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June 15, 2005

Re: Off-Site Soil and Water Investigation Report  
Former BP Service Station # 11126  
1700 Powell Street  
Emeryville, CA

Alameda County  
JUN 17 2005  
Environmental Health

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

Submitted by:

Kyle Christie  
Environmental Business Manager



June 15, 2005

Ms. Donna Drogos  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

Re: **Off-Site Soil and Water Investigation Report**  
**ACEHS Case # RO0000066**  
**Former BP Service Station #11126**  
**1700 Powell Street**  
**Emeryville, California**

Emeryville, California  
JUN 17 2005  
Alameda County

Dear Ms. Drogos:

URS Corporation (URS) has prepared this *Off-Site Soil and Water Investigation (SWI) Report* on behalf of Atlantic Richfield Company (RM - a BP affiliated company), for Former BP Service Station #11126 located at 1700 Powell Street, Emeryville, California (the Site, Figure 1). The purpose of the work was to further assess the downgradient extent of dissolved-phase hydrocarbons in groundwater at the request of Alameda County Environmental Health Services (ACEHS). As proposed within the *Addendum to Off-Site Assessment Work Plan (Addendum)*, the SWI included the installing two downgradient groundwater monitoring wells. This *SWI Report* includes a discussion of the Site background, describes the scope of investigation and field work performed, and presents conclusions and recommendations based on the findings. A copy of the ACEHS Work Plan approval letter dated March 15, 2005 is provided as Attachment A.

## 1.0 SITE BACKGROUND

The Site is located on the northwest corner of Powell Street and Christie Avenue in Emeryville, California (Figure 1). The Site is currently operating as a retail gasoline service station. Three gasoline underground storage tanks (USTs) and associated product lines and dispensers are present at the Site (Alisto, 1994). A total of nine groundwater monitoring wells exist on the Site (Figure 2).

The properties in the immediate vicinity of the Site are a mixture of industrial and commercial developments (Alisto, 1994). South of the Site and across Powell Street is Powell Street Plaza, a retail commercial development with a number of groundwater monitoring wells on-site and around it's perimeter (Alisto, 1993). Immediately east of Powell Street Plaza and approximately 1,000 feet southeast of the Site are monitoring wells

Ms. Donna Drogos  
June 15, 2005  
Page 2 of 13

installed in the immediate vicinity of Harcros Pigments, located at 4650 Shellmound Street. The area surrounding the Site was historically used for industrial purposes before being developed into a shopping center.

A soil gas survey was conducted on April 10, 1989, by Target Environmental Services, Inc. (EMCON, 1994). The results of the survey indicated that gasoline may have entered the Site subsurface at the pump islands, UST complex, or along the product supply lines. Laboratory results indicated the presence of gasoline in subsurface soil at the Site. The maximum total volatile hydrocarbons concentrations were detected in the vicinity of the pump islands and east of the USTs.

On April 24, 1989, one 550-gallon waste-oil UST was removed from the Site (Alisto, 1994). Confirmation soil samples collected from beneath the tank and sidewalls contained up to 340 parts per million (ppm) total oil and grease (TOG), 27 ppm total petroleum hydrocarbons as diesel (TPH-d) and 9.6 ppm total petroleum hydrocarbons as gasoline (TPH-g). A further set of confirmation soil samples was collected from the new waste-oil tank pit, located approximately 20 feet south of the old waste-oil tank pit. These samples contained up to 10,000 ppm TOG and 370 ppm TPH-d.

In 1993, BP installed monitoring wells MW-1 through MW-4 as part of a preliminary Site investigation (Alisto, 1994). Laboratory analysis detected TPH-g at concentrations of up to 280 ppm and benzene at concentrations of up to 0.94 ppm in the soil samples collected at maximum depths of 5.5 feet below grade in the immediate vicinity of the USTs and dispenser islands. Dissolved phase TPH-g at concentrations of up to 12,000 parts per billion (ppb) and benzene at concentrations of up to 3,900 ppb were detected in groundwater samples collected from all the monitoring wells at the Site.

Additional monitoring wells were installed on- and off-site in September 1993 (Alisto, 1994). Well MW-5 was installed off-site in the center of Powell Street to the south of the station; wells MW-6 and MW-7 were installed to the west of the Site in the adjacent Denny's restaurant parking lot; well MW-8 was installed on-site to the north of the USTs; and well MW-9 was installed west of the USTs near the dispenser islands (Figure 2). Wells MW-5 through MW-8 are 2 inches in diameter, screened from approximately 3.5 to 15 feet bgs, and MW-9 is 4 inches in diameter, screened from 3.5 to 15 feet bgs.

During installation of wells MW-5 through MW-9, groundwater was first encountered at approximately 7 feet bgs, with saturated soil conditions at approximately 6.5 feet bgs. Up to 4,600 milligrams per kilogram (mg/kg) TPH-g and 76 mg/kg benzene were detected in soil samples collected at approximately 4.5 feet bgs. Free product was detected in well MW-9 at

Ms. Donna Drogos  
June 15, 2005  
Page 3 of 13

an approximate thickness of 0.08 feet. A product recovery canister was installed in well MW-9. Dissolved phase hydrocarbons were detected in six of the eight wells sampled at concentrations of up to 4,500 ppb TPH-g and 3,400 ppb benzene. Analysis of a groundwater sample collected from well MW-3, located near the waste-oil tank, detected 2,100 ppb TPH-d. TOG and volatile organic compounds were not detected.

Alisto's April 1994 *Supplemental Site Investigation Report* also indicated that several potential off-site sources were previously located near to or upgradient of the Site (Alisto, 1994). These included former Pabco Products, a paint, roofing and floor coverings manufacturing facility located on and northeast of the Site, which stored oil in aboveground tanks at the Site; former Auto Freight Depot, located on the southeast corner of Shellmound Street and Powell Street, approximately 450 feet east of the Site; Former Truck Repair Shop, approximately 480 feet east-southeast of the Site, which stored diesel and gasoline in aboveground tanks; and former Pacific Intermountain Express Truck Terminal, located approximately 440 feet southeast of the Site, which included aboveground and underground petroleum storage tanks.

A *Baseline Assessment Report* for the Site was prepared by EMCON in December, 1994, at the time Tosco acquired the property from BP (EMCON, 1994). The *Baseline Assessment Report* reported that an *Underground Storage Tank Unauthorized Release (Leak) / Contamination Site Report* from the Alameda County Environmental Health Department, Hazardous Materials Division, dated May 2, 1989, indicated an unknown quantity of waste oil was released at the Site on May 2, 1989, prior to Tosco's purchase.

EMCON performed supplemental Site assessment work in October 1994 (EMCON, 1994). Three soil borings (THP-1, TB-2 and THP-3; recorded as TB-1, TB-2 and TB-3 in EMCON's Table A-1) were advanced on-site using cone penetrometer equipment. Soil and groundwater samples were collected from borings THP-1 and THP-3. TPH-g up to 290 ppm and one or more benzene, toluene, ethylbenzene, and total xylenes (BTEX constituents) per sample were detected in soil. TPH-d was also detected in soil at THP-1 (33 ppm), and TOG was detected in soil at THP-3 (1,800 ppm). Both groundwater samples contained TPH-g up to 4,600 ppb and BTEX (up to 800 ppb benzene, 290 ppb toluene, 9.5 ppb ethylbenzene, and 410 ppb xylenes). TOG at 3,300 ppb, trans-1,2-dichloroethane (DCE) at 2.4 ppb, cis-1,2-DCE at 41 ppb and 1,2-dichloroethane (DCA) at 6.4 ppb were also detected in the groundwater sample collected from THP-1.

EMCON personnel checked the fuel dispensers for the presence of spill containment boxes and for indications of leakage on December 5, 1994 (EMCON, 1994). No spill containment boxes were found. Photoionization detector (PID) readings taken from backfill material

Ms. Donna Drogos  
June 15, 2005  
Page 4 of 13

below the dispensers ranged from 27 ppm to 1,063 ppm, and staining was observed beneath the northeast and southwest dispensers. Grab soil samples were collected from beneath the fuel dispensers (TD-1, TD-2, TD-3 and TD-4). TPH-g was detected up to 1,400 ppm; TPH-d was detected up to 4,600 ppm; low levels of toluene and xylenes were detected in one sample.

In April 1999, at the request of Tosco, Environmental Resolutions Inc. (ERI) performed a five-day soil vapor extraction (SVE) test at the subject Site (ERI, 1999). Existing on-site UST backfill wells (TP-1 and TP-2) were used for soil vapor extraction and groundwater monitoring wells MW-1, MW-2 and MW-4 were used for observation. Analytical results of vapor samples collected from well TP-1 indicated that methyl tert-butyl ether (MTBE) concentrations decreased from 4,820 micrograms per liter ( $\mu\text{g/L}$ ) to 300  $\mu\text{g/L}$  during the test, while TPH-g concentrations decreased from 12,800  $\mu\text{g/L}$  to 464  $\mu\text{g/L}$ . ERI estimated that approximately 21.5 pounds (lbs) of TPH-g and 16.7 lbs of MTBE were removed during the five-day test; eight 200-lb carbon vessels were saturated to breakthrough. Flow rates ranged from 88 to 98 standard cubic feet per minute (SCFM) at an applied vacuum of 12 inches of hydrogen (in Hg); however, no effective radius of influence, defined as 0.5 inches water column (in WC) vacuum, was measured in native soil outside the UST backfill.

On April 28, 1999, after the SVE test, SECOR observed the removal of one 550-gallon waste-oil UST along with a clarifier and two hoists from the former service bays as part of Site remodeling activities (SECOR, 1999). The waste-oil UST, Hoist No. 2, and the clarifier and Hoist No. 1 were removed during separate excavations (total of three).

Groundwater was encountered at 7.5 feet bgs in the waste-oil UST excavation (SECOR, 1999). No holes or cracks were noted in the waste-oil UST. A grab groundwater sample was collected from the waste-oil UST excavation, and was found to contain 560  $\mu\text{g/L}$  TPH-d, 710  $\mu\text{g/L}$  TPH as motor oil (TPH-mo), 10  $\mu\text{g/L}$  benzene and 2,400  $\mu\text{g/L}$  MTBE. Groundwater was encountered at approximately 6 feet bgs in the hoist and clarifier excavations, but no groundwater samples were collected.

Soil samples collected from the vicinity of the former waste-oil UST and service bays revealed petroleum hydrocarbon impact to the subsurface (SECOR, 1999). Up to 18 mg/kg TPH-g, 0.19 mg/kg benzene, 370 mg/kg TPH-d, and 7,000 mg/kg TPH-mo were detected in confirmation samples collected from the waste-oil UST excavation at approximately 5 feet bgs. No MTBE was detected. Confirmation soil samples were collected from beneath the former clarifier at 4 feet bgs, the former Hoist No. 1 at 8 feet bgs, and the former Hoist No. 2 at 8 feet bgs on April 28, 1999. TPH-g was detected at concentrations up to 3.0 mg/kg (clarifier); total extractable petroleum hydrocarbons (TEPH) was detected up to 870 mg/kg

Ms. Donna Drogos  
June 15, 2005  
Page 5 of 13

(Hoist No. 1); TPH-mo was detected up to 4,200 mg/kg (Hoist No. 1); benzene was detected at up to 0.013 mg/kg (clarifier); lead was detected at up to 22,000 mg/kg (clarifier); and cadmium was detected at up to 2.4 mg/kg (clarifier).

On May 7, 1999, the clarifier and hoist areas were overexcavated based on the initial sample results. Additional confirmation soil samples were collected from the clarifier excavation at 5 feet bgs, and the hoist excavations at 5 feet bgs. TPH-g was detected up to 1,200 mg/kg (Hoist No. 1); TEPH was detected up to 1,200 mg/kg (Hoist No. 1); TPH-mo was detected up to 5,000 mg/kg (Hoist No. 1); and lead was detected up to 410 mg/kg (clarifier). BTEX and other metals were not analyzed for in the May 7, 1999 set of confirmation samples. Stockpiled overexcavation soil was analyzed and was reported to contain 720 mg/kg total lead, 15 mg/kg STLC lead and 0.13 mg/L TCLP lead, and 610 mg/kg pyrene.

On March 28 and 30, 2001, Gettler Ryan Incorporated (GRI) performed removal and replacement of product lines and dispensers (SECOR, 2001). Sampling activities were performed by SECOR. During product line removal, soil in the excavation trench appeared to be stained. Suspected petroleum hydrocarbon odors were noted. The entire length of the former product line trench was subsequently overexcavated an additional 1.5 feet bgs to 3.5 feet bgs prior to sampling. An additional 150 cubic yards (yd<sup>3</sup>) of soil were removed from the Site during trenching and overexcavation activities. Due to insufficient grading, the former trenches were not suitable for re-use. GRI therefore backfilled the former trenches with clean imported backfill and excavated an additional 100 yd<sup>3</sup> of soil while installing new product line trenches. A total of 13 confirmation soil samples were collected from product line, dispenser and trench excavations. TPH-g and TPH-d were detected in all 13 samples at concentrations up to 5,300 mg/kg TPH-g and 630 mg/kg TPH-d in sample PL-4-3.5', collected from a product line trench near MW-9. MTBE was detected in 12 of 13 samples up to 8.4 mg/kg in sample PD-NE-3.5' collected from beneath a product dispenser.

From June to October 2004, a program of biweekly batch extraction events using a vacuum truck was initiated. Groundwater was extracted from wells MW-1, MW-2, MW-4, MW-8 and MW-9, as proposed in the July 2003 *Interim Remedial Action and Off-Site Assessment Workplan*, and modified in April 2004. Well yields were low; each well typically dewatered and recharged extremely slowly. As a result of the limited groundwater recovery, URS discontinued batch extraction at the Site with ACEHS approval. The volume of groundwater extracted per event was estimated based on the calculated well volume and the number of times it was dewatered per event (typically 1 or 2). A total of approximately 125 gallons were extracted from the Site, approximately 14 gallons were extracted during each batch extraction event (URS, 2004).

URS is currently coordinating ongoing groundwater monitoring at the Site. The most recent quarterly monitoring data from the second quarter 2005 is summarized in Section 3.6 of this report.

## **2.0 SCOPE OF INVESTIGATION**

URS installed two monitoring wells at the Powell Street Plaza property at 5795 Christie Street, across Powell Street from the Site (Figure 2). Both wells are located downgradient (south-southwest) of the Site. One well (MW-10) is located in front of the east side of the Circuit City building in the parking lot, which is approximately 220 feet south of the UST complex. The second well (MW-11) is located in the narrow, undeveloped area between the west side of the Circuit City building and the east side of Interstate 80 (I-80), which is approximately 410 feet south-southwest of the Site. The well locations are shown on Figure 2.

## **3.0 FIELD INVESTIGATION**

### **3.1 Preliminary Field Activities**

Prior to initiating field activities, URS obtained necessary access agreements and Alameda County Public Works (ACPW) well installation permits, and created a Site specific health and safety plan (HASP) describing hazards associated with the proposed work. The HASP addressed safety concerns associated with the well installation and groundwater sampling. A copy of the HASP was available on-site at all times. The URS Site supervisor held a tailgate meeting covering aspects of the HASP before the start of all workdays.

Pre-field activities also included notifying Underground Service Alert (USA) of the pending work a minimum of 48-hours before initiating the field investigation, and securing the services of a private utility-locating company to confirm the absence of underground utilities at the well location. In addition, the top 5-feet of soil was cleared using the "air-knife" rig at the boring location. Copies of the ACPW drilling permits are included as Attachment B.

### **3.2 Drilling, Sampling and Monitoring Well Construction**

On April 15, 2005, URS personnel observed Gregg Drilling and Testing, Inc. (Gregg), of Martinez, California, use a Marl M5T rig, equipped with a hollow-stem auger to advance two soil borings to depths of 20 feet below ground surface (bgs) (MW-10) and 23.5 feet bgs (MW-11). Soil samples were collected above the saturated zone at five-foot intervals when possible and where visible staining or hydrocarbon impacted soils were encountered. Samples were collected from the continuous cores and the cores and samples were logged by a URS geologist according to the Unified Soil Classification System (USCS), and monitored

for grain size, color, consistency, staining, and odor using a photoionization detector (PID). Soil samples collected for potential chemical analysis were sealed with Teflon® tape, capped, and placed in an ice-filled cooler for transportation to the laboratory. Soil samples collected during this investigation were submitted to a California State-certified analytical laboratory for analysis of gasoline range organics (GRO), BTEX and fuel oxygenates using EPA Method 8260B. Soil analytical data are summarized in Table 1. Laboratory analytical reports and chain-of-custody records are provided as Attachment C.

Upon drilling completion, the borings were converted to groundwater monitoring wells by installing 2-inch diameter, flush-threaded, Schedule 40 PVC casing with 0.010-inch factory-slotted screen. The wells were screened with approximately 10 feet of screen from the bottom of the well. Total depths of the wells were determined by lithology. A sand pack was placed in the annular space across the entire screened interval, and extends approximately 1 foot above the top of the well screen. A one-foot bentonite transition seal was placed atop the sand pack, and a Portland cement seal extends from the bentonite transition seal to ground surface. Finish to grade consists of a traffic rated vault box set flush to grade, with a concrete surface seal. Top-of-casing has been sealed with a water tight locking well cap. Well construction details are included in the well logs (Attachment D).

### **3.3 Well Development, Surveying, and Groundwater Sampling**

On April 20, 2005, after allowing the grout and wellhead concrete to cure for at least 24 hours, Blaine Tech Services, Inc. (Blaine Tech) of San Jose, California mobilized to the Site to develop wells MW-10 and MW-11. The well development process consisted of measuring the total well depth and depth to water, and subsequently developing the well using a handheld surge block or steel bailer to remove fine-grained sediments from the well casing and filter pack. At least 10 well casing volumes of groundwater were removed from the well by pumping and/or bailing. Periodic measurements of pH, conductivity, temperature, and turbidity were recorded during development. Purge water generated during well development was transported by Blaine Tech to its storage facility pending disposal by Dillard Environmental Services (Dillard, an BP direct-billed contractor) at a BP approved facility. Well development field data sheets are included in Attachment E.

On May 17, 2005, newly installed wells MW-10 and MW-11 were surveyed by a California licensed land surveyor for top-of-casing elevation with respect to mean sea level (MSL), and for latitude and longitude coordinates using Global Positioning System methods and the NAVD 1988 and NAD 1983 vertical and horizontal datums. Survey data is included in Attachment F. Wells MW-10 and MW-11 were subsequently incorporated into the Site-wide quarterly groundwater monitoring program and sampled on April 25, 2005, as part of the



second quarter 2005 groundwater monitoring event. Blaine Tech measured the total well depth and depth to water in the wells, and subsequently purged and sampled the wells. Periodic measurements of pH, conductivity, and temperature were recorded during purging activities. All purge water generated during sampling was transported by Blaine Tech to its storage facility pending disposal at an BP approved facility. The groundwater samples were analyzed for GRO, BTEX, and fuel additives (MTBE, tertiary butyl alcohol [TBA], di-isopropyl ether [DIPE], tertiary amyl methyl ether [TAME], ethyl tertiary butyl ether [ETBE], 1,2-Dichloroethane [1,2-DCA], 1,2-Dibromoethane [EDB], and ethanol) by EPA Method 8260B. Copies of the well development and groundwater sampling data records are included in Attachment E.

### **3.4 Geology and Hydrogeology**

The Site is located on a reclaimed portion of the upper subaqueous silty clay zone of San Francisco Bay (USGS Topographic Map, 1913). The elevation at the Site is approximately 8 feet above sea level and the topography slopes gently to the west, toward San Francisco Bay. Based on the April 25, 2005 quarterly groundwater sampling event, the groundwater flow direction was to the southwest at a calculated hydraulic gradient of 0.02 feet per foot.

Soil types encountered in the borings generally consist of fill material of sand, silt, clay, and debris from previous industrial structures to approximately 13 feet bgs. Below these fill horizons are silty clays and clayey silts to the total explored depths of the borings. Based on previous consultants' boring and well logs and the logs generated during the recent work, soil conditions do not appear to be contiguous across the Site and or off-site. Copies of the soil boring/well completion logs for wells MW-10 and MW-11 are presented in Attachment D.

