of Custody Record

bp

Date: 4/19/04

Project Name: BP #11132 Soil and Water Investigation (Environmen...
BP BU/GEM CO Portfolio: Retail
BP Laboratory Contract Number: Atlantic Richfield Company
Requested Due Date: Standard TAT

Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Send To:	BP/GEM Facility No.: 11132	Consultant/Contractor: URS Corporation
Lab Name: Sequoia Analytical	BP/GEM Facility Address: 3201 25th Avenue, Oakland, CA	Address: 1333 Broadway, Suite 800
Lab Address: 885 Jarvis Drive	Site ID No. 11132	Oakland, CA 94612
Morgan Hill, CA 95037	Site Lat/Long:	e-mail EDD: [redacted]donna-cosper@URScorp.com
	California Global ID #: T0600100213	Consultant/Contractor Project No.: 38486822
Lab PM: Lisa Race	BP/GEM PM Contact: Paul Supple	Consultant Tele/Fax: 510-893-3600 / 510-874-3268
Tele/Fax: 408.776.9600 / 408.782.6308	Address: P.O. Box 6549	Consultant/Contractor PM: Leonard Niles
Report Type & QC Level: Level 1	Moraga, CA 94570	Invoice to: Consultant or BP or Atlantic Richfield Co (Circle one)
BP/GEM Account No.:	Tele/Fax: 925.299.8891	BP/GEM Work Release No:

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	Preservatives: H_2SO_4	Preservatives: HNO_3	Preservatives: HCl	Requested Analysis: GRO EPA 8260B	Requested Analysis: DRO 8015M	Requested Analysis: BTEX/MTBE/Oxys 8260B ethanol	Requested Analysis: Total Pb	Sample Point Lat/Long and Comments
1	VB-12-	1050	4/19		X		01	4				X	X		X	*	
2	VB-9	1245			X		02	4				X					* see instructions
3	VB-7	1510			X		03	4				X					below*
4	VB-12-5	930		X			04	1	X								
5	VB-12-10	940					05										
6	VB-12-15	1000					06										
7	VB-12-24.5	1040					07										
8	VB-9-5	1110					08										
9	VB-9-15	1135					09										
10	VB-9-25	1205					10										

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Joe Gonzales						
Sampler's Company: URS	[signature] / URS	4/19	1700	M. Foster Jr/Weiss	4-20-04	0650
Shipment Date:	M. Foster / Weiss	4/20/04	1910	Outa Jr/Weiss	4-20-04	1210
Shipment Method:						
Shipment Tracking No:	soil					

Special Instructions: * analyze highest GRO for total lead

Custody Seals In Place Yes ___ No X Temp Blank Yes ___ No X Cooler Temperature on Receipt 3.9 °F/°C Trip Blank Yes X No ___

Distribution: White Copy - Laboratory / Yellow Copy - BP/GEM / Pink Copy - Consultant/Contractor

BP COC Rev. 3 12/15/03

MNDO473

Chain of Custody Record

On-site Time:	Temp:
Off- site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Project Name: BP #11132 Soil and Water Investigation (Environmental/Remediat
BP BU/GEM CO Portfolio: Retail
BP Laboratory Contract Number: Atlantic Richfield Company
Requested Due Date: Standard TAT

Date: 4/19/04

Send To:	BP/GEM Facility No.: 11132	Consultant/Contractor: URS Corporation
Lab Name: Sequoia Analytical	BP/GEM Facility Address: 3201 25th Avenue, Oakland, CA	Address: 1333 Broadway, Suite 800
Lab Address: 885 Jarvis Drive	Site ID No. 11132	Oakland, CA 94612
Morgan Hill, CA 95037	Site Lat/Long:	e-mail EDD: donna.cosper@URScorp.com
	California Global ID #: T0600100213	Consultant/Contractor Project No.: 38486822
Lab PM: Lisa Race	BP/GEM PM Contact: Paul Supple	Consultant Tele/Fax: 510-893-3600 / 510-874-3268
Tele/Fax: 408.776.9600 / 408.782.6308	Address: P.O. Box 6549	Consultant/Contractor PM: Leonard Niles
Report Type & QC Level: Level 1	Moraga, CA 94570	Invoice to: Consultant or BP or Atlantic Richfield Co (Circle one)
BP/GEM Account No.:	Tele/Fax: 925.299.8891	BP/GEM Work Release No:

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	Preservatives: H_2SO_4	Preservatives: HNO_3	Preservatives: HCl	Requested Analysis: GRO EPA 8260B	Requested Analysis: DRO 8015M*	Requested Analysis: BTEX/MTBE/Oxys 8260B ethanol	Requested Analysis: Total Pb	Sample Point Lat/Long and Comments
1	VB-9-35	1245	4/19	X			11	2	X				X		X	X	
2	VB-7-42	1300	"	"			12	"	"				"		"		*See instructions
3	VB-7-5	1340	"	"			13	"	"				"		"		below*
4	VB-7-15	1400	"	"			14	"	"				"		"		
5	VB-7-25	1445	"	"			15	"	"				"		"		
6	VB-7-35	1510	"	"			16	"	"				"		"		
7	VB-7-41	1515	"	"			17	"	"				"		"		
8	trip blank						on hold 18	2									on hold
9																	
10																	

Sampler's Name: Joe Gonzales	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: URS	Joe Gonzales / URS	4/19	1700	M Hunter / Woods	4/20/04	1650
Shipment Date:	M Hunter / Woods	4/20/04	1910	Charles Jones SAMM	4/20/04	1910
Shipment Method:						
Shipment Tracking No:						

Special Instructions: * analyze highest TPHD for total lead soil

Custody Seals In Place Yes ___ No X Temp Blank Yes ___ No X Cooler Temperature on Receipt 3.9 °F/C Trip Blank Yes X No ___

Distribution: White Copy - Laboratory / Yellow Copy - BP/GEM / Pink Copy - Consultant/Contractor

BP COC Rev. 3 12/15/03

Chain of Custody Record

Date: 4/20/04

Project Name: BP #11132 Soil and Water Investigation (Environmental/Remediat
BP BU/GEM CO Portfolio: Retail
BP Laboratory Contract Number: Atlantic Richfield Company
Requested Due Date: Standard TAT

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Send To:	BP/GEM Facility No.: 11132	Consultant/Contractor: URS Corporation
Lab Name: Sequoia Analytical	BP/GEM Facility Address: 3201 25th Avenue, Oakland, CA	Address: 1333 Broadway, Suite 800
Lab Address: 885 Jarvis Drive	Site ID No. 11132	Oakland, CA 94612
Morgan Hill, CA 95037	Site Lat/Long:	e-mail BID: Donna-Cooper@urscorp.com
	California Global ID #: T0600100213	Consultant/Contractor Project No.: 38486822
Lab PM: Lisa Race	BP/GEM PM Contact: Paul Supple	Consultant Tele/Fax: 510-893-3600 / 510-874-3268
Tele/Fax: 408.776.9600 / 408.782.6308	Address: P.O. Box 6549	Consultant/Contractor PM: Leonard Niles
Report Type & QC Level: Level 1	Moraga, CA 94570	Invoice to: Consultant or BP or Atlantic Richfield Co (Circle one)
BP/GEM Account No.:	Tele/Fax: 925.299.8891	BP/GBM Work Release No:

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	Preservatives: H_2SO_4	Preservatives: HNO_3	Preservatives: HCl	Requested Analysis: GRO EPA 8260B	Requested Analysis: DRO 8015M	Requested Analysis: BTEX/MTBE/Oxys 8260B + ethanol	Requested Analysis: Total Pb	Sample Point Lat/Long and Comments
1	VB-10	1140	4/20		X		19	4				X	X		X	*	
2	VB-11	1015	4/20		X		20	4				X					* see instructions below *
3	VB-10-5	1095	4/20	X			21	1	X								
4	VB-10-15	1115	4/20				22										
5	VB-10-25	1130	4/20				23										
6	VB-10-35	1150	4/20				24										
7	VB-10-37	1155	4/20				25										
8	VB-11-5	835	4/20				26										
9	VB-11-15	910	4/20				27										
10	VB-11-25	945	4/20	↓			28	↓	↓				↓		↓		