### **3.5 Soil Analytical Results**

URS submitted select soil samples collected during the installation of off-site monitoring wells MW-10 and MW-11 to Sequoia Analytical (Sequoia) of Morgan Hill, California for chemical analysis. Two soil samples collected from well MW-11 and one sample collected from well MW-10 were analyzed for GRO, BTEX, and fuel additives (MTBE, TBA, DIPE, ETBE, TAME, 1,2-DCA, EDB, and ethanol) using EPA Method 8260B. One of the three soil samples was analyzed for total lead using EPA Method 6010B for waste disposal characterization purposes. The unsaturated soil sample from well MW-10 was analyzed. The two saturated soil samples collected below the total depth of well MW-11 were analyzed in response to the slight odor noted in the field. No unsaturated soil samples were able to be collected from well MW-11 due to poor recovery. Cumulative soil analytical results are presented in Table 1. Copies of laboratory analytical reports and chain-of-custody records are presented in Attachment C.

Soil sample analytical results can be summarized as follows:

- No GRO or BTEX or fuel additives were detected at or above their respective laboratory reporting limits in any of the soil samples analyzed; and
- Lead was reported at a concentration of 45 mg/kg in sample MW-10-7.0.

### 3.6 Groundwater Analytical Results

Groundwater samples were collected for the Second Quarter 2005 groundwater monitoring event from the eleven Site wells (MW-1 through MW-11) on April 25, 2005. The samples were analyzed for GRO, BTEX and fuel additives (MTBE, TBA, DIPE, ETBE, TAME, 1,2-DCA, EDB and ethanol) using EPA Method 8260B. Cumulative groundwater analytical results are presented in Table 2 and Table 3. Copies of laboratory analytical reports and chain-of-custody records are presented in Attachment C.

Groundwater analytical results can be summarized as follows:

- GRO was detected above the laboratory reporting limit in eight of eleven wells at concentrations ranging from 63 µg/L (MW-7) to 80,000 µg/L (MW-2);
- DRO was detected in well MW-3 at a concentration of 520 µg/L;
- Benzene was detected above the laboratory reporting limit in five of the eleven wells at concentrations ranging from 8.0 µg/L (MW-4) to 6,700 µg/L (MW-2);
- MTBE was detected above the laboratory reporting limit in ten wells at concentrations ranging from 1.5 µg/L (MW-10) to 8,200 µg/L (MW-2);
- TBA was detected above the laboratory reporting limit in eight wells at concentrations ranging from 45 µg/L (MW-6) to 45,000 µg/L (MW-8); and
- No GRO or BTEX was detected in newly installed wells MW-10 and MW-11. MTBE was detected in well MW-10 at a concentration of 1.5 µg/L. No other fuel additives were reported within wells MW-10 or MW-11.

### 3.7 Waste Disposal

Investigation derived waste generated during drilling activities were stored in DOT-approved 55-gallon drums and stored at the Site (Former BP# 11126) across the street pending characterization and disposal. Investigation derived waste was transported by Dillard Environmental, a certified disposal contractor, to an appropriate disposal facility. The waste manifest was not available at time of reporting. A copy of the waste manifest can be forwarded as soon as obtained.

### 3.8 GeoTracker

In accordance with GeoTracker requirements, URS has uploaded well survey (Geo\_XY and GEO\_Z) and gauging (Geo\_well) data. Soil and groundwater sample electronic data files (edf) were uploaded to GeoTracker. A copy of the GeoTracker confirmation and error check reports are provided as Attachment G.

## 4.0 CONCLUSIONS AND RECOMMENDATIONS

The purpose of the SWI was to further assess the extent of petroleum hydrocarbons in groundwater downgradient of the Site, and to better assess the plume migration. Based on the results of the SWI performed by URS, we offer the following conclusions and recommendations:

- Sediments encountered generally consisted of fill material including sand, silt, clay, and debris from previous industrial structures to approximately 13 feet bgs. Below these fill horizons are silty clays and clayey silts to the maximum explored depths of 20 feet bgs (MW-10) and 24 feet bgs (MW-11). Based on previous consultants' boring and well logs and the logs generated during the recent work, soil conditions do not appear to be contiguous across the Site and or off-site. Groundwater was encountered at a depth of approximately 11 feet bgs during drilling;
- Based on the most recent sampling event conducted on April 25, 2005, the groundwater flow direction is to the southwest at a calculated hydraulic gradient of 0.02 feet per foot (Figure 2);
- No GRO, BTEX or fuel additives (MTBE, TBA, DIPE, ETBE, TAME, 1,2-DCA, EDB and ethanol) were detected at or above their respective laboratory reporting limits in any of the soil samples analyzed from newly installed downgradient wells MW-10 and MW-11;
- GRO was detected in groundwater above the laboratory reporting limit in eight of eleven wells at concentrations ranging from 63 µg/L (MW-7) to 80,000 µg/L (MW-2). DRO was detected in well MW-3 at a concentration of 520 µg/L. Benzene was detected above the laboratory reporting limit in five of the eleven wells at concentrations ranging from 8.0 µg/L (MW-4) to 6,700 µg/L (MW-2). MTBE was detected above the laboratory reporting limit in ten wells at concentrations ranging from 1.5 µg/L (MW-10) to 8,200 µg/L (MW-2). TBA was detected above the laboratory reporting limit in eight wells at concentrations ranging from 45 µg/L (MW-6) to 45,000 µg/L (MW-8).

- No GRO or BTEX was detected in new wells MW-10 or MW-11. MTBE was detected in new well MW-10, but not in the downgradient most well MW-11.
- Based on these conclusions, the downgradient extent of hydrocarbons in soil and groundwater has been assessed. Hydrocarbon concentrations in downgradient soil samples were below the laboratory reporting limit and hydrocarbon concentrations in groundwater are very low to below the laboratory reporting limit. As a result, URS recommends that no further assessment at this Site is warranted.

## 5.0 Corrective Action Plan

The data obtained from the historical and recent Site assessment activities will be evaluated. Based on the evaluation, a corrective action plan (CAP) will be submitted proposing a cost-effective final cleanup solution for the remaining petroleum hydrocarbons in soil and groundwater. The CAP will also select a final remedial alternative for soil and groundwater that will adequately address human health and safety, the environment, eliminate nuisance conditions, and protect water resources. The CAP will evaluate at least two technically and economically feasible methods to restore and protect the beneficial uses of water and to meet the cleanup objectives for each contaminant established in the CAP. The CAP will also propose verification monitoring to confirm completion of the correction actions and evaluate the CAP implementation effectiveness. The CAP will be submitted to the ACEHS 90 days following submission of this *SWI 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.

Background information, including but not limited to previous field measurements, analytical results, Site plans, and other data has been furnished to URS by RM, 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 RM 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.

Ms. Donna Drogos  
June 15, 2005  
Page 12 of 13


If you have any questions or comments regarding our planned course of action, please call Lynelle Onishi at (510) 874-1758.

Sincerely,

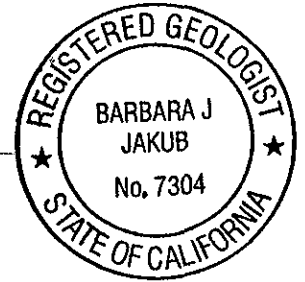
**URS CORPORATION**



Lynelle Onishi  
Project Manager



Barbara Jakub, P.G.  
Senior Geologist



- Attachments:
- Figure 1 – Site Location Map
  - Figure 2 – Groundwater Elevation Contour and Analytical Summary Map  
Second Quarter 2005 (April 25, 2005)
  - Figure 3 – Monitoring Well Locations and Geological Cross Sections
  - Figure 4 – Cross Sections A-A' and B-B'
  - Figure 5 – Cross Section C-C'
  - Table 1 – Soil Analytical Data
  - Table 2 – Groundwater Elevation and Analytical Data
  - Table 3 – Fuel Additives Analytical Data
  - Attachment A – ACEHS Work Plan Approval Letter dated March 15, 2005
  - Attachment B – ACPW Drilling Permits
  - Attachment C – Laboratory Analytical Reports and Chain-of-Custody Records
  - Attachment D – Boring and Wells Logs for Wells MW-10 and MW-11
  - Attachment E – Well Development and Groundwater Data Records
  - Attachment F – Well Survey Data
  - Attachment G – GeoTracker Confirmation and Error Check Reports

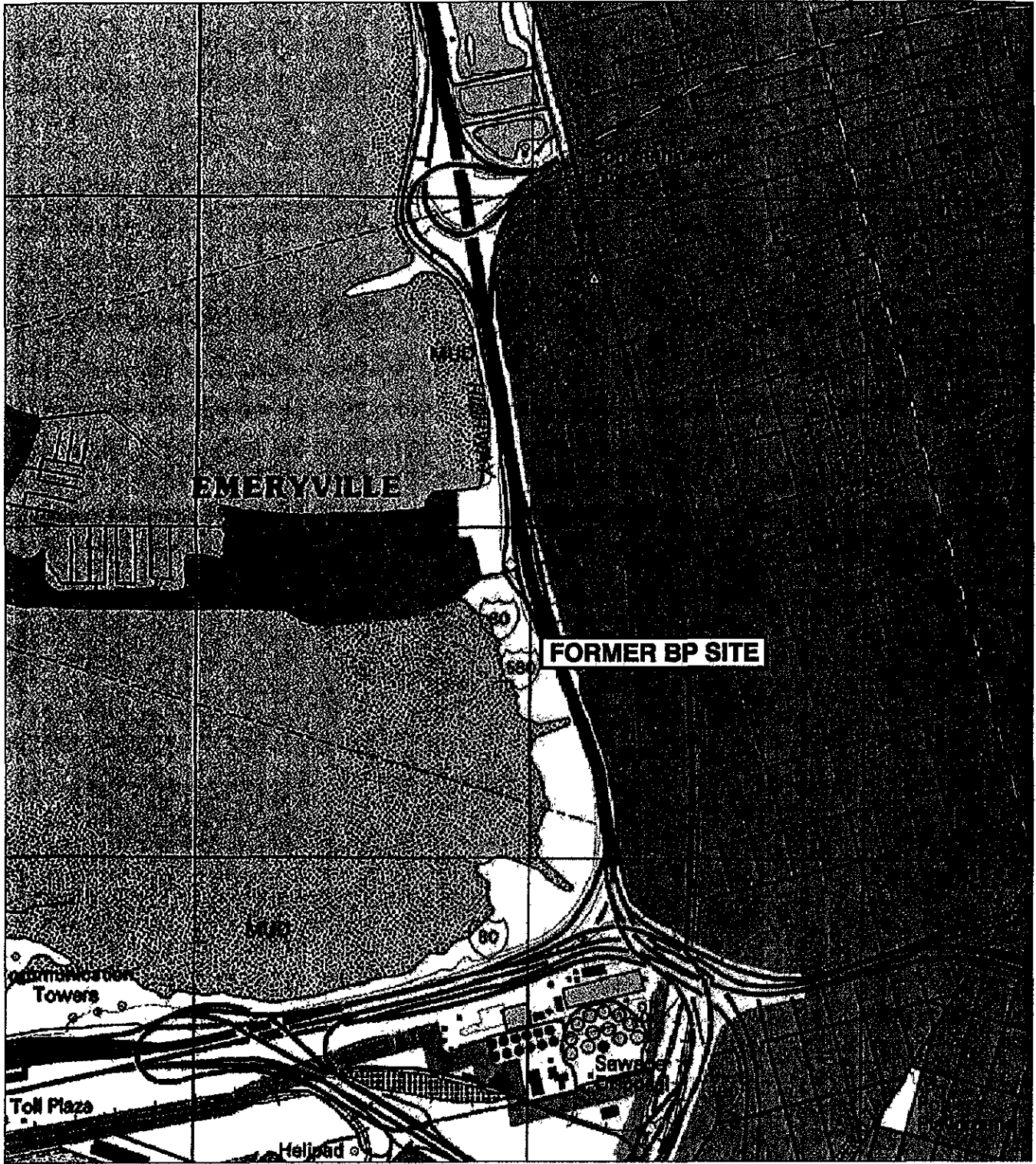


Ms. Donna Drogos  
June 15, 2005  
Page 13 of 13

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- URS, 2005b. *Addendum to Off-Site Assessment Work Plan*, Former BP Service Station #11126, 1700 Powell Street, Emeryville, California. February 3.
- cc: Mr. Kyle Christie, RM (copy uploaded to ENFOS)  
Ms. Liz Sewell, ConocoPhillips, (copy uploaded to FTP site)  
Mr. Chad Brathwaite, Regency Centers, 555 South Flower Street, Suite 3500, Los Angeles, CA 90071  
Ms. Star Lightner, Farella, Braun and Martel, 235 Montgomery Street, San Francisco, CA 94104

## **FIGURES**



REFERENCE:

BASE MAP FROM USGS TOPOI  
NORTH REGION 7

7.5 MINUTE TOPOGRAPHIC  
PHOTOREVISED 1998



QUADRANGLE LOCATION



0 1400 2800



APPROXIMATE SCALE 1"= 1400'

Jan 24, 2005 - 2:46pm  
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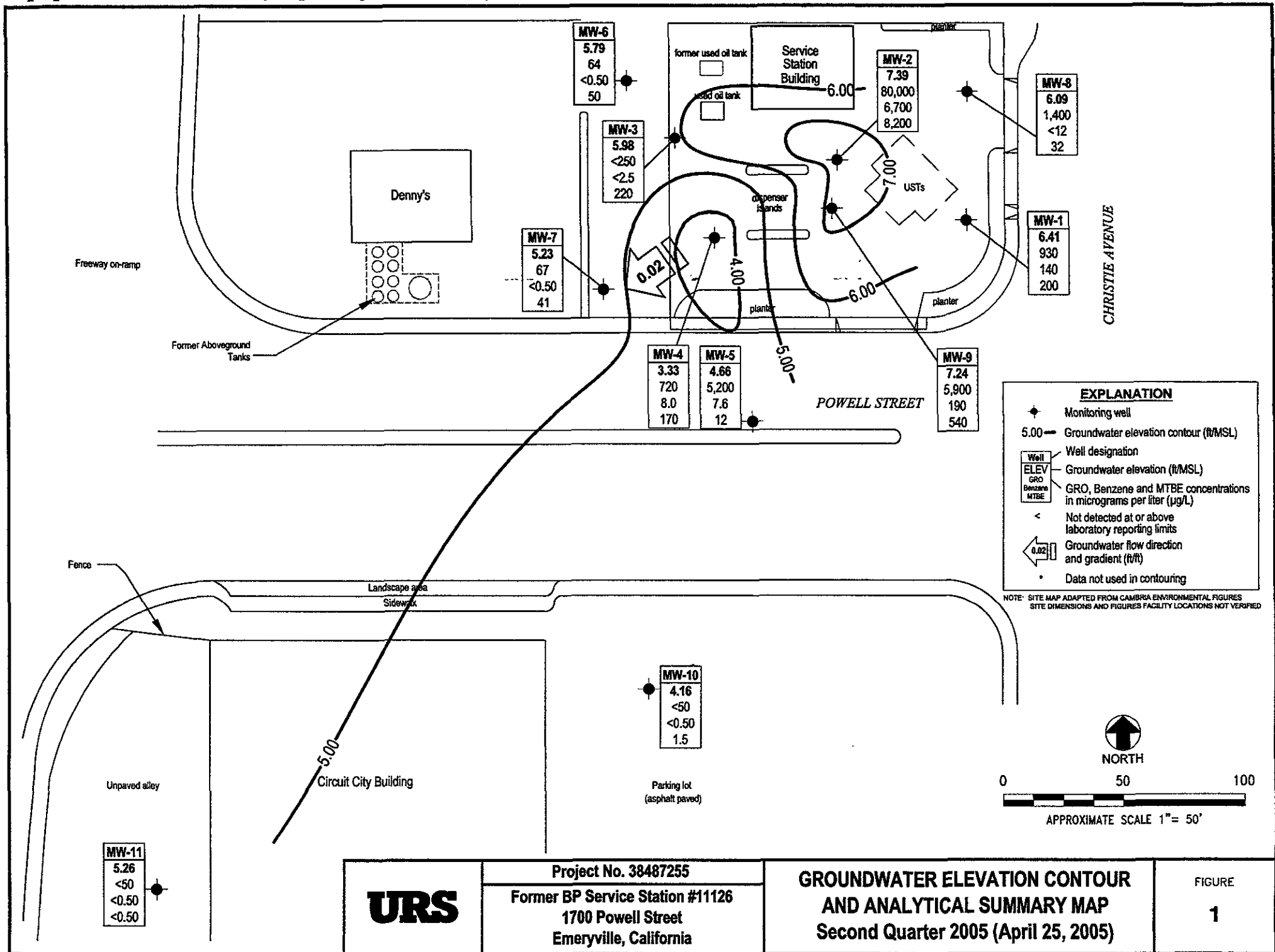