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Joe Gonzales						
Sampler's Company: URS	[signature] / URS			[signature]	4-20-04	1450
Shipment Date:	[signature] / [illegible]	4-20-04	1910	[signature] Quality Assurance SQ MH	4-20-04	1910
Shipment Method:						
Shipment Tracking No:						

Special Instructions: * Analyze highest soil GRO for total lead

Custody Seals In Place Yes ___ No X Temp Blank Yes ___ No X Cooler Temperature on Receipt 3.9 °F/(C) Trip Blank Yes X No

MUD0475

Chain of Custody Record

bp

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Project Name: BP #11132 Soil and Water Investigation (Environmental/Remediat
BP BU/GEM CO Portfolio: Retail
BP Laboratory Contract Number: Atlantic Richfield Company
Requested Due Date: Standard TAT

Date: 4/20/09

Send To:	BP/GEM Facility No.: 11132	Consultant/Contractor: URS Corporation
Lab Name: Sequoia Analytical	BP/GEM Facility Address: 3201 25th Avenue, Oakland, CA	Address: 1333 Broadway, Suite 800
Lab Address: 885 Jarvis Drive	Site ID No. 11132	Oakland, CA 94612
Morgan Hill, CA 95037	Site Lat/Long:	e-mail EDD: donna.cosper@URScorp.com
	California Global ID #: T0600100213	Consultant/Contractor Project No.: 38486822
Lab PM: Lisa Race	BP/GEM PM Contact: Paul Supple	Consultant Tele/Fax: 510-893-3600 / 510-874-3268
Tele/Fax: 408.776.9600 / 408.782.6308	Address: P.O. Box 6549	Consultant/Contractor PM: Leonard Niles
Report Type & QC Level: Level 1	Moraga, CA 94570	Invoice to: Consultant or BP or Atlantic Richfield Co (Circle one)
BP/GEM Account No.:	Tele/Fax: 925.299.8891	BP/GEM Work Release No:

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	Preservatives: H_2SO_4	Preservatives: HNO_3	Preservatives: HCl	Requested Analysis: GRO EPA 8260B	Requested Analysis: DRO 8015M	Requested Analysis: BTEX/MTBE/Oxys 8260B, ethanol	Requested Analysis: Total Pb	Sample Point Lat/Long and Comments
1	VB-11-35	1010	4/20	X			29	1	X				X		X	X	
2	VB-11-37	1015	4/20	X			30	1	X				X		X		* See Instructions below*
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler's Name: Joe Gonzales	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: URS	Joe Gonzales / URS	4/20/09	1810	Jennifer Jensen / STL SMH	4/20/09	1810
Shipment Date:	Jennifer Jensen / STL SMH	4/20/09	1910			
Shipment Method:						
Shipment Tracking No:						

Special Instructions: * Analyze highest soil GRO for total lead

Custody Seals In Place Yes ___ No X Temp Blank Yes ___ No X Cooler Temperature on Receipt 3.9 °F/C Trip Blank Yes X No ___

Distribution: White Copy - Laboratory / Yellow Copy - BP/GEM / Pink Copy - Consultant/Contractor

BP COC Rev. 3 12/15/03

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: MRS
REC. BY (PRINT): TD
WORKORDER: MND0473

DATE REC'D AT LAB: 4-20-04
TIME REC'D AT LAB: 1910
DATE LOGGED IN: 4-21-04

DRINKING WATER for regulatory purposes: YES / (NO)
WASTE WATER for regulatory purposes: YES / (NO)

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): Present / (Absent); Intact / Broken*
2. Chain-of-Custody: (Present) / Absent*
3. Traffic Reports or Packing List: Present / (Absent)
4. Airbill: Airbill / Sticker; (World Courier) Present / (Absent)
5. Airbill #:
6. Sample Labels: (Present) / Absent
7. Sample IDs: (Listed) / Not Listed on Chain-of-Custody
8. Sample Condition: (Intact) / Broken* / Leaking*
9. Does information on chain-of-custody, traffic reports and sample labels agree? (Yes) / No*
10. Sample received within hold time: (Yes) / No*
11. Adequate sample volume received? (Yes) / No*
12. Proper Preservatives used: (Yes) / No*
13. Temp Rec. at Lab: 3.9°C
    Is temp 4 +/-2°C? (Yes) / No**

(Acceptance range for samples requiring thermal pres.)