**Project No. 38487133**  
**Former BP Service Station #11126**  
**1700 Powell Street**  
**Emeryville, California**

**SITE LOCATION MAP**

FIGURE  
**1**





<b>MW-11</b>
5.26
<50
<0.50
<0.50

<b>MW-7</b>
5.23
67
<0.50
41

<b>MW-6</b>
5.79
64
<0.50
50

<b>MW-3</b>
5.98
<250
<2.5
220

<b>MW-4</b>
3.33
720
8.0
170

<b>MW-5</b>
4.66
5,200
7.6
12

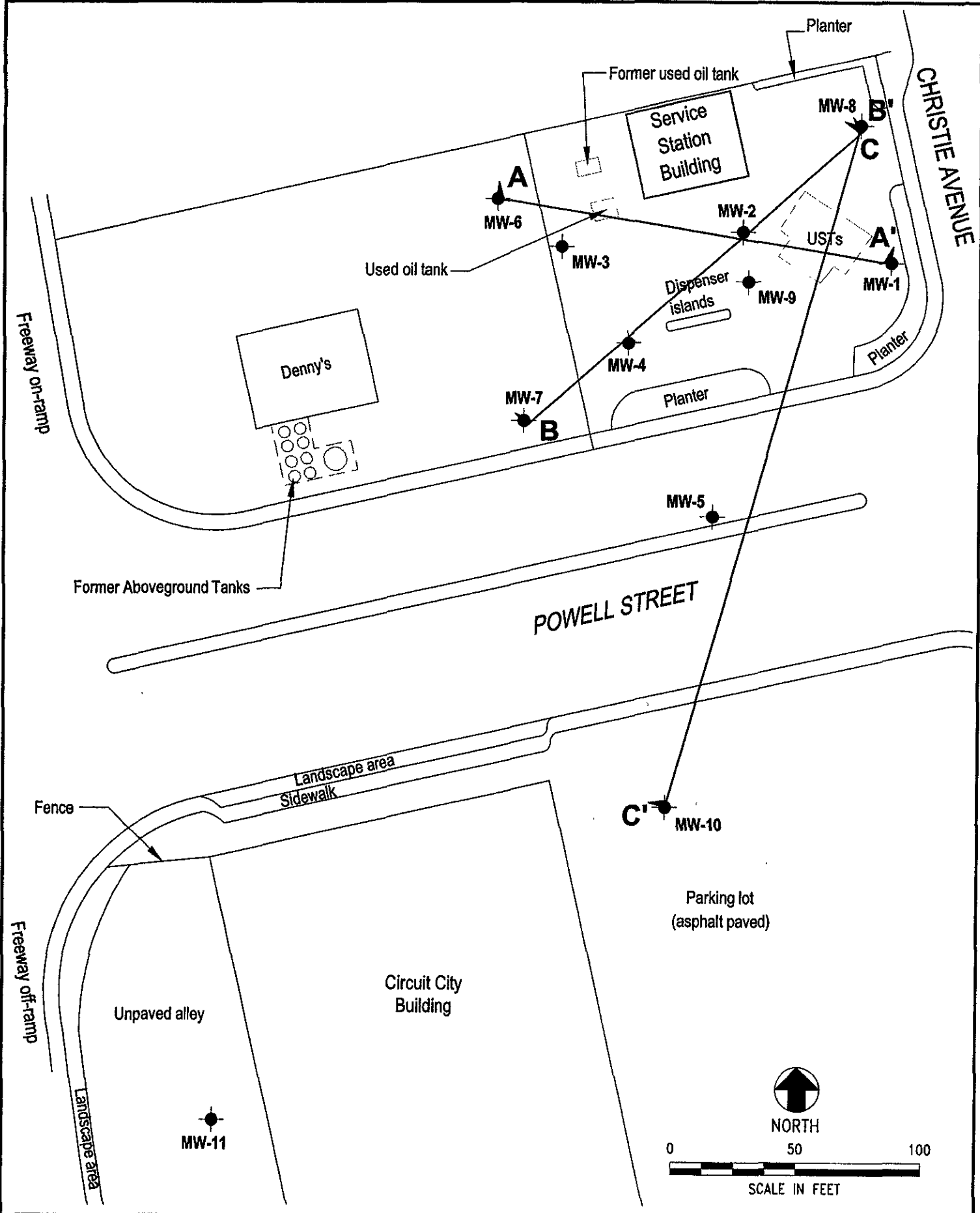
<b>MW-10</b>
4.16
<50
<0.50
1.5

<b>MW-2</b>
7.39
80,000
6,700
8,200

<b>MW-8</b>
6.09
1,400
<12
32

<b>MW-1</b>
6.41
930
140
200

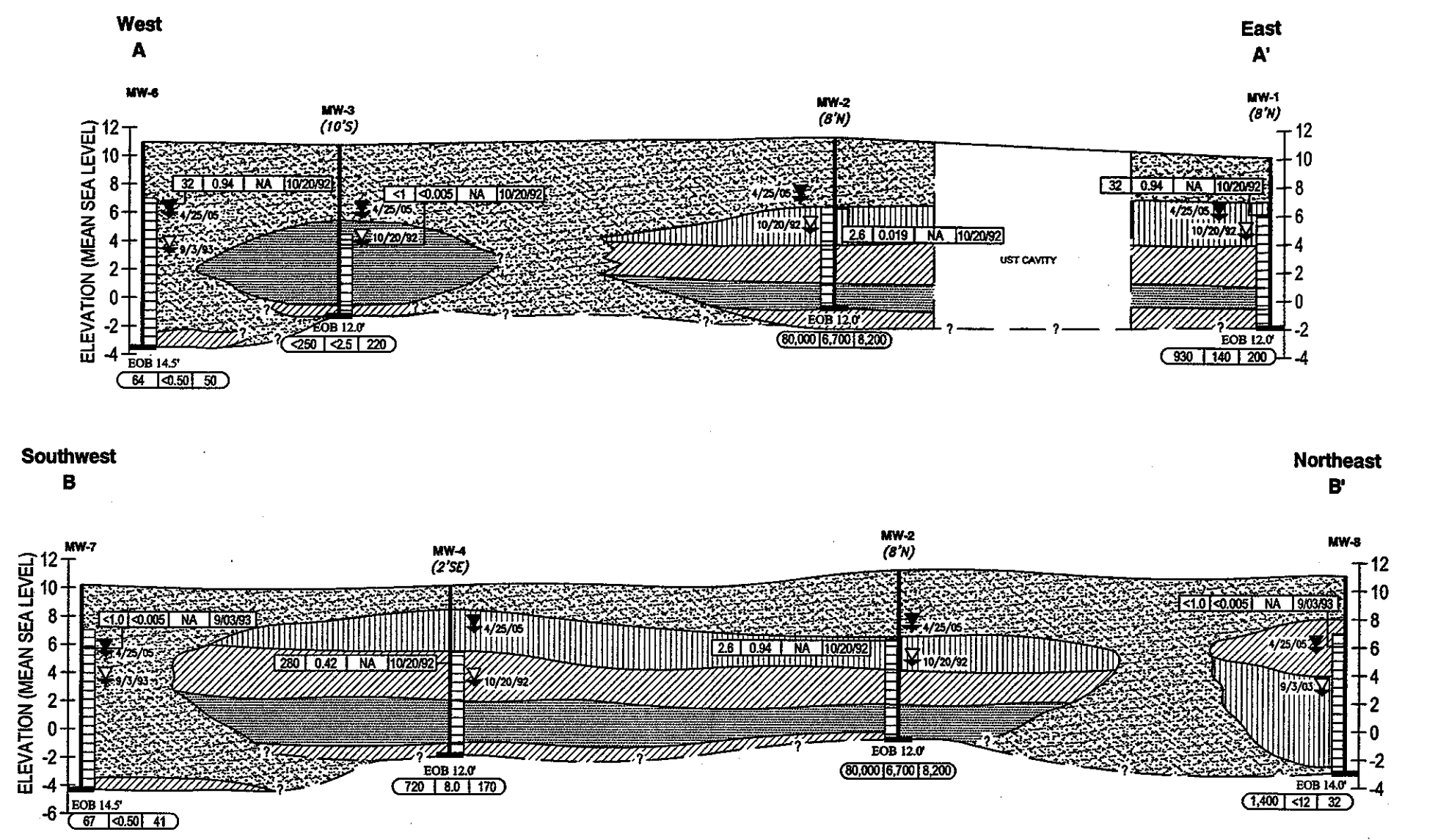
<b>MW-9</b>
7.24
5,900
190
540



Jun 14, 2005 - 4:04pm  
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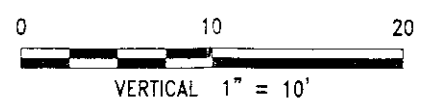
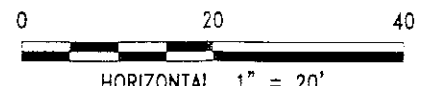
	<b>Project No. 38487133</b>	<b>MONITORING WELL LOCATIONS AND GEOLOGICAL CROSS SECTIONS</b>	<b>FIGURE 3</b>
	<b>Former BP Service Station #11126</b> <b>1700 Powell Street</b> <b>Emeryville, California</b>		

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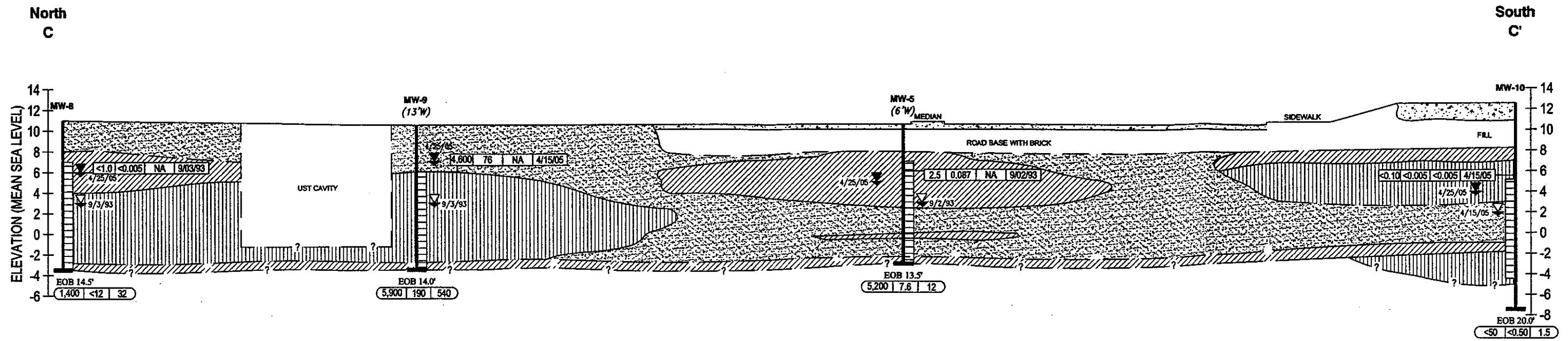
**LEGEND**

- SW Well to poorly graded sands or gravelly sands, minor to no fines.
  - SM Well to poorly graded sands or gravelly sands, minor to no fines.
  - ML Inorganic silts and very fine sands, clayey silts.
  - CL Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
  - First encountered groundwater
  - Static water level
- MW-2 (8'N)**
- Well or soil boring number
  - Distance in feet and direction of projection
  - Screening depth
  - End of boring 12 feet below ground surface
- Soil**
- |     |       |    |          |                 |
|-----|-------|----|----------|-----------------|
| 2.6 | 0.019 | NA | 10/20/92 | Sampling date   |
|     |       |    |          | MTBE (mg/kg)    |
|     |       |    |          | Benzene (mg/kg) |
|     |       |    |          | GRO (mg/kg)     |
- Groundwater**
- |        |       |       |                |
|--------|-------|-------|----------------|
| 80,000 | 6,700 | 8,200 |                |
|        |       |       | MTBE (µg/L)    |
|        |       |       | Benzene (µg/L) |
|        |       |       | GRO (µg/L)     |



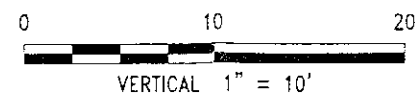
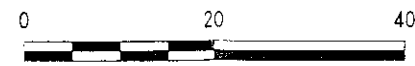
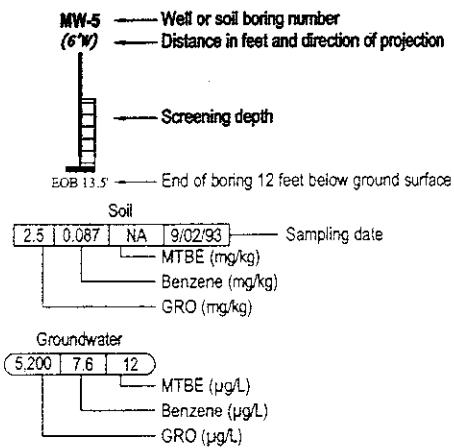
<b>URS</b>	Project No. 38487133	<b>GEOLOGIC CROSS SECTIONS A - A' AND B - B'</b>	FIGURE <b>4</b>
	Former BP Service Station #11126 1700 Powell Street Emeryville, California		

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**LEGEND**

- SW/SP Well to poorly graded sands or gravelly sands, minor to no fines.
- SM Well to poorly graded sands or gravelly sands, minor to no fines.
- ML Inorganic silts and very fine sands, clayey silts.
- CL Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
- ▽ First encountered groundwater
- ▼ Static water level



<b>URS</b>	Project No. 38487133	<b>GEOLOGIC CROSS SECTION C - C'</b>	FIGURE <b>5</b>
	Former BP Service Station #11126 1700 Powell Street Emeryville, California		

## **TABLES**

**Table 1**

**Soil Analytical Data**  
**Former BP #11126**  
**1700 Powell St., Emeryville, CA**

Soil Sample ID	Sample Depth (feet bgs)	Date Sampled	GRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Xylenes (mg/kg)	TBA (mg/kg)	MTBE (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	Ethanol (mg/kg)
MW-10-7.0	7	04/15/05	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.10 <sup>1</sup>
MW-11-18.0	18	04/15/05	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.10 <sup>1</sup>
MW-11-23.5	23.5	04/15/05	ND<0.099	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.099 <sup>1</sup>

Notes: All Samples analyzed by EPA Method 8260B.

1 Calibration verification within method limits but outside contract limits.

bgs = below ground surface

GRO = Gasoline range organics

TBA = tert-butyl alcohol

MTBE = Methyl tert-butyl ether

DIPE = Di-isopropyl ether

ETBE = Ethyl tert-butyl ether

TAME = tert-amyl methyl ether

mg/kg = milligrams per kilogram

ND< = Not detected at or above stated laboratory reporting limit

**Table 2**  
**Groundwater Elevation and Analytical Data**  
**Former BP Station #11126**  
**1700 Powell St., Emeryville, CA**

Well No.	Date	P/ NP	Foot Note	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	DRO/ TPH-d (µg/L)	TOG (µg/L)	HVOC (µg/L)
MW-1	11/4/1992	--	k	7.76	4.96	--	2.80	5,300	1,100	480	<0.5	1,500	--	--	PACE	--	--	--	--
	10/12/1993	--	k	7.76	5.26	--	2.50	3,600	970	71	100	550	6,111	--	PACE	--	--	--	--
	2/15/1994	--	k	7.76	4.98	--	2.78	17,000	4,200	510	360	1,600	5,495	3.9	PACE	--	--	--	--
	5/11/1994	--	k	7.76	4.55	--	3.21	5,500	2,900	37	56	64	705	8.0	PACE	--	--	--	--
	8/1/1994	--	d, e	--	--	--	--	16,000	3,600	750	510	2,800	9,800	--	PACE	--	--	--	--
	8/1/1994	--	d,k	7.76	5.51	--	2.25	15,000	3,600	740	510	2,800	9,718	2.9	PACE	--	--	--	--
	10/18/1994	--	e	--	--	--	--	16,000	1,900	64	170	950	--	--	PACE	--	--	--	--
	10/18/1994	--	k	7.76	5.11	--	2.65	16,000	1,800	61	160	890	15,668	2.9	PACE	--	--	--	--
	1/13/1995	--	e	--	--	--	--	590	88	0.7	<0.5	55	--	--	ATI	--	--	--	--
	1/13/1995	--	--	7.76	3.05	--	4.71	220	7	<0.5	1	23	--	6.6	ATI	--	--	--	--
	4/13/1995	--	--	7.76	3.84	--	3.92	9,300	4,000	300	200	950	--	7.7	ATI	--	--	--	--
	7/11/1995	--	--	7.76	3.60	--	4.16	15,000	2,200	84	<25	2,500	--	8.8	ATI	--	--	--	--
	11/2/1995	--	--	7.76	4.58	--	3.18	19,000	920	<100	<100	430	52,000	7.3	ATI	--	--	--	--
	2/5/1996	--	--	7.76	4.43	--	3.33	4,600	1,400	330	54	247	8,700	3.2	SPL	--	--	--	--
	4/24/1996	--	--	7.76	4.00	--	3.76	2,000	510	33	61	228	4,500	7.5	SPL	--	--	--	--
	7/15/1996	--	--	7.76	4.30	--	3.46	--	--	--	--	--	--	--	--	--	--	--	--
	7/16/1996	--	e	--	--	--	--	12,000	2,800	160	390	1,610	63,000	--	SPL	--	--	--	--
	7/16/1996	--	--	7.76	--	--	--	12,000	2,800	170	390	1,630	64,000	7.9	SPL	--	--	--	--
	7/30/1996	--	--	7.76	4.64	--	3.12	--	--	--	--	--	--	--	--	--	--	--	--
	8/12/1996	--	--	7.76	--	--	--	11,000	2,500	160	<10	1,740	440,000	7.0	SPL	--	--	--	--
	11/4/1996	--	--	7.76	5.98	--	1.78	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/1996	--	f	7.76	--	--	--	53,000	1,300	43	100	349	42000/190000	6.6	SPL	--	--	--	--
	5/17/1997	--	--	7.76	4.65	--	3.11	52,000	1,958	55	305	1,216	140,198	5.7	SPL	--	--	--	--
	8/11/1997	--	--	7.76	4.90	--	2.86	25,000	540	6.7	<5.0	57	360,000	7.9	SPL	--	--	--	--
	11/17/1997	--	--	7.76	6.12	--	1.64	93,000	1,200	31	180	40	400,000	7.6	SPL	--	--	--	--
	1/29/1998	--	--	7.76	4.90	--	2.86	4,800	320	24	52	19.9	<50	6.6	SPL	--	--	--	--
	6/22/1998	--	--	7.76	4.62	--	3.14	63,000	180	<5.0	15	69	57,000	6.0	--	--	--	--	--
	12/30/1998	--	f	7.76	5.41	--	2.35	22,000	2,500	24	120	400	15000/13000	--	SPL	--	--	--	--
	3/9/1999	--	--	7.76	3.40	--	4.36	16,000	2,000	84	290	510	13,000	--	SPL	--	--	--	--
	6/23/1999	--	--	7.76	4.60	--	3.16	9,600	4,500	21	160	260	24,000	--	SPL	--	--	--	--
	9/23/1999	--	--	7.76	4.21	--	3.55	3,800	1,600	32	150	240	7,100	--	SPL	--	--	--	--
	12/28/1999	--	--	7.76	4.10	--	3.66	3,400	<2200	17	53	130	5,500	--	PACE	--	--	--	--

Table 2

## Groundwater Elevation and Analytical Data

Former BP Station #11126  
1700 Powell St., Emeryville, CA

Well No.	Date	P/ NP	Foot Note	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	DRO/ TPH-d (µg/L)	TOG (µg/L)	HVOC (µg/L)	
MW-1	3/22/2000	--	--	7.76	5.51	--	2.25	6,400	1,100	45	190	330	4,900	--	PACE	--	--	--	--	
	5/26/2000	--	--	7.76	4.79	--	2.97	110,000	700	44	140	250	320,000	--	PACE	--	--	--	--	
	9/6/2000	--	--	7.76	5.19	--	2.57	5,600	1,000	13	57	90	19,000	--	PACE	--	--	--	--	
	9/15/2000	--	--	7.76	5.73	--	2.03	--	--	--	--	--	--	--	--	--	--	--	--	
	12/11/2000	--	--	7.76	5.82	--	1.94	5,500	1,160	47.1	155	292	3,900	--	PACE	--	--	--	--	
	3/29/2001	--	h	7.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/27/2001	--	--	7.76	5.49	--	2.27	6,100	1,200	12.9	17.3	77.9	1,780	--	PACE	--	--	--	--	
	9/19/2001	--	--	7.76	6.19	--	1.57	1,800	102	<12.5	<12.5	<37.5	1,090	--	PACE	--	--	--	--	
	12/28/2001	--	--	7.76	5.27	--	2.49	4,000	540	11.8	20.4	64.6	1,120	--	PACE	--	--	--	--	
	3/12/2002	--	--	7.76	5.68	--	2.08	3,700	491	8.39	12.4	27.3	1,020	--	PACE	--	--	--	--	
	6/13/2002*	--	--	7.76	5.54	--	2.22	1,900	255	<12.5	<12.5	<25	6,490	--	PACE	--	--	--	--	
	9/6/2002	--	--	7.76	5.56	--	2.20	1,100	170	5.1	2.2	20	550	--	SEQ	--	--	--	--	
	12/13/2002	--	o	7.76	5.45	--	2.31	2,700	610	10	18	67	470	--	SEQ	--	--	--	--	
	2/19/2003	--	p	7.76	3.00	--	4.76	1,500	180	<5.0	<5.0	15	610	--	SEQ	--	--	--	--	
	6/6/2003	--	--	7.76	5.52	--	2.24	4,600	620	<25	<25	55	1,400	--	SEQ	--	--	--	--	
	8/7/2003	--	--	7.76	5.55	--	2.21	2,000	290	<5.0	<5.0	15	920	--	SEQ	--	--	--	--	
	11/20/2003	P	--	7.76	5.41	--	2.35	2,800	420	11	11	53	250	--	SEQM	6.7	--	--	--	
	04/28/2004	P	--	7.76	5.33	--	2.43	1,600	100	5.3	<5.0	8.8	200	--	SEQM	6.8	--	--	--	
	08/26/2004	P	--	7.76	4.03	--	3.73	1,700	220	7.2	15	35	180	--	SEQM	6.7	--	--	--	
	12/01/2004	P	--	7.76	3.93	--	3.83	2,100	380	8.0	34	76	170	--	SEQM	6.8	--	--	<2.5	
02/02/2005	P	--	7.76	3.61	--	4.15	1,100	150	3.0	12	14	160	--	SEQM	7.0	--	--	--		
04/25/2005	P	--	10.16	3.75	--	6.41	930	140	3.6	5.3	11	200	--	SEQM	6.8	--	--	--		
MW-2	11/4/1992	--	e	--	--	--	--	12,000	3,200	980	<0.5	1,900	--	--	PACE	--	--	--	--	
	11/4/1992	--	k	8.56	5.88	--	2.68	12,000	3,900	1,300	<0.5	2,300	--	--	PACE	--	--	--	--	
	10/12/1993	--	k	8.56	6.29	--	2.27	4,500	3,400	180	230	940	442	--	PACE	--	--	--	--	
	2/15/1994	--	e	--	--	--	--	1,800	290	160	14	250	--	--	PACE	--	--	--	--	
	2/15/1994	--	k	8.56	5.56	--	3.00	2,000	430	270	28	390	127	4.0	PACE	--	--	--	--	
	5/11/1994	--	d, e	--	--	--	--	15,000	5,600	1,500	470	2,000	740	--	PACE	--	--	--	--	
	5/11/1994	--	k	8.56	5.17	--	3.39	14,000	3,900	1,200	440	1,900	953	8.9	PACE	--	--	--	--	
	8/1/1994	--	k	8.56	5.43	--	3.13	8,200	3,000	420	230	660	1,676	2.6	PACE	--	--	--	--	
	10/18/1994	--	k	8.56	5.71	--	2.85	9,000	2,000	140	150	420	2,417	7.2	PACE	--	--	--	--	
	1/13/1995	--	--	8.56	4.67	--	3.89	7,900	2,200	42	<5	770	--	6.8	ATI	--	--	--	--	
	4/13/1995	--	e	--	--	--	--	25,000	6,500	1,500	110	5,300	--	--	ATI	--	--	--	--	