**Exception (if any): METALS / OFF ON ICE or Problem COC

LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
01		VB-12	4-voas	HCl	L	4-19-04	lot# HA 407030
02		VB-9	↓	↓	↓		
03		VB-7	↓	↓	↓		
04		VB-12-5	1-plastic core	—	S		
05		VB-12-10	↓	↓	↓		
06		↓ -15					
07		↓ -24.5					
08		VB-9-5					
09		↓ -15					
10		↓ -25					
11		-35					
12		↓ -42					
13		VB-7-5					
14		-15					
15		-25					
16		-35					
17		-41	↓	↓	↓		
18		trip blank	2-voas	HCl	L		
19		VB-10	4-voas	↓	↓		
20		VB-11	↓	↓	↓		
21		VB-10-5	1-plastic core	—	S		
22		↓ -15					
23		↓ -25					
24		↓ -35					
25		↓ -37					
26		VB-11-5					
27		↓ -15					
28		↓ -25	↓	↓	↓	↓	

*IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION.

cr4.xls
on 4 (11/10/03)
Revision 3 (03/18/03)
/10/03

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: URS
REC. BY (PRINT): AS
WORKORDER: MAN0473

DATE REC'D AT LAB: 4-20-04
TIME REC'D AT LAB: 1910
DATE LOGGED IN: 4-21-04

DRINKING WATER for regulatory purposes: YES / NO
WASTE WATER for regulatory purposes: YES / NO

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s)	Present / Absent	29		VB-11-35	1 plastic core	—	S	4-20-04	
	Intact / Broken*	30		VB-11-37	"	"	"	"	
2. Chain-of-Custody	Present / Absent*								
3. Traffic Reports or Packing List:	Present / Absent								
4. Airbill:	Airbill / Sticker Present / Absent								
5. Airbill #:									
6. Sample Labels:	Present / Absent								
7. Sample IDs:	Listed / Not Listed on Chain-of-Custody								
8. Sample Condition:	Intact / Broken* / Leaking*								
9. Does information on chain-of-custody, traffic reports and sample labels agree?	Yes / No*								
10. Sample received within hold time:	Yes / No*								
11. Adequate sample volume received?	Yes / No*								
12. Proper Preservatives used:	Yes / No*								
13. Temp Rec. at Lab: 3.9°C									
Is temp 4 +/-2°C?	Yes / No**								

(Acceptance range for samples requiring thermal pres.)

**Exception (if any): METALS / OFF ON ICE at Problem COC

4-20-04

*IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION.

ATTACHMENT H
Typical Monitoring Well Completion Diagrams

URS

Well Construction Details

(monitoring well)