Table 2

## Groundwater Elevation and Analytical Data

Former BP Station #11126  
1700 Powell St., Emeryville, CA

Well No.	Date	P/ NP	Foot Note	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	DRO/ TPH-d (µg/L)	TOG (µg/L)	HVOC (µg/L)
MW-2	4/13/1995	--	--	8.56	4.37	--	4.19	33,000	8,000	2,500	1,100	6,600	--	7.5	ATI	--	--	--	--
	7/11/1995	--	e	--	--	--	--	28,000	6,800	1,000	900	4,900	--	--	ATI	--	--	--	--
	7/11/1995	--	--	8.56	4.51	--	4.05	19,000	3,300	99	7.5	4,600	--	7.8	ATI	--	--	--	--
	11/2/1995	--	e	--	--	--	--	22,000	4,000	1,200	600	2,700	19,000	--	ATI	--	--	--	--
	11/2/1995	--	--	8.56	5.55	--	3.01	20,000	3,800	1,200	570	2,700	15,000	7.3	ATI	--	--	--	--
	2/5/1996	--	e	--	--	--	--	910	290	180	19	137	93	--	SPL	--	--	--	--
	2/5/1996	--	--	8.56	5.10	--	3.46	1,200	320	220	26	187	99	2.2	SPL	--	--	--	--
	4/24/1996	--	e	--	--	--	--	<500	100	30	<10	71	<100	--	SPL	--	--	--	--
	4/24/1996	--	--	8.56	4.95	--	3.61	<500	70	22	<10	61	<50	7.0	SPL	--	--	--	--
	7/15/1996	--	--	8.56	5.40	--	3.16	--	--	--	--	--	--	--	--	--	--	--	--
	7/16/1996	--	--	8.56	--	--	--	12,000	3,300	1,400	250	2,610	1,400	7.8	SPL	--	--	--	--
	7/30/1996	--	--	8.56	5.44	--	3.12	--	--	--	--	--	--	--	--	--	--	--	--
	11/4/1996	--	--	8.56	7.06	--	1.50	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/1996	--	e	--	--	--	--	9,200	1,300	170	<25	2,240	1,100	--	SPL	--	--	--	--
	11/5/1996	--	--	8.56	--	--	--	7,200	1,400	230	38	2,110	1,100	7.4	SPL	--	--	--	--
	5/17/1997	--	--	8.56	5.77	--	2.79	570	42	<5.0	5	60	210	6.9	SPL	--	--	--	--
	8/11/1997	--	--	8.56	5.71	--	2.85	6,300	1,800	130	86	397	2,400	8.5	SPL	--	--	--	--
	11/17/1997	--	--	8.56	6.91	--	1.65	2,400	220	30	33	259	130	7.9	SPL	--	--	--	--
	1/29/1998	--	--	8.56	4.61	--	3.95	<50	<0.5	<1.0	<1.0	<1.0	<10	6.2	SPL	--	--	--	--
	6/22/1998	--	--	8.56	4.80	--	3.76	4,200	640	150	120	650	560	5.4	SPL	--	--	--	--
	12/30/1998	--	--	8.56	5.21	--	3.35	--	--	--	--	--	--	--	--	--	--	--	--
	6/23/1999	--	--	8.56	5.30	--	3.26	--	--	--	--	--	--	--	--	--	--	--	--
	9/23/1999	--	--	8.56	4.75	--	3.81	3,800	760	19	210	960	910	--	SPL	--	--	--	--
	12/28/1999	--	--	8.56	4.51	--	4.05	--	--	--	--	--	--	--	--	--	--	--	--
	3/22/2000	--	--	8.56	4.21	--	4.35	2,500	780	17	44	270	2,800	--	PACE	--	--	--	--
	5/26/2000	--	--	8.56	4.66	--	3.90	--	--	--	--	--	--	--	--	--	--	--	--
	9/6/2000	--	--	8.56	4.71	--	3.85	3,700	1,200	5.5	12	170	12,000	--	PACE	--	--	--	--
	9/15/2000	--	--	8.56	4.74	--	3.82	--	--	--	--	--	--	--	--	--	--	--	--
	12/11/2000	--	--	8.56	4.79	--	3.77	--	--	--	--	--	--	--	--	--	--	--	--
	3/29/2001	--	h	8.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/27/2001	--	j	8.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/19/2001	--	j	8.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/28/2001	--	j	8.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/12/2002	--	--	8.56	4.25	--	4.31	26,000	1,160	4.39	61.1	171	37,300	--	PACE	--	--	--	--

**Table 2**  
**Groundwater Elevation and Analytical Data**  
**Former BP Station #11126**  
**1700 Powell St., Emeryville, CA**

Well No.	Date	P/ NP	Foot Note	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	DRO/ TPH-d (µg/L)	TOG (µg/L)	HVOC (µg/L)	
MW-2	6/13/2002*	--	--	8.56	4.94	--	3.62	18,000	578	<50	<50	<100	84,600	--	PACE	--	--	--	--	
	9/6/2002	--	--	8.56	5.23	--	3.33	26,000	440	<50	<50	<50	45,000	--	SEQ	--	--	--	--	
	12/13/2002	--	o	8.56	4.94	--	3.62	69,000	1,200	<500	<500	<500	98,000	--	SEQ	--	--	--	--	
	2/19/2003	--	p	8.56	4.14	--	4.42	78,000	1,100	<500	<500	<500	81,000	--	SEQ	--	--	--	--	
	6/6/2003	--	--	8.56	4.66	--	3.90	120,000	1,100	<1000	<1000	<1000	72,000	--	SEQ	--	--	--	--	
	8/7/2003	--	r	8.56	4.90	--	3.66	71,000	590	<500	<500	<500	83,000	--	SEQ	--	--	--	--	
	11/20/2003	P	--	8.56	4.59	--	3.97	22,000	720	<100	<100	<100	18,000	--	SEQM	6.8	--	--	--	
	04/28/2004	P	--	8.56	4.37	--	4.19	<25,000	690	<250	<250	<250	31,000	--	SEQM	6.9	--	--	--	
	08/26/2004	P	--	8.56	4.59	--	3.97	140,000	8,200	18,000	4,200	19,000	11,000	--	SEQM	6.7	--	--	<250	
	12/01/2004	P	--	8.56	4.79	--	3.77	98,000	8,400	13,000	4,600	21,000	10,000	--	SEQM	6.9	--	--	--	
	02/02/2005	P	r	8.56	4.27	--	4.29	92,000	6,600	9,900	4,400	18,000	10,000	--	SEQM	7.0	--	--	--	
	04/25/2005	P	--	11.39	4.00	--	7.39	80,000	6,700	4,900	4,400	17,000	8,200	--	SEQM	6.8	--	--	--	
	MW-3	11/4/1992	--	k	8.25	6.38	--	1.87	200	1.6	<0.5	<0.5	1.1	--	--	PACE	--	690	<5000	ND
10/12/1993		--	e	--	--	--	--	150	5.6	0.6	<0.5	1.6	--	--	PACE	--	--	--	--	
10/12/1993		--	k	8.25	5.84	--	2.41	270	5	0.7	<0.5	2.6	96.3	--	PACE	--	2,100	<5000	ND	
2/15/1994		--	k	8.25	6.60	--	1.65	140	5.7	<0.5	<0.5	<0.5	30.1	3.9	PACE	--	2.3	90	ND	
5/11/1994		--	d,k	8.25	5.86	--	2.39	190	2.7	1.9	<0.5	1.9	51	9.2	PACE	--	2,500	<5000	ND	
8/1/1994		--	k	8.25	6.13	--	2.12	120	1.3	<0.5	0.5	1.1	17.6	2.9	PACE	--	1,300	<5000	ND	
10/18/1994		--	k	8.25	6.39	--	1.86	100	2.3	<0.5	<0.5	<0.5	21	3.6	PACE	--	2,200	<5000	ND	
1/13/1995		--	--	8.25	5.47	--	2.78	<50	0.8	<0.5	<0.5	<1	--	7.7	ATI	--	970	--	ND	
4/13/1995		--	--	8.25	5.17	--	3.08	530	8.7	1.9	<0.5	<0.5	3.9	--	8.4	ATI	--	<500	2,100	ND
7/11/1995		--	--	8.25	5.37	--	2.88	78	0.57	<0.50	<0.50	<1.0	--	8.3	ATI	--	2,100	1,900	ND	
11/2/1995		--	--	8.25	6.29	--	1.96	250	0.73	<0.50	<0.50	1.8	270	8.3	ATI	--	2,000	1,400	ND	
2/5/1996		--	--	8.25	5.80	--	2.45	<50	<0.5	<1	<1	2.7	11	3.5	SPL	--	1,600	9,000	ND	
4/24/1996		--	--	8.25	5.69	--	2.56	<50	<5	<10	<10	<10	150	8.6	SPL	--	2,800	6,000	ND	
7/15/1996		--	--	8.25	6.18	--	2.07	<250	<2.5	<5	<5	<5	<50	7.7	SPL	--	3,700	1,000	ND	
7/30/1996		--	--	8.25	6.04	--	2.21	--	--	--	--	--	--	--	--	--	--	--	--	
11/4/1996		--	--	8.25	7.84	--	0.41	--	--	--	--	--	--	--	--	--	--	--	--	
11/5/1996		--	--	8.25	--	--	--	90	<0.5	<1.0	<1.0	<1.0	30	6.8	SPL	--	890	2,000	ND	
5/17/1997		--	--	8.25	6.49	--	1.76	<50	<0.5	<1.0	<1.0	<1.0	52	6.3	SPL	--	2,100	700	ND	
8/11/1997		--	--	8.25	6.15	--	2.10	490	<2.5	<5.0	<5.0	<5.0	170	7.4	SPL	--	1,900	<5000	ND	
11/17/1997	--	--	8.25	7.15	--	1.10	120	<0.5	<1.0	<1.0	<1.0	46	7.0	SPL	--	2,500	<5000	ND		
1/29/1998	--	--	8.25	5.10	--	3.15	270	0.53	<1.0	<1.0	<1.0	330	6.4	SPL	--	1,700	2,000	ND		

**Table 2**  
**Groundwater Elevation and Analytical Data**  
**Former BP Station #11126**  
**1700 Powell St., Emeryville, CA**

Well No.	Date	P/ NP	Foot Note	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	DRO/ TPH-d (µg/L)	TOG (µg/L)	HVOC (µg/L)	
MW-3	6/22/1998	--	--	8.25	5.50	--	2.75	200	<0.5	<1.0	<1.0	<1.0	130	5.5	SPL	--	2,200	<5	ND	
	12/30/1998	--	--	8.25	6.68	--	1.57	--	--	--	--	--	--	--	--	--	--	--	--	
	3/9/1999	--	--	8.25	5.53	--	2.72	60	<1.0	<1.0	<1.0	<1.0	19	--	SPL	--	840	7,600	--	
	6/23/1999	--	--	8.25	6.60	--	1.65	--	--	--	--	--	--	--	--	--	--	--	--	
	9/23/1999	--	--	8.25	6.17	--	2.08	--	--	--	--	--	--	--	--	--	--	--	--	
	12/28/1999	--	--	8.25	6.00	--	2.25	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/22/2000	--	--	8.25	4.77	--	3.48	690	4.2	3.1	0.81	2.7	2,900	--	PACE	--	<58	13,000	--	
	5/26/2000	--	--	8.25	5.28	--	2.97	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/15/2000	--	--	8.25	5.58	--	2.67	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/11/2000	--	i	8.25	11.74	--	-3.49	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/29/2001	--	--	8.25	5.04	--	3.21	650	<2.5	<2.5	<2.5	<7.5	680	--	PACE	--	<50	6,540	--	
	6/27/2001	--	--	8.25	5.62	--	2.63	460	<2.5	<2.5	<2.5	<7.5	560	--	PACE	--	690	<5000	--	
	9/19/2001	--	--	8.25	5.80	--	2.45	<500	<5.0	<5.0	<5.0	<15	464	--	PACE	--	520	<5000	--	
	12/28/2001	--	--	8.25	4.85	--	3.40	180	<0.5	<0.5	<0.5	<1.0	180	--	PACE	--	550	<5000	--	
	3/12/2002	--	--	8.25	4.39	--	3.86	410	<2.5	<2.5	<2.5	<5.0	443	--	PACE	--	1,300	<5000	--	
	6/13/2002	--	*	8.25	5.38	--	2.87	<250	<2.5	<2.5	<2.5	<5.0	395	--	PACE	--	2,600	<5000	--	
	9/6/2002	--	--	8.25	5.68	--	2.57	<200	<2.0	<2.0	<2.0	<2.0	650	--	SEQ	--	--	--	--	
	12/13/2002	--	o	8.25	5.37	--	2.88	<50	<0.5	<0.5	<0.5	<0.5	60	--	SEQ	--	980	7,000	--	
	2/19/2003	--	p	8.25	4.80	--	3.45	<1000	<10	<10	<10	<10	120	--	SEQ	--	380	6,700	--	
	6/6/2003	--	--	8.25	5.13	--	3.12	<500	<5.0	<5.0	<5.0	<5.0	180	--	SEQ	--	620	7.9	--	
8/7/2003	--	q	8.25	5.43	--	2.82	<500	5.7	<5.0	<5.0	<5.0	290	--	SEQ	--	820	5.4	--		
11/20/2003	P	q	8.25	4.72	--	3.53	<50	<0.50	<0.50	<0.50	<0.50	17	--	SEQM	6.9	1,200	<4.8	--		
04/28/2004	P	q	8.25	4.87	--	3.38	<100	<1.0	<1.0	<1.0	<1.0	87	--	SEQM	7.1	240	<5,100	--		
08/26/2004	P	q	8.25	5.42	--	2.83	56	<0.50	<0.50	<0.50	<0.50	34	--	SEQM	7.0	250	<10,000	<0.50		
12/01/2004	P	--	8.25	5.69	--	2.56	<100	<1.0	<1.0	<1.0	<1.0	7.4	--	SEQM	6.9	690	<5.0	--		
02/02/2005	P	--	8.25	4.72	--	3.53	<100	<1.0	<1.0	<1.0	<1.0	20	--	SEQM	6.8	730	<4,800	--		
04/25/2005	P	--	10.73	4.75	--	5.98	<250	<2.5	<2.5	<2.5	<2.5	220	--	SEQM	6.8	520	6,300	--		
MW-4	11/4/1992	--	k	8.12	6.66	--	1.46	340	4.5	<0.5	4.3	<0.5	--	--	PACE	--	--	--	--	
	10/12/1993	--	k	8.12	6.87	--	1.25	160	5.8	1.4	0.8	2.7	261	--	PACE	--	--	--	--	
	2/15/1994	--	d,k	8.12	6.61	--	1.51	110	4.4	0.7	<0.5	2.5	118	4.3	PACE	--	--	--	--	
	5/11/1994	--	d,k	8.12	5.89	--	2.23	120	0.5	0.8	<0.5	<0.5	137	9.3	PACE	--	--	--	--	
	8/1/1994	--	k	8.12	6.87	--	1.25	140	0.7	2	5.2	15	138	3.3	PACE	--	--	--	--	
	10/18/1994	--	k	8.12	6.62	--	1.50	140	3.5	<0.5	0.5	<0.5	197	3.0	PACE	--	--	--	--	

Table 2

## Groundwater Elevation and Analytical Data

Former BP Station #11126  
1700 Powell St., Emeryville, CA

Well No.	Date	P/ NP	Foot Note	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	DRO/ TPH-d (µg/L)	TOG (µg/L)	HVOC (µg/L)
MW-4	1/13/1995	--	--	8.12	7.27	--	0.85	<50	<0.5	<0.5	<0.5	<1	--	7.9	ATI	--	--	--	--
	4/13/1995	--	--	8.12	6.51	--	1.61	73	1.2	<0.5	<0.5	<1	--	9.9	ATI	--	--	--	--
	7/11/1995	--	--	8.12	6.21	--	1.91	82	0.57	<0.50	<0.50	<1.0	--	7.2	ATI	--	--	--	--
	11/2/1995	--	--	8.12	6.78	--	1.34	71	1.4	0.96	0.99	2.8	140	8.6	ATI	--	--	--	--
	2/5/1996	--	--	8.12	6.41	--	1.71	<50	<5	<10	<10	<10	200	4.4	SPL	--	--	--	--
	4/24/1996	--	--	8.12	6.18	--	1.94	<250	<2.5	<5	<5	<5	510	8.3	SPL	--	--	--	--
	7/15/1996	--	--	8.12	6.63	--	1.49	<50	5.7	<1	<1	<1	550	7.4	SPL	--	--	--	--
	7/30/1996	--	--	8.12	6.34	--	1.78	--	--	--	--	--	--	--	--	--	--	--	--
	11/4/1996	--	--	8.12	8.27	--	-0.15	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/1996	--	f	8.12	--	--	--	460	<2.5	11	<5.0	<5.0	620/610	7.3	SPL	--	--	--	--
	5/17/1997	--	--	8.12	7.00	--	1.12	--	--	--	--	--	--	--	--	--	--	--	--
	8/11/1997	--	--	8.12	6.81	--	1.31	--	--	--	--	--	--	--	--	--	--	--	--
	11/17/1997	--	--	8.12	9.19	--	-1.07	840	<0.5	<1.0	<1.0	<1.0	880	7.3	SPL	--	--	--	--
	1/29/1998	--	--	8.12	7.94	--	0.18	--	--	--	--	--	--	--	--	--	--	--	--
	6/22/1998	--	--	8.12	7.49	--	0.63	--	--	--	--	--	--	--	--	--	--	--	--
	12/30/1998	--	--	8.12	8.21	--	-0.09	--	--	--	--	--	--	--	--	--	--	--	--
	3/9/1999	--	--	8.12	7.70	--	0.42	1,200	<1.0	<1.0	<1.0	<1.0	2,000	--	SPL	--	--	--	--
	6/23/1999	--	--	8.12	8.81	--	-0.69	--	--	--	--	--	--	--	--	--	--	--	--
	9/23/1999	--	--	8.12	8.32	--	-0.20	--	--	--	--	--	--	--	--	--	--	--	--
	12/28/1999	--	--	8.12	8.21	--	-0.09	--	--	--	--	--	--	--	--	--	--	--	--
	3/22/2000	--	--	8.12	6.74	--	1.38	910	<0.5	<0.5	0.54	1.7	3,800	--	PACE	--	--	--	--
	5/26/2000	--	--	8.12	5.13	--	2.99	--	--	--	--	--	--	--	--	--	--	--	--
	9/15/2000	--	--	8.12	8.20	--	-0.08	--	--	--	--	--	--	--	--	--	--	--	--
	12/11/2000	--	--	8.12	8.31	--	-0.19	--	--	--	--	--	--	--	--	--	--	--	--
	3/29/2001	--	h	8.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/27/2001	--	--	8.12	7.57	--	0.55	2,800	18.9	<2.5	<2.5	<7.5	4,220	--	PACE	--	--	--	--
	9/19/2001	--	--	8.12	7.87	--	0.25	2,500	<5.0	<5.0	<5.0	<15	3,340	--	PACE	--	--	--	--
	12/28/2001	--	--	8.12	7.80	--	0.32	4,400	<5.0	<5.0	<5.0	<10	5,330	--	PACE	--	--	--	--
	3/12/2002	--	--	8.12	4.53	--	3.59	6,400	71.5	<5.0	<5.0	<10	8,440	--	PACE	--	--	--	--
	6/13/2002*	--	--	8.12	6.21	--	1.91	1,800	7.5	<5.0	5.03	13.1	6,870	--	PACE	--	--	--	--
	9/6/2002	--	--	8.12	7.78	--	0.34	<2000	<20	<20	<20	<20	9,600	--	SEQ	--	--	--	--
	12/13/2002	--	o	8.12	7.87	--	0.25	5,600	<50	<50	<50	<50	8,600	--	SEQ	--	--	--	--
	2/19/2003	--	p	8.12	4.84	--	3.28	<10000	<100	<100	<100	<100	8,000	--	SEQ	--	--	--	--
	6/6/2003	--	--	8.12	7.98	--	0.14	13,000	<50	<50	<50	<50	6,800	--	SEQ	--	--	--	--