Project: _____ **Well Name:** _____

Well Type: _____

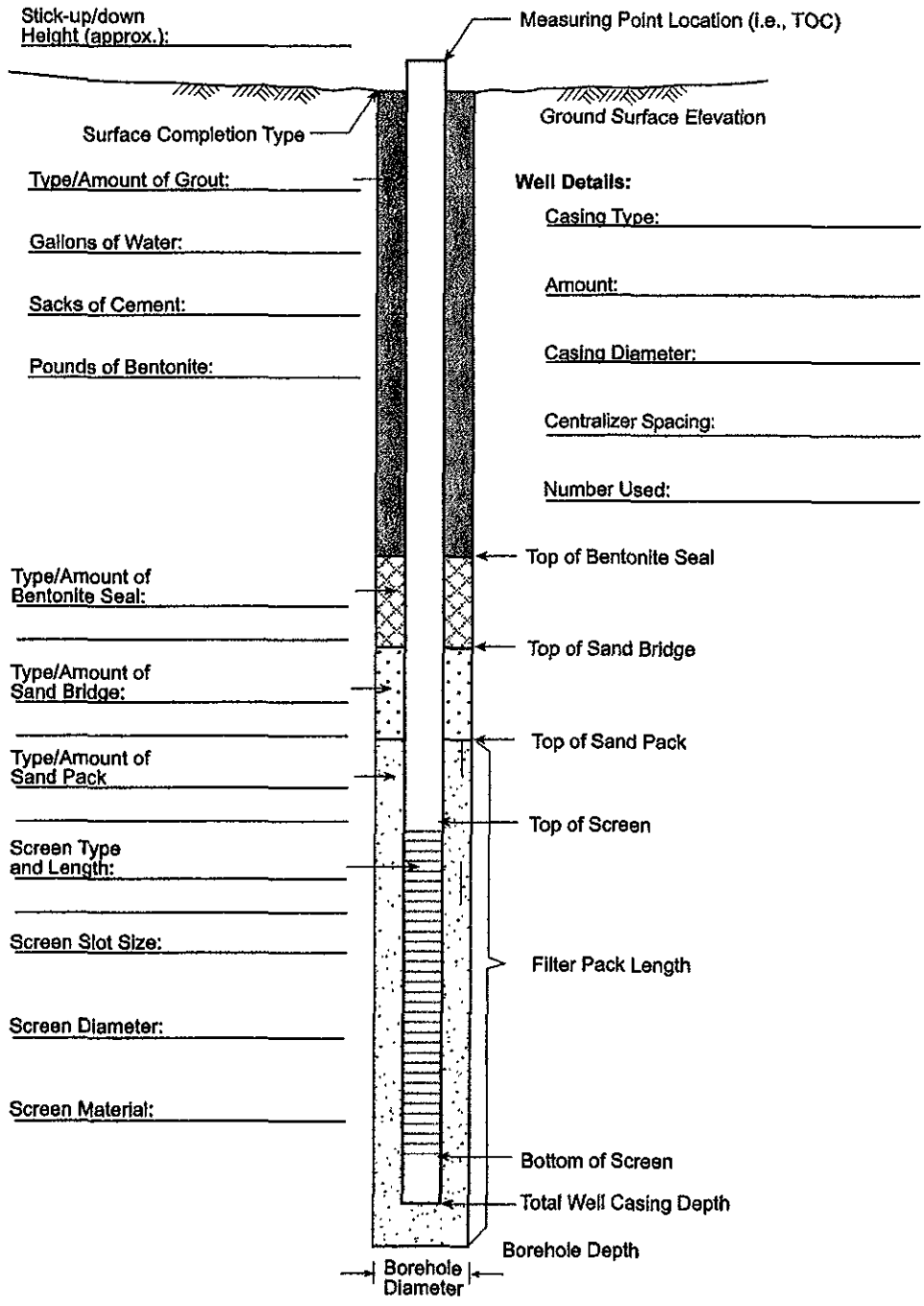
Supervised by: _____

Installation Date: / / **Well Owner:** _____ **Location Description:** _____

Drilling Company: _____ Address: _____

Construction Method: _____ Phone _____

Drilling Method (if different): _____



RESONANTSONIC® INTERNATIONAL

MULTI-LEVEL WELL CONSTRUCTION DETAILS

BORING DESIGNATION: _____

INSTALLATION
DATE: _____ BY: _____

DRILLING METHOD: _____

CONTRACTOR: _____

MATERIALS DATA

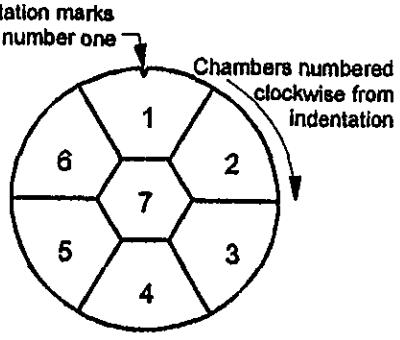
- Monument Footing (A) _____
- Annular Seal (B) _____
- Bottom Seal (C) _____

DIMENSIONS

- (W) Borehole Diameter _____
- (X) Stick-up _____
- (Y) Tubing Diameter _____
- (Z) Protective Covering Diameter _____
- Well Centralizer Depths _____