Table 2

## Groundwater Elevation and Analytical Data

Former BP Station #1126  
1700 Powell St., Emeryville, CA

Well No.	Date	P/ NP	Foot Note	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	DRO/ TPH-d (µg/L)	TOG (µg/L)	HVOC (µg/L)
MW-4	8/7/2003	--	--	8.12	7.24	--	0.88	6,200	<50	<50	<50	<50	6,600	--	SEQ	--	--	--	--
	11/20/2003	P	--	8.12	7.02	--	1.10	10,000	<100	<100	<100	<100	11,000	--	SEQM	7.3	--	--	--
	04/28/2004	P	--	8.12	4.81	--	3.31	<25,000	<250	<250	<250	<250	3,600	--	SEQM	7.2	--	--	--
	08/26/2004	P	t	8.12	5.65	--	2.47	<2,500	<25	<25	<25	<25	1,800	--	SEQM	7.2	--	--	<25
	12/01/2004	P	--	8.12	7.34	--	0.78	1,100	<10	<10	<10	<10	450	--	SEQM	7.1	--	--	--
	02/02/2005	P	--	8.12	7.61	--	0.51	1,000	<5.0	<5.0	<5.0	<5.0	410	--	SEQM	7.3	--	--	--
	04/25/2005	P	--	10.58	7.25	--	3.33	720	8.0	5.3	<5.0	16	170	--	SEQM	7.1	--	--	--
	MW-5	10/12/1993	--	k	7.69	6.01	--	1.68	--	--	--	--	--	--	--	PACE	--	--	--
10/13/1993		--	k	7.69	--	--	--	2,300	160	10	<0.5	26	--	--	PACE	--	--	--	--
2/15/1994		--	d,k	7.69	5.74	--	1.95	5,100	710	16	33	35	153	4.0	PACE	--	--	--	--
5/11/1994		--	d,k	7.69	5.28	--	2.41	11,000	1,100	39	110	57	165	8.0	PACE	--	--	--	--
8/1/1994		--	d,k	7.69	5.84	--	1.85	9,000	730	35	61	41	196	2.6	PACE	--	--	--	--
10/18/1994		--	k	7.69	6.01	--	1.68	7,800	330	30	27	27	559	5.6	PACE	--	--	--	--
1/13/1995		--	--	7.69	4.74	--	2.95	<500	290	6	<5	18	--	6.8	ATI	--	--	--	--
4/13/1995		--	--	7.69	5.50	--	2.19	9,100	400	15	52	27	--	7.4	ATI	--	--	--	--
7/11/1995		--	--	7.69	5.75	--	1.94	7,300	390	13	28	23	--	7.2	ATI	--	--	--	--
11/3/1995		--	--	7.69	6.65	--	1.04	7,200	270	15	38	23	200	8.4	ATI	--	--	--	--
2/5/1996		--	--	7.69	4.83	--	2.86	4,600	370	15	53	28	<50	1.9	SPL	--	--	--	--
4/24/1996		--	--	7.69	6.09	--	1.60	3,000	180	<10	32	14	<100	8.1	SPL	--	--	--	--
7/15/1996		--	--	7.69	6.57	--	1.12	--	--	--	--	--	--	--	--	--	--	--	--
7/16/1996		--	--	7.69	--	--	--	<50	190	<10	31	16	<100	8.3	SPL	--	--	--	--
7/30/1996		--	--	7.69	5.61	--	2.08	--	--	--	--	--	--	--	--	--	--	--	--
8/12/1996		--	--	7.69	--	--	--	2,000	150	12	25	18.2	<50	7.6	SPL	--	--	--	--
11/4/1996		--	--	7.69	8.25	--	-0.56	--	--	--	--	--	--	--	--	--	--	--	--
11/5/1996		--	--	7.69	--	--	--	5,200	42	5.5	13	<5.0	1,700	7.4	SPL	--	--	--	--
5/17/1997		--	--	7.69	6.95	--	0.74	80	0.56	<1.0	<1.0	<1.0	46	6.7	SPL	--	--	--	--
8/11/1997		--	--	7.69	6.72	--	0.97	2,700	20	12	6.7	9.7	1,900	8.5	SPL	--	--	--	--
11/17/1997	--	--	7.69	9.49	--	-1.80	8,400	25	12	8.7	5.4	13,000	7.9	SPL	--	--	--	--	
1/29/1998	--	--	7.69	7.88	--	-0.19	110,000	2,500	110	180	589	180,000	6.8	SPL	--	--	--	--	
6/22/1998	--	--	7.69	7.40	--	0.29	4,400	47	10	29	20.5	47	6.6	SPL	--	--	--	--	
12/30/1998	--	f	7.69	6.13	--	1.56	6,000	18	9.1	22	16	63/44	--	SPL	--	--	--	--	
3/9/1999	--	--	7.69	4.79	--	2.90	4,600	8.8	5.5	12	11	24	--	SPL	--	--	--	--	
6/23/1999	--	--	7.69	5.95	--	1.74	3,400	1,500	8.9	54	87	7,500	--	SPL	--	--	--	--	

**Table 2**  
**Groundwater Elevation and Analytical Data**  
**Former BP Station #11126**  
**1700 Powell St., Emeryville, CA**

Well No.	Date	P/ NP	Foot Note	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	DRO/ TPH-d (µg/L)	TOG (µg/L)	HVOC (µg/L)
MW-5	9/23/1999	--	--	7.69	5.43	--	2.26	2,600	510	14	140	650	580	--	SPL	--	--	--	--
	12/28/1999	--	--	7.69	5.30	--	2.39	3,500	900	18	57	140	4,800	--	PACE	--	--	--	--
	3/22/2000	--	h	7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/26/2000	--	h	7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/6/2000	--	h	7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/15/2000	--	h	7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/11/2000	--	h	7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/29/2001	--	h	7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/27/2001	--	j	7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/19/2001	--	j	7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/28/2001	--	--	7.69	4.65	--	3.04	4,600	19.9	24.6	16.2	57	72.3	--	PACE	--	--	--	--
	3/12/2002	--	--	7.69	5.35	--	2.34	5,100	45.4	13.7	22	38.9	31.6	--	PACE	--	--	--	--
	6/13/2002	--	*	7.69	5.34	--	2.35	2,900	31.8	<12.5	<12.5	<25	616	--	PACE	--	--	--	--
	9/6/2002	--	--	7.69	5.46	--	2.23	3,400	23	5.5	<5.0	11	230	--	SEQ	--	--	--	--
	12/13/2002	--	o	7.69	5.47	--	2.22	2,500	12	9.3	4.6	8.8	110	--	SEQ	--	--	--	--
	2/19/2003	--	p	7.69	5.29	--	2.40	2,800	11	5.4	9.7	12	6.4	--	SEQ	--	--	--	--
	6/6/2003	--	--	7.69	5.30	--	2.39	3,200	9.1	<5.0	7.6	9.3	<5.0	--	SEQ	--	--	--	--
	8/7/2003	--	--	7.69	5.33	--	2.36	2,200	7.3	<5.0	<5.0	9.1	18	--	SEQ	--	--	--	--
	11/20/2003	P	--	7.69	5.39	--	2.30	3,500	12	5.4	6.4	12	12	--	SEQM	6.5	--	--	--
	04/28/2004	P	--	7.69	5.53	--	2.16	5,700	7.8	4.2	5.2	11	11	--	SEQM	7.1	--	--	--
	08/26/2004	P	--	7.69	5.42	--	2.27	2,400	23	4.0	3.6	11	74	--	SEQM	6.8	--	--	<2.5
	12/01/2004	P	--	7.69	5.38	--	2.31	4,300	11	<5.0	5.5	15	<5.0	--	SEQM	6.9	--	--	--
	02/02/2005	P	--	7.69	5.48	--	2.21	4,000	8.4	4.8	4.0	10	11	--	SEQM	7.0	--	--	--
	04/25/2005	P	--	10.18	5.52	--	4.66	5,200	7.6	4.0	4.3	9.9	12	--	SEQM	6.7	--	--	--
MW-6	10/12/1993	--	k	8.52	6.59	--	1.93	63	<0.5	<0.5	<0.5	<0.5	44.4	--	PACE	--	--	--	--
	2/15/1994	--	d,k	8.52	6.31	--	2.21	68	<0.5	<0.5	<0.5	<0.5	38.1	3.1	PACE	--	--	--	--
	5/11/1994	--	d,k	8.52	6.15	--	2.37	68	<0.5	<0.5	<0.5	<0.5	48.5	8.7	PACE	--	--	--	--
	8/1/1994	--	k	8.52	6.46	--	2.06	91	<0.5	<0.5	<0.5	0.6	59.6	2.4	PACE	--	--	--	--
	10/18/1994	--	k	8.52	6.72	--	1.80	<50	<0.5	<0.5	<0.5	<0.5	84.6	6.0	PACE	--	--	--	--
	1/13/1995	--	--	8.52	5.95	--	2.57	<50	<0.5	<0.5	<0.5	<1	--	7.0	ATI	--	--	--	--
	4/13/1995	--	--	8.52	5.44	--	3.08	<50	<0.5	<0.5	<0.5	<1	--	8.5	ATI	--	--	--	--
	7/11/1995	--	--	8.52	5.68	--	2.84	<50	<0.50	<0.50	<0.50	<1.0	--	8.4	ATI	--	--	--	--
	11/2/1995	--	--	8.52	6.57	--	1.95	<50	<0.50	<0.50	<0.50	<1.0	35	8.3	ATI	--	--	--	--

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**Groundwater Elevation and Analytical Data**  
**Former BP Station #11126**  
**1700 Powell St., Emeryville, CA**

Well No.	Date	P/ NP	Foot Note	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	DRO/ TPH-d (µg/L)	TOG (µg/L)	HVOC (µg/L)
MW-6	2/5/1996	--	--	8.52	6.27	--	2.25	<50	<5	<10	<10	<10	<100	2.2	SPL	--	--	--	--
	4/24/1996	--	--	8.52	5.95	--	2.57	<250	<2.5	<5	<5	<5	62	8.0	SPL	--	--	--	--
	7/15/1996	--	--	8.52	6.39	--	2.13	<250	<2.5	<5	<5	<5	<50	8.0	SPL	--	--	--	--
	7/30/1996	--	--	8.52	6.44	--	2.08	--	--	--	--	--	--	--	--	--	--	--	--
	11/4/1996	--	--	8.52	8.05	--	0.47	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/1996	--	--	8.52	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<10	7.3	SPL	--	--	--	--
	5/17/1997	--	--	8.52	6.75	--	1.77	--	--	--	--	--	--	--	--	--	--	--	--
	8/11/1997	--	--	8.52	6.48	--	2.04	--	--	--	--	--	--	--	--	--	--	--	--
	11/17/1997	--	--	8.52	9.27	--	-0.75	<50	<0.5	<1.0	<1.0	<1.0	<10	7.7	SPL	--	--	--	--
	1/29/1998	--	--	8.52	7.98	--	0.54	--	--	--	--	--	--	--	--	--	--	--	--
	6/22/1998	--	--	8.52	7.68	--	0.84	--	--	--	--	--	--	--	--	--	--	--	--
	12/30/1998	--	--	8.52	6.98	--	1.54	--	--	--	--	--	--	--	--	--	--	--	--
	3/9/1999	--	--	8.52	5.90	--	2.62	--	--	--	--	--	--	--	--	--	--	--	--
	6/23/1999	--	--	8.52	6.93	--	1.59	--	--	--	--	--	--	--	--	--	--	--	--
	9/23/1999	--	--	8.52	6.45	--	2.07	--	--	--	--	--	--	--	--	--	--	--	--
	12/28/1999	--	--	8.52	6.33	--	2.19	--	--	--	--	--	--	--	--	--	--	--	--
	3/22/2000	--	--	8.52	5.15	--	3.37	--	--	--	--	--	--	--	--	--	--	--	--
	5/26/2000	--	--	8.52	5.72	--	2.80	--	--	--	--	--	--	--	--	--	--	--	--
	9/15/2000	--	--	8.52	6.02	--	2.50	--	--	--	--	--	--	--	--	--	--	--	--
	12/11/2000	--	--	8.52	6.20	--	2.32	--	--	--	--	--	--	--	--	--	--	--	--
	3/29/2001	--	--	8.52	5.34	--	3.18	750	<2.5	2.91	<2.5	11.8	820	--	PACE	--	--	--	--
	6/27/2001	--	--	8.52	6.00	--	2.52	760	32.9	<2.5	<2.5	<7.5	968	--	PACE	--	--	--	--
	9/19/2001	--	--	8.52	6.22	--	2.30	<500	<5.0	<5.0	<5.0	<15	879	--	PACE	--	--	--	--
	12/28/2001	--	n	8.52	4.71	--	3.81	--	--	--	--	--	--	--	--	--	--	--	--
	3/12/2002	--	--	8.52	4.96	--	3.56	<500	<5.0	<5.0	<5.0	<10	244	--	PACE	--	--	--	--
	6/13/2002	--	*	8.52	5.78	--	2.74	<250	<2.5	<2.5	<2.5	<5.0	413	--	PACE	--	--	--	--
	9/6/2002	--	--	8.52	6.14	--	2.38	130	<0.5	<0.5	<0.5	<0.5	240	--	SEQ	--	--	--	--
	12/13/2002	--	o	8.52	6.05	--	2.47	140	<1.0	<1.0	<1.0	<1.0	200	--	SEQ	--	--	--	--
	2/19/2003	--	p	8.52	5.40	--	3.12	<500	<5.0	<5.0	<5.0	<5.0	150	--	SEQ	--	--	--	--
	6/6/2003	--	--	8.52	5.54	--	2.98	1,100	<5.0	<5.0	<5.0	<5.0	140	--	SEQ	--	--	--	--
	8/7/2003	--	--	8.52	5.94	--	2.58	<500	<5.0	<5.0	<5.0	<5.0	160	--	SEQ	--	--	--	--
	11/20/2003	P	--	8.52	5.85	--	2.67	95	<0.50	<0.50	<0.50	<0.50	74	--	SEQM	7.0	--	--	--
	04/28/2004	P	--	8.52	5.45	--	3.07	<250	<2.5	<2.5	<2.5	<2.5	120	--	SEQM	7.3	--	--	--
	08/26/2004	P	--	8.52	6.06	--	2.46	<250	<2.5	<2.5	<2.5	<2.5	110	--	SEQM	7.1	--	--	<2.5

Table 2

## Groundwater Elevation and Analytical Data

Former BP Station #11126  
1700 Powell St., Emeryville, CA

Well No.	Date	P/ NP	Foot Note	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	DRO/ TPH-d (µg/L)	TOG (µg/L)	HVOC (µg/L)
MW-6	12/01/2004	P	-	8.52	6.19	-	2.33	<250	<2.5	<2.5	<2.5	<2.5	86	-	SEQM	7.2	-	-	-
	02/02/2005	P	-	8.52	5.20	-	3.32	55	<0.50	<0.50	<0.50	<0.50	41	-	SEQM	7.2	-	-	-
	04/25/2005	P	-	11.01	5.22	-	5.79	64	<0.50	<0.50	<0.50	<0.50	50	-	SEQM	3.6	-	-	-
MW-7	10/12/1993	-	k	7.61	6.14	-	1.47	<50	<0.5	<0.5	<0.5	0.7	<5.0	-	PACE	-	-	-	-
	2/15/1994	-	k	7.61	5.88	-	1.73	78	<0.5	<0.5	<0.5	0.6	<5.0	4.0	PACE	-	-	-	-
	5/11/1994	-	k	7.61	5.76	-	1.85	70	<0.5	<0.5	<0.5	0.9	11.5	9.1	PACE	-	-	-	-
	8/1/1994	-	k	7.61	5.97	-	1.64	77	<0.5	<0.5	<0.5	0.5	182	2.5	PACE	-	-	-	-
	10/18/1994	-	k	7.61	6.24	-	1.37	<50	<0.5	<0.5	<0.5	<0.5	51.7	6.3	PACE	-	-	-	-
	1/13/1995	-	-	7.61	5.39	-	2.22	<50	<0.5	<0.5	<0.5	<1	-	8.2	ATI	-	-	-	-
	4/13/1995	-	-	7.61	5.17	-	2.44	63	<0.5	<0.5	<0.5	1.4	-	8.4	ATI	-	-	-	-
	7/11/1995	-	-	7.61	5.25	-	2.36	<50	<0.50	<0.50	<0.50	<1.0	-	7.9	ATI	-	-	-	-
	11/2/1995	-	-	7.61	6.19	-	1.42	<50	<0.50	<0.50	<0.50	<1.0	55	8.0	ATI	-	-	-	-
	2/5/1996	-	-	7.61	5.69	-	1.92	<50	<0.5	<1	<1	<1	40	1.9	SPL	-	-	-	-
	4/24/1996	-	-	7.61	5.59	-	2.02	<250	<2.5	<5	<5	<5	53	8.2	SPL	-	-	-	-
	7/15/1996	-	-	7.61	6.07	-	1.54	<250	<2.5	<5	<5	<5	<50	7.8	SPL	-	-	-	-
	7/30/1996	-	-	7.61	6.04	-	1.57	-	-	-	-	-	-	-	-	-	-	-	-
	11/4/1996	-	-	7.61	7.76	-	-0.15	-	-	-	-	-	-	-	-	-	-	-	-
	11/5/1996	-	-	7.61	-	-	-	<50	<0.5	<1.0	<1.0	<1.0	<10	7.8	SPL	-	-	-	-
	5/17/1997	-	-	7.61	6.42	-	1.19	-	-	-	-	-	-	-	-	-	-	-	-
	8/11/1997	-	-	7.61	6.06	-	1.55	-	-	-	-	-	-	-	-	-	-	-	-
	11/17/1997	-	-	7.61	9.07	-	-1.46	<50	<0.5	<1.0	<1.0	<1.0	<10	7.1	SPL	-	-	-	-
	1/29/1998	-	-	7.61	7.44	-	0.17	-	-	-	-	-	-	-	-	-	-	-	-
	6/22/1998	-	-	7.61	7.39	-	0.22	-	-	-	-	-	-	-	-	-	-	-	-
	12/30/1998	-	-	7.61	5.51	-	2.10	-	-	-	-	-	-	-	-	-	-	-	-
	3/9/1999	-	-	7.61	5.57	-	2.04	-	-	-	-	-	-	-	-	-	-	-	-
	6/23/1999	-	-	7.61	6.69	-	0.92	-	-	-	-	-	-	-	-	-	-	-	-
9/23/1999	-	-	7.61	6.23	-	1.38	-	-	-	-	-	-	-	-	-	-	-	-	
12/28/1999	-	-	7.61	6.08	-	1.53	-	-	-	-	-	-	-	-	-	-	-	-	
3/22/2000	-	-	7.61	4.88	-	2.73	-	-	-	-	-	-	-	-	-	-	-	-	
5/26/2000	-	-	7.61	5.42	-	2.19	-	-	-	-	-	-	-	-	-	-	-	-	
9/15/2000	-	-	7.61	5.79	-	1.82	-	-	-	-	-	-	-	-	-	-	-	-	
12/11/2000	-	-	7.61	5.93	-	1.68	-	-	-	-	-	-	-	-	-	-	-	-	
3/29/2001	-	-	7.61	5.24	-	2.37	600	<2.5	<2.5	<2.5	<7.5	636	-	PACE	-	-	-	-	



**Table 2**  
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**Former BP Station #11126**  
**1700 Powell St., Emeryville, CA**

Well No.	Date	P/ NP	Foot Note	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	DRO/ TPH-d (µg/L)	TOG (µg/L)	HVOC (µg/L)
MW-7	6/27/2001	--	--	7.61	5.69	--	1.92	590	<2.5	<2.5	<2.5	<7.5	739	--	PACE	--	--	--	--
	9/19/2001	--	--	7.61	5.89	--	1.72	560	<5.0	<5.0	<5.0	<15	1,190	--	PACE	--	--	--	--
	12/28/2001	--	--	7.61	4.53	--	3.08	910	22.7	<2.5	<2.5	<5.0	856	--	PACE	--	--	--	--
	3/12/2002	--	--	7.61	4.71	--	2.90	620	<2.5	<2.5	<2.5	<5.0	675	--	PACE	--	--	--	--
	6/13/2002	--	*	7.61	5.21	--	2.40	860	<2.5	<2.5	<2.5	<5.0	1,470	--	PACE	--	--	--	--
	9/6/2002	--	--	7.61	5.77	--	1.84	350	<2.5	<2.5	<2.5	<2.5	690	--	SEQ	--	--	--	--
	12/13/2002	--	o	7.61	5.65	--	1.96	1,300	<10	<10	<10	<10	1,800	--	SEQ	--	--	--	--
	2/19/2003	--	p	7.61	5.07	--	2.54	1,700	<10	<10	<10	<10	1,600	--	SEQ	--	--	--	--
	6/6/2003	--	--	7.61	5.27	--	2.34	1,000	<5.0	<5.0	<5.0	<5.0	510	--	SEQ	--	--	--	--
	8/7/2003	--	--	7.61	5.52	--	2.09	510	<5.0	<5.0	<5.0	<5.0	520	--	SEQ	--	--	--	--
	11/20/2003	P	--	7.61	5.79	--	1.82	330	<2.5	<2.5	<2.5	<2.5	270	--	SEQM	7.2	--	--	--
	04/28/2004	P	--	7.61	5.20	--	2.41	<250	<2.5	<2.5	<2.5	<2.5	71	--	SEQM	7.3	--	--	--
	08/26/2004	P	--	7.61	5.65	--	1.96	450	<2.5	<2.5	<2.5	2.8	150	--	SEQM	7.0	--	--	<0.50
	12/01/2004	P	--	7.61	5.79	--	1.82	100	<1.0	<1.0	<1.0	<1.0	25	--	SEQM	7.1	--	--	--
	02/02/2005	P	--	7.61	4.92	--	2.69	81	<0.50	<0.50	<0.50	<0.50	31	--	SEQM	7.1	--	--	--
	04/25/2005	P	--	10.11	4.88	--	5.23	67	<0.50	<0.50	<0.50	0.64	41	--	SEQM	6.8	--	--	--
MW-8	10/12/1993	--	k	8.6	5.86	--	2.74	<50	<0.5	<0.5	<0.5	<0.5	11.1	--	PACE	--	--	--	--
	2/15/1994	--	k	8.6	5.50	--	3.10	380	<0.5	<0.5	<0.5	<0.5	<5.0	3.3	PACE	--	--	--	--
	5/11/1994	--	k	8.6	5.09	--	3.51	330	<0.5	1.2	<0.5	1.9	<5.0	8.5	PACE	--	--	--	--
	8/1/1994	--	k	8.6	5.20	--	3.40	260	<0.5	1.2	2.9	5.8	<5.0	2.3	PACE	--	--	--	--
	10/18/1994	--	k	8.6	5.70	--	2.90	82	<0.5	<0.5	<0.5	<0.5	<5.0	6.4	PACE	--	--	--	--
	1/13/1995	--	--	8.6	4.96	--	3.64	<50	<0.5	<0.5	<0.5	<1	--	6.9	ATI	--	--	--	--
	4/13/1995	--	--	8.6	5.40	--	3.20	270	<0.5	<0.5	<0.5	4.4	--	8.4	ATI	--	--	--	--
	7/11/1995	--	--	8.6	6.01	--	2.59	320	<0.50	<0.50	<0.50	3.5	--	8.0	ATI	--	--	--	--
	11/2/1995	--	--	8.6	6.81	--	1.79	100	<0.50	<0.50	<0.50	<1.0	<5.0	8.7	ATI	--	--	--	--
	2/5/1996	--	--	8.6	6.12	--	2.48	<50	<5	<10	<10	<10	<100	1.5	SPL	--	--	--	--
	4/24/1996	--	--	8.6	6.23	--	2.37	<50	<5	<10	<10	<10	<100	8.7	SPL	--	--	--	--
	7/15/1996	--	--	8.6	6.70	--	1.90	<250	<2.5	<5	<5	<5	<50	8.4	SPL	--	--	--	--
	7/30/1996	--	--	8.6	6.64	--	1.96	--	--	--	--	--	--	--	--	--	--	--	--
	11/4/1996	--	--	8.6	8.36	--	0.24	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/1996	--	--	8.6	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<10	7.2	SPL	--	--	--	--
	5/17/1997	--	--	8.6	7.03	--	1.57	--	--	--	--	--	--	--	--	--	--	--	--
	8/11/1997	--	--	8.6	6.05	--	2.55	--	--	--	--	--	--	--	--	--	--	--	--

**Table 2**  
**Groundwater Elevation and Analytical Data**  
**Former BP Station #11126**  
**1700 Powell St., Emeryville, CA**

Well No.	Date	P/ NP	Foot Note	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	DRO/ TPH-d (µg/L)	TOG (µg/L)	HVOC (µg/L)
MW-8	11/17/1997	--	--	8.6	9.14	--	-0.54	<50	<0.5	<1.0	<1.0	<1.0	<10	7.7	SPL	--	--	--	--
	1/29/1998	--	--	8.6	7.90	--	0.70	--	--	--	--	--	--	--	--	--	--	--	--
	6/22/1998	--	--	8.6	7.72	--	0.88	--	--	--	--	--	--	--	--	--	--	--	--
	12/30/1998	--	h	8.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/9/1999	--	h	8.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/23/1999	--	--	8.6	4.70	--	3.90	--	--	--	--	--	--	--	--	--	--	--	--
	9/23/1999	--	--	8.6	4.22	--	4.38	--	--	--	--	--	--	--	--	--	--	--	--
	12/28/1999	--	--	8.6	4.12	--	4.48	--	--	--	--	--	--	--	--	--	--	--	--
	3/22/2000	--	--	8.6	4.71	--	3.89	--	--	--	--	--	--	--	--	--	--	--	--
	5/26/2000	--	--	8.6	4.98	--	3.62	--	--	--	--	--	--	--	--	--	--	--	--
	9/15/2000	--	--	8.6	4.62	--	3.98	--	--	--	--	--	--	--	--	--	--	--	--
	12/11/2000	--	--	8.6	4.77	--	3.83	--	--	--	--	--	--	--	--	--	--	--	--
	3/29/2001	--	h	8.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/27/2001	--	--	8.6	5.11	--	3.49	570	<2.5	<2.5	2.58	<7.5	3.43	--	PACE	--	--	--	--
	9/19/2001	--	--	8.6	5.00	--	3.60	<500	<5.0	<5.0	<5.0	<15	<5.0	--	PACE	--	--	--	--
	12/28/2001	--	--	8.6	4.15	--	4.45	440	<0.5	<0.5	0.975	<1.0	6.27	--	PACE	--	--	--	--
	3/12/2002	--	--	8.6	4.35	--	4.25	330	<2.5	<2.5	<2.5	<5.0	8.69	--	PACE	--	--	--	--
	6/13/2002	--	*	8.6	5.09	--	3.51	<500	<5.0	<5.0	<5.0	<10	16.4	--	PACE	--	--	--	--
	9/6/2002	--	--	8.6	5.18	--	3.42	98	<0.5	<0.5	<0.5	<0.5	76	--	SEQ	--	--	--	--
	12/13/2002	--	o	8.6	4.84	--	3.76	120	<0.5	<0.5	0.94	0.52	140	--	SEQ	--	--	--	--
	2/19/2003	--	p	8.6	4.45	--	4.15	<2500	<25	<25	<25	<25	800	--	SEQ	--	--	--	--
	6/6/2003	--	--	8.6	5.00	--	3.60	<50000	<500	<500	<500	<500	17,000	--	SEQ	--	--	--	--
	8/7/2003	--	--	8.6	4.84	--	3.76	<2500	<25	<25	<25	<25	2,400	--	SEQ	--	--	--	--
	11/20/2003	P	--	8.60	4.48	--	4.12	<2,500	<25	<25	<25	<25	1,400	--	SEQM	6.9	--	--	--
	04/28/2004	P	--	8.60	9.66	--	-1.06	730	<2.5	<2.5	<2.5	<2.5	170	--	SEQM	6.9	--	--	--
	08/26/2004	P	--	8.60	4.73	--	3.87	<2,500	<25	<25	<25	<25	170	--	SEQM	6.8	--	--	--
	12/01/2004	P	--	8.60	4.80	--	3.80	<250	<2.5	<2.5	<2.5	<2.5	36	--	SEQM	6.8	--	--	<25
	02/02/2005	P	--	8.60	4.50	--	4.10	810	<0.50	<0.50	<0.50	<0.50	41	--	SEQM	7.0	--	--	--
	04/25/2005	P	--	11.08	4.99	--	6.09	1,400	<12	<12	<12	<12	32	--	SEQM	6.8	--	--	--
MW-9	10/12/1993	--	--	8.08	5.66	0.08	2.34	--	--	--	--	--	--	--	--	--	--	--	--
	2/15/1994	--	--	8.08	5.32	0.05	2.71	--	--	--	--	--	--	--	--	--	--	--	--
	5/11/1994	--	--	8.08	5.57	--	2.51	--	--	--	--	--	--	--	--	--	--	--	--
	8/1/1994	--	--	8.08	6.25	--	1.83	--	--	--	--	--	--	--	--	--	--	--	--

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**Groundwater Elevation and Analytical Data**  
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**1700 Powell St., Emeryville, CA**

Well No.	Date	P/ NP	Foot Note	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	DRO/ TPH-d (µg/L)	TOG (µg/L)	HVOC (µg/L)
MW-9	10/18/1994	--	--	8.08	5.59	0.13	2.36	--	--	--	--	--	--	--	--	--	--	--	--
	1/13/1995	--	--	8.08	4.42	0.14	3.52	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/1995	--	--	8.08	4.06	0.11	3.91	--	--	--	--	--	--	--	--	--	--	--	--
	7/11/1995	--	--	8.08	4.21	0.08	3.79	--	--	--	--	--	--	--	--	--	--	--	--
	11/2/1995	--	--	8.08	5.22	0.05	2.81	--	--	--	--	--	--	--	--	--	--	--	--
	2/5/1996	--	--	8.08	4.76	0.01	3.31	--	--	--	--	--	--	--	--	--	--	--	--
	4/24/1996	--	--	8.08	4.62	0.09	3.37	--	--	--	--	--	--	--	--	--	--	--	--
	7/15/1996	--	--	8.08	5.11	0.04	2.93	--	--	--	--	--	--	--	--	--	--	--	--
	7/30/1996	--	--	8.08	5.15	--	2.93	--	--	--	--	--	--	--	--	--	--	--	--
	11/4/1996	--	--	8.08	6.75	0.01	1.32	--	--	--	--	--	--	--	--	--	--	--	--
	5/17/1997	--	e	--	--	--	--	97,000	16,000	8,200	2,300	17,300	39,000	--	SPL	--	--	--	--
	5/17/1997	--	--	8.08	5.42	--	2.66	97,000	16,000	7,700	2,300	18,400	40,000	7.0	SPL	--	--	--	--
	8/11/1997	--	e	--	--	--	--	100,000	14,000	360	3,200	5,790	27,000	--	SPL	--	--	--	--
	8/11/1997	--	--	8.08	5.37	--	2.71	71,000	12,000	340	2,100	4,300	26,000	9.1	SPL	--	--	--	--
	11/17/1997	--	e	--	--	--	--	100,000	24,000	5,300	3,500	19,300	35,000	--	SPL	--	--	--	--
	11/17/1997	--	r	8.08	5.62	--	2.46	100,000	22,000	4,800	3,100	17,900	32,000	8.3	SPL	--	--	--	--
	1/29/1998	--	e	--	--	--	--	250,000	20,000	20,000	3,100	18,400	110,000	--	SPL	--	--	--	--
	1/29/1998	--	r	8.08	4.07	--	4.01	250,000	20,000	21,000	3,100	18,500	110,000	6.6	SPL	--	--	--	--
	6/22/1998	--	e	--	--	--	--	290,000	20,000	17,000	3,800	21,200	110,000	--	SPL	--	--	--	--
	6/22/1998	--	--	8.08	4.28	--	3.80	280,000	21,000	18,000	3,800	21,200	110,000	5.8	SPL	--	--	--	--
	12/30/1998	--	f	8.08	4.95	--	3.13	150,000	10,000	3,800	2,000	9,600	86000/89000	--	SPL	--	--	--	--
	3/9/1999	--	--	8.08	3.95	--	4.13	82,000	6,800	570	1,400	4,700	100,000	--	SPL	--	--	--	--
	6/23/1999	--	--	8.08	5.12	--	2.96	41,000	11,000	820	2,300	5,200	92,000	--	SPL	--	--	--	--
	9/23/1999	--	--	8.08	4.74	--	3.34	57,000	12,000	5,400	1,900	9,500	89,000	--	SPL	--	--	--	--
	12/28/1999	--	--	8.08	4.58	--	3.50	46,000	15,000	490	2,500	3,500	100,000	--	PACE	--	--	--	--
	3/22/2000	--	--	8.08	3.90	--	4.18	86,000	18,000	1,800	2,300	6,800	120,000	--	PACE	--	--	--	--
	5/26/2000	--	--	8.08	4.15	--	3.93	82,000	17,000	680	1,800	3,800	100,000	--	PACE	--	--	--	--
	9/6/2000	--	--	8.08	4.47	--	3.61	100,000	19,000	280	2,400	6,400	84,000	--	PACE	--	--	--	--
	9/15/2000	--	--	8.08	4.34	--	3.74	--	--	--	--	--	--	--	--	--	--	--	--
	12/11/2000	--	--	8.08	4.41	--	3.67	110,000	14,400	768	2,610	6,670	123,000	--	PACE	--	--	--	--
	3/29/2001	--	h	8.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/26/2001	--	m, l	8.08	5.03	0.13	2.92	--	--	--	--	--	--	--	--	--	--	--	--
	9/19/2001	--	m	8.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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 1700 Powell St., Emeryville, CA

Well No.	Date	P/ NP	Foot Note	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	DRO/ TPH-d (µg/L)	TOG (µg/L)	HVOC (µg/L)
MW-9	12/28/2001	--	--	8.08	3.73	--	4.35	110,000	15,000	1,500	2,280	5,530	60,900	--	PACE	--	--	--	--
	3/12/2002	--	--	8.08	4.93	--	3.15	88,000	12,500	2,600	2,800	8,950	44,000	--	PACE	--	--	--	--
	6/13/2002	--	*	8.08	4.13	--	3.95	59,000	9,870	161	2,560	5,560	35,600	--	PACE	--	--	--	--
	9/6/2002	--	--	8.08	4.39	--	3.69	47,000	10,000	<100	2,100	4,600	31,000	--	SEQ	--	--	--	--
	12/13/2002	--	o	8.08	3.97	--	4.11	57,000	11,000	1,000	2,300	5,800	28,000	--	SEQ	--	--	--	--
	2/19/2003	--	p	8.08	3.25	--	4.83	76,000	10,000	2,100	3,000	8,900	11,000	--	SEQ	--	--	--	--
	6/6/2003	--	--	8.08	3.94	--	4.14	66,000	9,000	<500	2,500	4,400	17,000	--	SEQ	--	--	--	--
	8/7/2003	--	r	8.08	3.92	--	4.16	53,000	7,600	<250	2,600	4,700	17,000	--	SEQ	--	--	--	--
	11/20/2003	P	--	8.08	4.89	--	3.19	40,000	6,800	<250	860	1,100	16,000	--	SEQM	6.7	--	--	--
	04/28/2004	P	r	8.08	3.19	--	4.89	47,000	5,600	690	2,300	6,800	8,500	--	SEQM	7.7	--	--	--
	08/26/2004	P	--	8.08	3.61	--	4.47	35,000	3,700	500	1,300	5,300	6,500	--	SEQM	--	--	--	<50
	12/01/2004	P	--	8.08	3.99	--	4.09	36,000	3,500	<250	1,200	4,300	8,300	--	SEQM	6.8	--	--	--
	02/02/2005	P	r	8.08	3.71	--	4.37	21,000	1,800	130	670	2,000	3,600	--	SEQM	7.1	--	--	--
	04/25/2005	P	r	10.55	3.31	--	7.24	5,900	190	<5.0	120	77	540	--	SEQM	7.2	--	--	--
	MW-10	04/25/2005	P	--	12.53	8.37	--	4.16	<50	<0.50	<0.50	<0.50	<0.50	1.5	--	SEQM	6.8	--	--
MW-11	04/25/2005	P	--	14.55	9.29	--	5.26	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	SEQM	7.1	--	--	--
QC-2	11/5/1992	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	--	--	--
	10/12/1993	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	--	--	--
	2/15/1994	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	--	--	--
	5/11/1994	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	--	--	--
	8/1/1994	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	--	--	--
	10/18/1994	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	--	--	--
	1/13/1995	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	--	--	--
	4/13/1995	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<1	--	--	ATI	--	--	--	--
	7/11/1995	--	g	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	--	ATI	--	--	--	--
	11/2/1995	--	g	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	ATI	--	--	--	--
	2/5/1996	--	g	--	--	--	--	<50	<0.5	<1	<1	<1	<10	--	SPL	--	--	--	--
	4/24/1996	--	g	--	--	--	--	<50	<0.5	<1	<1	<1	<10	--	SPL	--	--	--	--
	7/16/1996	--	g	--	--	--	--	<50	<0.5	<1	<1	<1	<10	--	SPL	--	--	--	--

Table 2

Groundwater Elevation and Analytical Data

Former BP Station #11126  
1700 Powell St., Emeryville, CA

ABBREVIATIONS:

TPH-g Total petroleum hydrocarbons as gasoline  
TPH-d Total petroleum hydrocarbons as diesel  
GRO Gasoline Range Organics  
DRO Diesel Range Organics  
MTBE Methyl tert butyl ether  
TOG Total oil and grease  
HVOC Halogenated volatile organic compounds  
DO Dissolved oxygen  
P/NP Purge/No Purge  
ug/L Micrograms per liter  
mg/L Milligrams per liter  
ppm Parts per million  
< Not detected above reported detection limit  
— Not analyzed/applicable/measurable  
PACE Pace, Inc.  
ATI Analytical Technologies, Inc.  
SPL Southern Petroleum Laboratories  
SEQ Sequoia Analytical  
TOC Top of Casing  
DTW Depth to Water  
GWE Groundwater Elevation

NOTES:

- a Top of casing elevations surveyed relative to an established benchmark with an elevation of 8.11 feet above mean sea level.  
b Groundwater elevations adjusted assuming a specific gravity of 0.75 for free product.  
c Detection limits vary; see laboratory report. d A copy of the documentation for this data is included in Appendix C of Alisto report 10-061-07-004.  
e Blind duplicate.  
f EPA Methods 8020/8260 used.  
g Travel blank.  
h Inaccessible.  
i Depth to water anomalous; groundwater elevation not used in contouring.  
j Well paved over.  
k A copy of the documentation for this data can be found in Blaine Tech Services report 010627-Z-1. MTBE data for the November 4, 1992 sampling event has been destroyed. No chromatograms could be located for MTBE data from well MW-5, sampled on October 12, 1993.  
l Groundwater elevation is an estimate.  
m Not sampled due to nature of SPH.  
n Unable to sample.  
o EPA Methods 8015B / 8021B used.  
p Beginning in the first quarter 2003, TPHg and VOCs analyzed by EPA Method 8260B.  
q Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.  
r Sheen in well  
s Discrete Peak @ C5  
t HVOC detected was methylene chloride  
\* During the second quarter of 2002, URS Corporation assumed groundwater monitoring activities for BP.