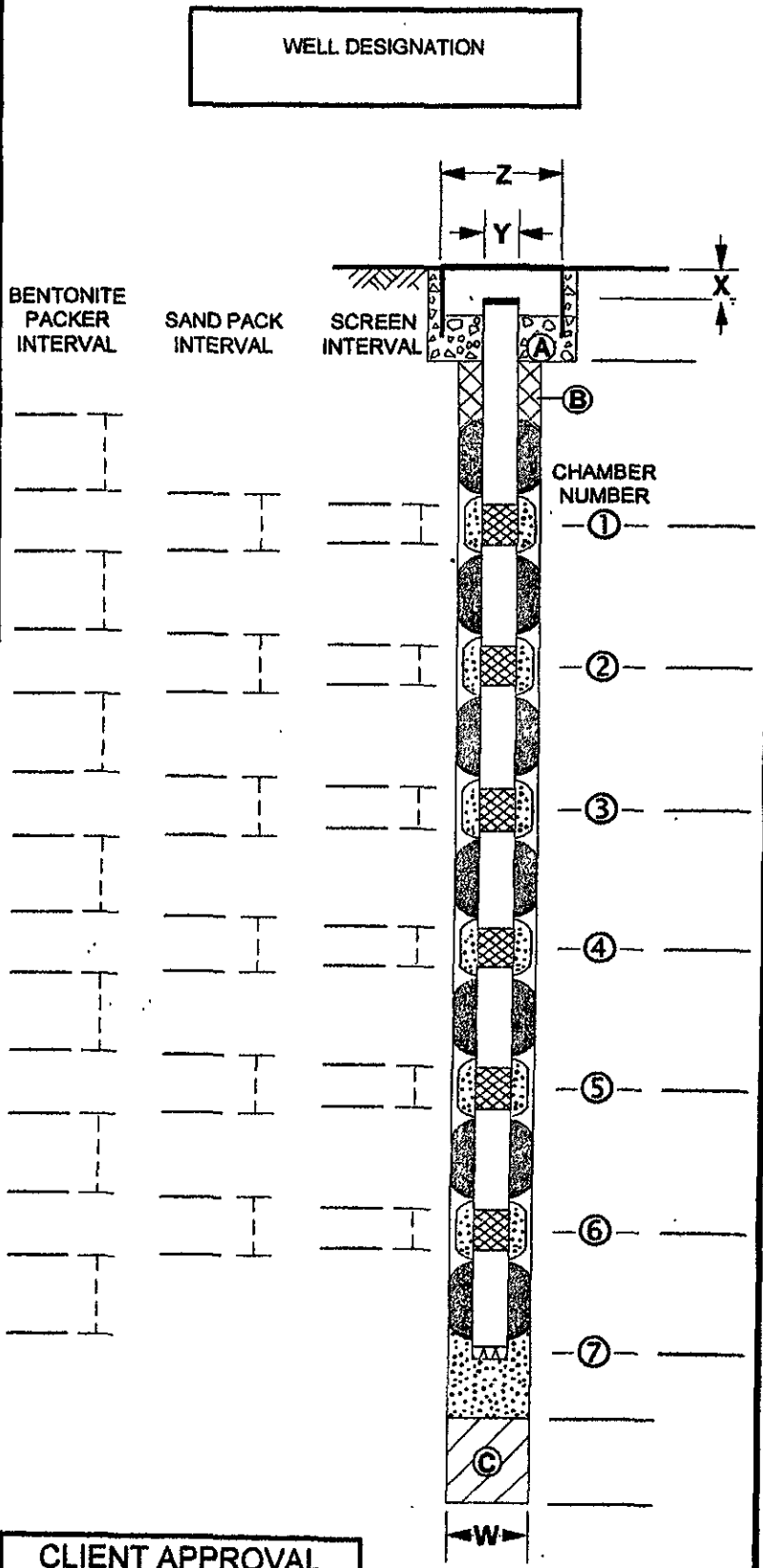
NOTES:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____



SITE: _____
PROJECT NO: _____
N. _____ E. _____
WELL PERMIT NO: _____

WELL DESIGNATION



SECTION VIEW
(Not to Scale)

CLIENT APPROVAL
_____