The data in this table collected prior to June 2002 was provided to URS by RM and their previous consultants. URS has not verified the accuracy of this information.

Table 3

## Fuel Additives Analytical Data

Former BP Station #11126  
1700 Powell St., Emeryville, 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)	Footnotes/Comments
MW-1	6/6/2003	<5,000	<1,000	1,400	<25	<25	<25	--	--	
	8/7/2003	<1,000	560	920	<5.0	<5.0	12	<5.0	<5.0	
	11/20/2003	1,800	<200	250	<5.0	<5.0	<5.0	--	--	a (ethanol)
	04/28/2004	<1,000	950	200	<5.0	<5.0	<5.0	<5.0	<5.0	
	08/26/2004	<500	320	180	<2.5	<2.5	<2.5	<2.5	<2.5	b
	12/01/2004	<1,000	300	170	<5.0	<5.0	<5.0	<5.0	<5.0	
	02/02/2005	<500	6,700	160	<2.5	<2.5	<2.5	<2.5	<2.5	b (ethanol)
	04/25/2005	<500	5,000	200	<2.5	<2.5	<2.5	<2.5	<2.5	
MW-2	6/6/2003	<200,000	<40,000	72,000	<1,000	<1,000	1,300	--	--	
	8/7/2003	<100,000	45,000	83,000	<500	<500	1,300	<500	<500	
	11/20/2003	<20,000	48,000	18,000	<100	<100	200	--	--	
	04/28/2004	<50,000	59,000	31,000	<250	<250	<250	<250	<250	
	08/26/2004	23	<10,000	11,000	<250	<250	320	<250	<250	b
	12/01/2004	<20,000	<4,000	10,000	<100	<100	230	<100	<100	
	02/02/2005	<20,000	4,000	10,000	<100	<100	260	<100	<100	b (ethanol)
	04/25/2005	<10,000	3,700	8,200	<50	<50	220	<50	<50	
MW-3	6/6/2003	<1,000	<200	180	<5.0	<5.0	16	--	--	
	8/7/2003	<1,000	<200	290	<5.0	<5.0	20	<5.0	<5.0	
	11/20/2003	<100	<20	17	<0.50	<0.50	1.4	--	--	
	04/28/2004	<200	<40	87	<1.0	<1.0	3.9	<1.0	<1.0	
	08/26/2004	<5.0	260	34	<0.50	<0.50	2.0	<0.50	<0.50	b
	12/01/2004	<200	610	7.4	<1.0	<1.0	<1.0	<1.0	<1.0	
	02/02/2005	<200	<40	20	<1.0	<1.0	1.1	<1.0	<1.0	b (ethanol)
	04/25/2005	<500	160	220	<2.5	<2.5	10	<2.5	<2.5	
MW-4	6/6/2003	<10,000	2,500	6,800	<50	<50	190	--	--	
	8/7/2003	<10,000	2,400	6,600	<50	<50	160	<50	<50	
	11/20/2003	<20,000	<4,000	11,000	<100	<100	310	--	--	
	04/28/2004	<50,000	15,000	3,600	<250	<250	<250	<250	<250	
	08/26/2004	<5.0	16,000	1,800	<25	<25	60	<25	<25	
	12/01/2004	<2,000	19,000	450	<10	<10	10	<10	<10	
	02/02/2005	<1,000	19,000	410	<5.0	<5.0	10	<5.0	<5.0	b (ethanol)
	04/25/2005	<1,000	18,000	170	<5.0	<5.0	<5.0	<5.0	<5.0	

Table 3

**Fuel Additives Analytical Data**  
 Former BP Station #11126  
 1700 Powell St., Emeryville, 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)	Footnotes/ Comments
MW-5	6/6/2003	<1,000	<200	<5.0	<5.0	<5.0	<5.0			
	8/7/2003	<1,000	<200	18	<5.0	<5.0	<5.0	-	-	
	11/20/2003	<500	<100	12	<2.5	<2.5	<2.5	-	<5.0	
	04/28/2004	<500	<100	11	<2.5	<2.5	<2.5	-	-	
	08/26/2004	8.3	<100	74	<2.5	<2.5	<2.5	<2.5	<2.5	
	12/01/2004	<1,000	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
	02/02/2005	<500	<100	11	<2.5	<2.5	<2.5	<2.5	<2.5	
	04/25/2005	<500	<100	12	<2.5	<2.5	<2.5	<2.5	<2.5	b (ethanol)
MW-6	6/6/2003	<1,000	<200	140	<5.0	<5.0	21	-	-	
	8/7/2003	<1,000	<200	160	<5.0	<5.0	20	<5.0	<5.0	
	11/20/2003	<100	<20	74	<0.50	<0.50	12	-	-	
	04/28/2004	<500	<100	120	<2.5	<2.5	12	<2.5	<2.5	
	08/26/2004	11	<100	110	<2.5	<2.5	12	<2.5	<2.5	
	12/01/2004	<500	<100	86	<2.5	<2.5	11	<2.5	<2.5	b
	02/02/2005	<100	32	41	<0.50	<0.50	6.2	<0.50	<0.50	
	04/25/2005	<100	45	50	<0.50	<0.50	6.0	<0.50	<0.50	b (ethanol)
MW-7	6/6/2003	<1,000	<200	510	<5.0	<5.0	41	-	-	
	8/7/2003	<1,000	<200	520	<5.0	<5.0	43	<5.0	<5.0	
	11/20/2003	<500	1,300	270	<2.5	<2.5	8.9	-	-	
	04/28/2004	<500	880	71	<2.5	<2.5	3.5	<2.5	<2.5	
	08/26/2004	6.0	4,800	150	<2.5	<2.5	7.8	<0.50	<0.50	
	12/01/2004	<200	1,400	25	<1.0	<1.0	1.1	<1.0	<1.0	
	02/02/2005	<100	830	31	<0.50	<0.50	1.8	<0.50	<0.50	
	04/25/2005	<100	520	41	<0.50	<0.50	2.1	<0.50	<0.50	b (ethanol)
MW-8	6/6/2003	<100,000	<20,000	17,000	<500	<500	<500	-	-	
	8/7/2003	<5,000	<1,000	2,400	<25	<25	44	<25	<25	
	11/20/2003	<5,000	4,100	1,400	<25	<25	<25	-	-	b
	04/28/2004	<500	42,000	170	<2.5	<2.5	<2.5	<2.5	<2.5	c
	08/26/2004	<5.0	47,000	170	<2.5	<2.5	<2.5	<2.5	<2.5	
	12/01/2004	<500	9,700	36	<2.5	<2.5	<2.5	<2.5	<2.5	
	02/02/2005	<100	<20	41	<0.50	0.72	0.64	<0.50	<0.50	
	04/25/2005	<2,500	45,000	32	<12	<12	<12	<12	<12	b (ethanol)

Table 3

## Fuel Additives Analytical Data

Former BP Station #11126  
1700 Powell St., Emeryville, 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)	Footnotes/ Comments
MW-9	6/6/2003	<100,000	<20,000	17,000	<500	<500	<500	--	--	
	8/7/2003	<50,000	<10,000	17,000	<250	<250	350	<250	<250	
	11/20/2003	<50,000	12,000	16,000	<250	<250	<250	--	--	
	04/28/2004	<25,000	<5,000	8,500	<120	<120	170	<120	<120	
	08/26/2004	13	2,600	6,500	<50	<50	140	<50	<50	d (TBA)
	12/01/2004	<50,000	<10,000	8,300	<250	<250	<250	<250	<250	
	02/02/2005	<10,000	5,600	3,600	<50	<50	88	<50	<50	b (ethanol)
	04/25/2005	<1,000	1,400	540	<5.0	<5.0	14	<5.0	<5.0	
MW-10	04/25/2005	<100	<20	1.5	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-11	04/25/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	



**Table 3**

**Fuel Additives Analytical Data**

Former BP Station #11126  
1700 Powell St., Emeryville, CA

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-Dibromoethane

EDB = 1,2-Dichloroethane

ug/L = micrograms per liter

< = Not detected above the laboratory detection limit.

-- = Not analyzed/not sampled/not measured/not available

a = Confirmatory analysis was past holding time

b = 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.

c = The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.

d = Initial analysis within holding time but required dilution.

e = Split samples analyzed by EPA Method 8260B SIM

**ATTACHMENT A**

**ACEHS WORK PLAN APPROVAL LETTER DATED MARCH 15, 2005**

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



March 15 2005

Kyle Christie  
Atlantic Richfield Company  
6 Centerpointe Drive, LPR6-161  
La Palma, CA 90623-1066

Liz Sewell  
ConocoPhillips  
Risk Management & Remediation  
76 Broadway  
Sacramento, CA 95818

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

Alameda County  
MAR 23 2005  
Environmental Health

Subject: Fuel Leak Case No. RO0000066, BP #11126, Active Service Station at 1700 Powell Street, Emeryville, California – Workplan Approval

Dear Mr. Christie and Ms. Sewell:

Alameda County Environmental Health (ACEH) has reviewed the February 3, 2005 *Addendum to Offsite Assessment Work Plan* prepared by URS Corporation for the above-referenced site. We concur with your workplan provided the following conditions are met:

1. If deemed necessary by your geologist or engineer to fully define the vertical and lateral extent of contamination, additional soil or groundwater samples will be collected as part of the current investigation efforts. ACEH will be informed via telephone or email of any additions to the sampling and analysis plan. Any additional work will follow the workplan-specified procedures. Dynamic investigations are consistent with USEPA protocol for expedited site assessments, which are scientifically valid and offer a cost-effective approach to fully define a plume and to help progress a case toward closure.
2. 72-hr advance written notification (email preferred) will be provided to ACEH prior to field sampling activities.

#### REPORT REQUEST

Please submit your *Soil and Water Investigation Report*, which addresses the comments above by **June 15, 2005**. ACEH makes this request pursuant to California Health & Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2778 outline the responsibilities of a responsible party for an unauthorized release from an UST system, and require your compliance with this request.

#### Professional Certification and Conclusions/Recommendations

The California Business and Professions Code (Sections 6735 and 7835.1) requires that workplans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature,

and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

Perjury Statement

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

**UNDERGROUND STORAGE TANK CLEANUP FUND**

Please note that delays in investigation, late reports or enforcement actions by ACEH may result in you becoming ineligible to receive cleanup cost reimbursement from the state's Underground Storage Tank Cleanup Fund (senate Bill 2004).

**AGENCY OVERSIGHT**

If it appears as though significant delays are occurring or reports are not submitted as requested we will consider referring your case to the County District Attorney or other appropriate agency, for enforcement. California Health and Safety Code, Section 25299.76 authorizes ACEH enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

Please call me at (510) 567-6719 with any questions regarding this case.

Sincerely,



Robert W. Schultz, P.G.  
Hazardous Materials Specialist

Alameda County  
MAR 23 2005  
Environmental Health

- cc: Lynelle Onishi, URS Corporation, 500 12th St., Ste 200, Oakland, CA 94607-4014  
✓ Chad Bralthwalte, Regency Centers Corporation, 555 South Flower St., Ste. 3500, Los Angeles, CA 90071  
Donna Drogos, ACEH  
Robert W. Schultz, ACEH

**ATTACHMENT B**

**ACPW DRILLING PERMITS**

.



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION**  
399 ELMHURST ST. HAYWARD CA. 94544-1395  
PHONE (510) 670-6693 James Yao

FAX (510) 782-1939

www.acfewcd.org

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

FOR OFFICE USE

LOCATION OF PROJECT 5795 CHRISTIE AVE.  
EMERYVILLE, CA 94608  
(GP #11126)

PERMIT NUMBER W05-0150  
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

-tw #4

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

CLIENT Name BP/AMCO MAIL CODE 8040  
Address 801 WILSONVILLE RD N Phone 630-434-6219  
City LISLE, IL Zip 60532

APPLICANT Name URS CORP / KEVIN UNO  
Address 1383 BROADWAY Fax 570-879-3268  
City OAKLAND Phone 370-879-3229 Zip 94612

#### TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input type="checkbox"/>
Monitoring	<input checked="" type="checkbox"/>	Well Destruction	<input type="checkbox"/>

#### PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other _____	<input type="checkbox"/>

#### DRILLING METHOD:

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input checked="" type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input type="checkbox"/>		

DRILLER'S NAME GREGG DRILLING + TESTING

DRILLER'S LICENSE NO. CE7-485165

#### WELL PROJECTS

Drill Hole Diameter	<u>8</u> in.	Maximum Depth	<u>20</u> ft.
Casing Diameter	<u>2</u> in.	Owner's Well Number	<u>MW-10</u>
Surface Seal Depth	<u>9</u> ft.		

#### GEOTECHNICAL/CONTAMINATION PROJECTS

Number of Borings	_____	Maximum Hole Diameter	_____ in.
Hole Diameter	_____ in.	Depth	_____ ft.

STARTING DATE 3/4/05

COMPLETION DATE 3/4/05

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

APPLICANT'S SIGNATURE [Signature] DATE 2/3/05

PLEASE PRINT NAME KEVIN UNO

Rev.5-11-04

APPROVED [Signature] DATE 2-3-05



# 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

www.acfcwcd.org

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

FOR OFFICE USE

LOCATION OF PROJECT 5795 CHRISTIE AVE  
EMERYVILLE, CA 94608  
(AP #11126)

PERMIT NUMBER W05-0151  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

CLIENT  
Name BP/AMCO MAIL CODE 8040  
Address 801 WILKINSON RD Phone 630-439-6219  
City LISLE, IL Zip 60532

APPLICANT  
Name URS CORP / KEVIN UNO  
Address 1353 BROADWAY Fax 570-874-3268  
City OAKLAND Phone 570-874-3229  
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

DRILLER'S NAME GREGG DRILLING + TESTING

DRILLER'S LICENSE NO. CE7-485165

### WELL PROJECTS

Drill Hole Diameter 8 in. Maximum Depth 20 ft.  
Casing Diameter 2 in. Owner's Well Number MW-11  
Surface Seal Depth 9 ft.

### GEO TECHNICAL/CONTAMINATION PROJECTS

Number of Borings \_\_\_\_\_ Maximum Depth \_\_\_\_\_ ft.  
Hole Diameter \_\_\_\_\_ in.

STARTING DATE 3/4/05

COMPLETION DATE 3/4/05

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

APPLICANT'S SIGNATURE [Signature] DATE 2/3/05

PLEASE PRINT NAME KEVIN UNO Rev.5-11-04

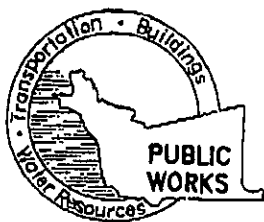
### PERMIT CONDITIONS

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** - MW# 4

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

APPROVED [Signature] DATE 2-3-05



**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**

**PERMIT NO. W05-0150-0151**

**WATER RESOURCES SECTION  
GROUNDWATER PROTECTION ORDINANCE  
MW#4-GENERAL CONDITIONS: MONITORING WELL/PIEZOMETERS**

1. Prior to installation of any monitoring wells into any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
2. **The applicant shall submit a written agreement to this office within 30 days, the permission/agreement to place the well(s) on property not owned by the well owner and also who will be responsible for the well(s).**
3. The minimum surface seal thickness two inches of cement grout placed by tremie.
4. All monitoring wells shall have a minimum surface cement seal depth of five (5) feet or the maximum depth practicable or twenty (20) feet.
5. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
6. Permittee, permittee's, contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statues regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on-or off site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.
7. No changes in construction procedures or well type shall change, as described on this permit application. This permit may be voided if it contains incorrect information.
8. Drilling Permit(s) can be voided/ canceled only in writing. It is the applicants responsibilities to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. **Permit is valid from March 4 to March 4, 2005.** Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.
9. Compliance with the above well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). **Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including: permit number and site map.**
10. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
11. **Applicant shall contact George Bolton for a inspection time at 510-670-5594 at least five (5) working days prior to starting, once the permit has been approved.**



**ATTACHMENT C**

**LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY RECORDS**



**Sequoia  
Analytical**

885 Jarvis Drive  
Morgan Hill, CA 95037  
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2 May, 2005

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

RE: BP Heritage #11126, Emeryville, CA  
Work Order: MOD0390

Enclosed are the results of analyses for samples received by the laboratory on 04/16/05 08:30. 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]  
1333 Broadway, Suite 800  
Oakland CA, 94612

Project:BP Heritage #11126, Emeryville, CA  
Project Number:G07TP-0020  
Project Manager:Leonard Niles

MOD0390  
Reported:  
05/02/05 18:13

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-10-7.0	MOD0390-01	Soil	04/15/05 09:55	04/16/05 08:30
MW-10-11.5	MOD0390-02	Soil	04/15/05 10:05	04/16/05 08:30
MW-10-15.5	MOD0390-03	Soil	04/15/05 10:12	04/16/05 08:30
MW-10-10.0	MOD0390-04	Soil	04/15/05 10:00	04/16/05 08:30
MW-10-19.5	MOD0390-05	Soil	04/15/05 10:27	04/16/05 08:30
MW-11-10.5	MOD0390-06	Soil	04/15/05 13:28	04/16/05 08:30
MW-11-15.5	MOD0390-07	Soil	04/15/05 13:40	04/16/05 08:30
MW-11-18.0	MOD0390-08	Soil	04/15/05 13:55	04/16/05 08:30
MW-11-23.5	MOD0390-09	Soil	04/15/05 14:14	04/16/05 08:30
TB-11126-04152005	MOD0390-10	Water	04/15/05 00:00	04/16/05 08:30

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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URS Corporation [Arco] 1333 Broadway, Suite 800 Oakland CA, 94612	Project:BP Heritage #11126, Emeryville, CA Project Number:G07TP-0020 Project Manager:Leonard Niles	MOD0390 Reported: 05/02/05 18:13
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**Total Metals by EPA 6000/7000 Series Methods  
 Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>MW-10-7.0 (MOD0390-01) Soil    Sampled: 04/15/05 09:55    Received: 04/16/05 08:30</b>										
Lead	45	5.0		mg/kg	1	5D25036	04/25/05	04/26/05	EPA 6010B	



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Oakland CA, 94612

Project:BP Heritage #11126, Emeryville, CA  
Project Number:G07TP-0020  
Project Manager:Leonard Niles

MOD0390  
Reported:  
05/02/05 18:13

**Volatile Organic Compounds by EPA Method 8260B**

**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-10-7.0 (MOD0390-01) Soil</b> <b>Sampled: 04/15/05 09:55</b> <b>Received: 04/16/05 08:30</b>									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	5D25012	04/25/05	04/25/05	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	"	"	"	"	"	"	IC
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	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		88 %	60-125		"	"	"	"	
<b>MW-11-18.0 (MOD0390-08) Soil</b> <b>Sampled: 04/15/05 13:55</b> <b>Received: 04/16/05 08:30</b>									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1.01	5D25012	04/25/05	04/25/05	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	"	"	"	"	"	"	IC
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	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		88 %	60-125		"	"	"	"	

Sequoia Analytical - Morgan Hill

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.*



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Project:BP Heritage #11126, Emeryville, CA  
 Project Number:G07TP-0020  
 Project Manager:Leonard Niles

MOD0390  
 Reported:  
 05/02/05 18:13

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-11-23.5 (MOD0390-09) Soil    Sampled: 04/15/05 14:14    Received: 04/16/05 08:30</b>									
tert-Amyl methyl ether	ND	0.0050	mg/kg	0.99	5D25012	04/25/05	04/25/05	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	0.099	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	IC
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	0.099	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		90 %	60-125	"	"	"	"	"	



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Project:BP Heritage #11126, Emeryville, CA  
 Project Number:G07TP-0020  
 Project Manager:Leonard Niles

MOD0390  
 Reported:  
 05/02/05 18:13

**Total Metals by EPA 6000/7000 Series Methods - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 5D25036 - EPA 3050B / EPA 6010B</b>										
<b>Blank (5D25036-BLK1)</b>										
Lead	ND	5.0	mg/kg							Prepared: 04/25/05 Analyzed: 04/26/05
<b>Laboratory Control Sample (5D25036-BS1)</b>										
Lead	48.4	5.0	mg/kg	50.0	11	97	75-120			Prepared: 04/25/05 Analyzed: 04/26/05
<b>Matrix Spike (5D25036-MS1)</b>										
Lead	55.8	5.0	mg/kg	50.0	11	90	75-120			Source: MOD0491-06 Prepared: 04/25/05 Analyzed: 04/26/05
<b>Matrix Spike Dup (5D25036-MSD1)</b>										
Lead	54.7	5.0	mg/kg	50.0	11	87	75-120	2	20	Source: MOD0491-06 Prepared: 04/25/05 Analyzed: 04/26/05



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Project:BP Heritage #11126, Emeryville, CA  
Project Number:G07TP-0020  
Project Manager:Leonard Niles

MOD0390  
Reported:  
05/02/05 18:13

**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
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**Batch 5D25012 - EPA 5030B P/T / EPA 8260B**

**Blank (5D25012-BLK1)**

Prepared & Analyzed: 04/25/05

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	"							IC
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      0.00436      "      0.00500      87      60-125

**Laboratory Control Sample (5D25012-BS1)**

Prepared & Analyzed: 04/25/05

tert-Amyl methyl ether	0.0108	0.0050	mg/kg	0.0100		108	80-130			
Benzene	0.0106	0.0050	"	0.0100		106	65-125			
tert-Butyl alcohol	0.0530	0.020	"	0.0500		106	80-165			
Di-isopropyl ether	0.0107	0.0050	"	0.0100		107	85-115			
1,2-Dibromoethane (EDB)	0.00997	0.0050	"	0.0100		100	85-130			
1,2-Dichloroethane	0.00970	0.0050	"	0.0100		97	63-124			
Ethanol	0.160	0.10	"	0.200		80	35-150			IC
Ethyl tert-butyl ether	0.0104	0.0050	"	0.0100		104	80-125			
Ethylbenzene	0.0113	0.0050	"	0.0100		113	80-135			
Methyl tert-butyl ether	0.00970	0.0050	"	0.0100		97	75-115			
Toluene	0.0107	0.0050	"	0.0100		107	85-125			
Xylenes (total)	0.0336	0.0050	"	0.0300		112	80-140			

Surrogate: 1,2-Dichloroethane-d4      0.00424      "      0.00500      85      60-125





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Project:BP Heritage #11126, Emeryville, CA  
Project Number:G07TP-0020  
Project Manager:Leonard Niles

MOD0390  
Reported:  
05/02/05 18:13

**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
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**Batch 5D25012 - EPA 5030B P/T / EPA 8260B**

**Laboratory Control Sample (5D25012-BS2)**

Prepared & Analyzed: 04/25/05

Benzene	0.00520	0.0050	mg/kg	0.00640		81	65-125			
Ethylbenzene	0.00869	0.0050	"	0.00752		116	80-135			
Toluene	0.0337	0.0050	"	0.0319		106	85-125			
Xylenes (total)	0.0434	0.0050	"	0.0366		119	80-140			
Gasoline Range Organics (C4-C12)	0.412	0.10	"	0.440		94	53-126			
Surrogate: 1,2-Dichloroethane-d4	0.00447		"	0.00500		89	60-125			

**Laboratory Control Sample Dup (5D25012-BSD1)**

Prepared & Analyzed: 04/25/05

tert-Amyl methyl ether	0.0107	0.0050	mg/kg	0.0100		107	80-130	0.9	25	
Benzene	0.0102	0.0050	"	0.0100		102	65-125	4	20	
tert-Butyl alcohol	0.0563	0.020	"	0.0500		113	80-165	6	25	
Di-isopropyl ether	0.0106	0.0050	"	0.0100		106	85-115	0.9	20	
1,2-Dibromoethane (EDB)	0.00945	0.0050	"	0.0100		94	85-130	5	15	
1,2-Dichloroethane	0.0102	0.0050	"	0.0100		102	63-124	5	25	
Ethanol	0.172	0.10	"	0.200		86	35-150	7	40	
Ethyl tert-butyl ether	0.0103	0.0050	"	0.0100		103	80-125	1	25	
Ethylbenzene	0.0110	0.0050	"	0.0100		110	80-135	3	20	
Methyl tert-butyl ether	0.0103	0.0050	"	0.0100		103	75-115	6	35	
Toluene	0.0102	0.0050	"	0.0100		102	85-125	5	15	
Xylenes (total)	0.0334	0.0050	"	0.0300		111	80-140	0.6	20	
Surrogate: 1,2-Dichloroethane-d4	0.00455		"	0.00500		91	60-125			

**Matrix Spike (5D25012-MS1)**

Source: MOD0491-11

Prepared & Analyzed: 04/25/05

Benzene	0.00507	0.0050	mg/kg	0.00640	0.000070	78	65-125			
Ethylbenzene	0.00706	0.0050	"	0.00752	ND	94	80-135			
Methyl tert-butyl ether	0.00792	0.0050	"	0.00992	ND	80	75-115			
Toluene	0.0287	0.0050	"	0.0319	0.00035	89	85-125			
Xylenes (total)	0.0352	0.0050	"	0.0366	ND	96	80-140			
Gasoline Range Organics (C4-C12)	0.356	0.10	"	0.440	ND	81	53-126			
Surrogate: 1,2-Dichloroethane-d4	0.00445		"	0.00500		89	60-125			

Sequoia Analytical - Morgan Hill

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.



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URS Corporation [Arco] 1333 Broadway, Suite 800 Oakland CA, 94612	Project:BP Heritage #11126, Emeryville, CA Project Number:G07TP-0020 Project Manager:Leonard Niles	MOD0390 Reported: 05/02/05 18:13
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**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
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**Batch 5D25012 - EPA 5030B P/T / EPA 8260B**

Matrix Spike Dup (5D25012-MSD1)	Source: MOD0491-11		Prepared & Analyzed: 04/25/05							
Benzene	0.00500	0.0050	mg/kg	0.00640	0.000070	77	65-125	1	20	
Ethylbenzene	0.00704	0.0050	"	0.00752	ND	94	80-135	0.3	20	
Methyl tert-butyl ether	0.00767	0.0050	"	0.00992	ND	77	75-115	3	35	
Toluene	0.0284	0.0050	"	0.0319	0.00035	88	85-125	1	15	
Xylenes (total)	0.0346	0.0050	"	0.0366	ND	95	80-140	2	20	
Gasoline Range Organics (C4-C12)	0.352	0.10	"	0.440	ND	80	53-126	1	25	
Surrogate: 1,2-Dichloroethane-d4	0.00457		"	0.00500		91	60-125			



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

Project:BP Heritage #11126, Emeryville, CA  
Project Number:G07TP-0020  
Project Manager:Leonard Niles

MOD0390  
Reported:  
05/02/05 18:13

**Notes and Definitions**

IC        Calib. verif. is within method limits but outside contract limits  
DET      Analyte DETECTED  
ND      Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified  
NR      Not Reported  
dry      Sample results reported on a dry weight basis  
RPD      Relative Percent Difference

---

**From:** <Lynelle\_Onishi@URSCorp.com>  
**To:** "Lisa Race" <lrace@sequoialabs.com>  
**Date:** 4/19/05 8:32AM  
**Subject:** 11126 soil samples revised COC

Lisa,  
I would like to request two additional samples be analyzed on the attached  
COC (MW-11-18.0 and MW-11-23.5.  
Let me know if you have any questions.

Thank you  
Lynelle Onishi  
URS Corporation  
1333 Broadway, Suite 800  
Oakland, CA 94612  
(510)874-1758 ofc  
(510)874-3268 FAX  
(408)839-4836 cell

(See attached file: 11126\_20050419083319.pdf)

MOD 6390



**REVISED** 4/19/05

**Chain of Custody Record**

Project Name: Former BP Site 11126 Offsite Well Installation  
 BP BU/AR Region/Enfos Segment: BP/Americas/West Coast/Retail/WCBUNCA/Cent  
 State or Lead Regulatory Agency: Alameda County Environmental Health  
 Requested Due Date (mm/dd/yy): Standard TAT

On-site Time: 0735 Temp: 53°  
 Off-site Time: 1600 Temp: 70°  
 Sky Conditions: CLEAR  
 Meteorological Events: NONE  
 Wind Speed: 5-10 Direction: N-NW

Lab Name: <u>Sequoia Analytical</u>	BP/AR Facility No.: <u>11126</u>	Consultant/Contractor: <u>URS</u>
Address: <u>885 Jarvis Drive</u> <u>Morgan Hill, CA 95037</u>	BP/AR Facility Address: <u>1700 Powell St., Emeryville, CA</u>	Address: <u>1333 Broadway, Suite 800</u> <u>Oakland, CA 94612</u>
Lab PM: <u>Lisa Morgan</u>	Site Lat/Long:	Consultant/Contractor Project No.: <u>38487332</u>
Tele/Fax: <u>925.299.8891/925.299.8872</u>	California Global ID No.:	Consultant/Contractor PM: <u>Lynelle Onishi</u>
BP/AR PM Contact: <u>Kyle Christie</u>	Enfos Project No.: <u>G07TP-0020</u>	Tele/Fax: <u>510-874-1758/510-874-3268</u>
Address: <u>4 Centerpointe Dr.</u> <u>La Palma, CA</u>	Provision or RCOP (circle one) <u>RCOP Provision</u>	Report Type & QC Level: <u>Level I &amp; BDF</u>
Tele/Fax:	Phase/WBS: <u>01 - Assessment</u>	E-mail EDD To: <u>rachel.livall@urscorp.com</u>
	Sub Phase/Task: <u>03 - Analytical</u>	Invoice to: <u>BP West Coast Global Alliance</u>
	Cost Element: <u>05 - Subcontracted Costs</u>	

Lab Bottle Order No.	Item No.	Sample Description	Time	Date	Matrix			Laboratory No.	No. of Containers	Preservatives					Requested Analysis					Sample Point Lat/Long and Comments			
					Soil/Solid	Water/Liquid	Air			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Methanol	GRO (8260)	BTEX (8260)	Peak Add. (8260) MTBE, 1,2-DCA, EDB, TBA, TAME, DPE, BTBE	Total Solids (5520E)	Volatiles (8260E)		Semi-Volatiles (8270E)	Oil & Grease	Total Lead
	1	MW-10-7.0	0755	4/15/05	X				1	X					X	X	X						MOD 0390  * RUN HIGHEST GRO SAMPLE FOR TOTAL LEAD  HOLD  Please Analyze MW-11-18.0 + MW-11-23.5
	2	MW-10-11.5	1005																				
	3	MW-10-15.5	1012																				
	4	MW-10-10.0	1000																				
	5	MW-10-19.5	1027																				
	6	MW-11-10.5	1328																				
	7	MW-11-15.5	1340																				
	8	MW-11-18.0	1355																				
	9	MW-11-23.5	1414																				
	10																						

Sampler's Name: <u>KEVIN UNO</u>	Relinquished By / Affiliation: <u>[Signature] / URS</u>	Date: <u>4/15</u>	Time: <u>1635</u>	Accepted By / Affiliation:	Date:	Time:
Sampler's Company: <u>URS</u>						
Shipment Date: <u>4/15/05</u>						
Shipment Method:						
Shipment Tracking No.:						

Special Instructions: if running total Pb analysis and result are >50ppm, run STLC, if STLC results are >5ppm, run TCLP

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

---

**From:** <Lynelle\_Onishi@URSCorp.com>  
**To:** "Lisa Race" <lrace@sequoialabs.com>  
**Date:** 4/18/05 7:48AM  
**Subject:** BP 11126 soil samples collected 4/15, arrived at lab Sat 4/16

Lisa,

Per my voicemail, attached is a copy of the revised COC for the samples received Saturday. At this time, please run MW-10-7.0.

Let me know if you have any questions.

Thank you

Lynelle

(See attached file: 20050418074441.pdf)

Lynelle Onishi

URS Corporation

1333 Broadway, Suite 800

Oakland, CA 94612

(510)874-1758 o/c

(510)874-3268 FAX

(408)839-4836 cell







## SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: BP 11120  
 REC. BY (PRINT) no  
 WORKORDER: 11002390

DATE REC'D AT LAB: 04/16/05  
 TIME REC'D AT LAB: 830  
 DATE LOGGED IN: 04-14-05

For Regulatory Purposes?  
 DRINKING WATER YES/NO NO  
 WASTE WATER YES/NO 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 <input checked="" type="checkbox"/> Absent <input type="checkbox"/> Intact / Broken*									see core 2/2 04/16/05
2. Chain-of-Custody Present <input checked="" type="checkbox"/> Absent <input type="checkbox"/>									
3. Traffic Reports or Packing List: Present <input checked="" type="checkbox"/> Absent <input type="checkbox"/>									
4. Airbill: Airbill / Sticker Present <input checked="" type="checkbox"/> Absent <input type="checkbox"/>									
5. Airbill #: <u>See Attached</u>									
6. Sample Labels: Present <input checked="" type="checkbox"/> Absent <input type="checkbox"/>									
7. Sample IDs: Listed <input checked="" type="checkbox"/> Not Listed <input type="checkbox"/> on Chain-of-Custody									
8. Sample Condition: Intact <input checked="" type="checkbox"/> Broken* / Leaking* <input type="checkbox"/>									
9. Does information on chain-of-custody, traffic reports and sample labels agree? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									
10. Sample received within hold time? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									
11. Adequate sample volume received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									
12. Proper Preservatives used? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									
13. Trip Blank / Temp Blank Received? (circle which, if yes) <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									
14. Temp Rec. at Lab: <u>4.2°C</u> Is temp 4 +/- 2°C? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <small>(Acceptance range for samples requiring thermal pres.)</small>									

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

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



**Sequoia  
Analytical**

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11 May, 2005

Lynelle Onishi  
URS Corporation [Arco]  
1333 Broadway, Suite 800  
Oakland, CA 94612

RE: BP Heritage #11126, Emeryville, CA  
Work Order: MOD0650

Enclosed are the results of analyses for samples received by the laboratory on 04/26/05 17:15. 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] 1333 Broadway, Suite 800 Oakland CA, 94612	Project:BP Heritage #11126, Emeryville, CA Project Number:G07TP-0019 Project Manager:Lynelle Onishi	MOD0650 Reported: 05/11/05 13:50
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**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MOD0650-01	Water	04/25/05 12:50	04/26/05 17:15
MW-2	MOD0650-02	Water	04/25/05 13:35	04/26/05 17:15
MW-3	MOD0650-03	Water	04/25/05 11:55	04/26/05 17:15
MW-4	MOD0650-04	Water	04/25/05 13:00	04/26/05 17:15
MW-5	MOD0650-05	Water	04/25/05 11:45	04/26/05 17:15
MW-6	MOD0650-06	Water	04/25/05 12:15	04/26/05 17:15
MW-7	MOD0650-07	Water	04/25/05 12:35	04/26/05 17:15
MW-8	MOD0650-08	Water	04/25/05 13:20	04/26/05 17:15
MW-9	MOD0650-09	Water	04/25/05 14:00	04/26/05 17:15
MW-10	MOD0650-10	Water	04/25/05 10:50	04/26/05 17:15
MW-11	MOD0650-11	Water	04/25/05 11:15	04/26/05 17:15
TB-11126-04252005	MOD0650-12	Water	04/25/05 00:00	04/26/05 17:15

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 intact custody seals.

MS/MSD is reported for all batches in which the laboratory received sufficient sample volume to perform the MS/MSD analysis. In the case where there was insufficient sample volume received for all samples associated in the batch, LCS/LCSD is analyzed in place of the MS/MSD.



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URS Corporation [Arco]  
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 Oakland CA, 94612

Project:BP Heritage #11126, Emeryville, CA  
 Project Number:G07TP-0019  
 Project Manager:Lynelle Onishi

MOD0650  
 Reported:  
 05/11/05 13:50

**Extractable Hydrocarbons with Silica Gel cleanup by EPA 8015B**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-3 (MOD0650-03) Water</b> <b>Sampled: 04/25/05 11:55</b> <b>Received: 04/26/05 17:15</b>									
Diesel Range Organics (C10-C36)	520	50	ug/l	1	5D27018	04/27/05	04/28/05	EPA 8015B-SVOA	PT
Surrogate: n-Octacosane		107 %	34-123		"	"	"	"	



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URS Corporation [Arco] 1333 Broadway, Suite 800 Oakland CA, 94612	Project:BP Heritage #11126, Emeryville, CA Project Number:G07TP-0019 Project Manager:Lynelle Onishi	MOD0650 Reported: 05/11/05 13:50
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**Volatile Organic Compounds by EPA Method 8260B**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (MOD0650-01) Water</b> Sampled: 04/25/05 12:50    Received: 04/26/05 17:15									
tert-Amyl methyl ether	ND	2.5	ug/l	5	5E04001	05/04/05	05/05/05	EPA 8260B	
Benzene	140	2.5	"	"	"	"	"	"	
tert-Butyl alcohol	5000	100	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.5	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	"	"	"	"	"	"	
Ethanol	ND	500	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Ethylbenzene	5.3	2.5	"	"	"	"	"	"	
Methyl tert-butyl ether	200	2.5	"	"	"	"	"	"	
Toluene	3.6	2.5	"	"	"	"	"	"	
Xylenes (total)	11	2.5	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	930	250	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96 %	60-135	"	"	"	"	"	
<b>MW-2 (MOD0650-02) Water</b> Sampled: 04/25/05 13:35    Received: 04/26/05 17:15									
tert-Amyl methyl ether	220	50	ug/l	100	5E04001	05/04/05	05/05/05	EPA 8260B	
Benzene	6700	50	"	"	"	"	"	"	
tert-Butyl alcohol	3700	2000	"	"	"	"	"	"	
Di-isopropyl ether	ND	50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	50	"	"	"	"	"	"	
Ethanol	ND	10000	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	50	"	"	"	"	"	"	
Ethylbenzene	4400	50	"	"	"	"	"	"	
Methyl tert-butyl ether	8200	50	"	"	"	"	"	"	
Toluene	4900	50	"	"	"	"	"	"	
Xylenes (total)	17000	50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	80000	5000	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %	60-135	"	"	"	"	"	

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Oakland CA, 94612

Project:BP Heritage #11126, Emeryville, CA  
Project Number:G07TP-0019  
Project Manager:Lynelle Onishi

MOD0650  
Reported:  
05/11/05 13:50

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-3 (MOD0650-03) Water</b> Sampled: 04/25/05 11:55 Received: 04/26/05 17:15									
tert-Amyl methyl ether	10	2.5	ug/l	5	5E05002	05/05/05	05/05/05	EPA 8260B	
Benzene	ND	2.5	"	"	"	"	"	"	
tert-Butyl alcohol	160	100	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.5	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	"	"	"	"	"	"	
Ethanol	ND	500	"	"	"	"	"	"	IC
Ethyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Ethylbenzene	ND	2.5	"	"	"	"	"	"	
Methyl tert-butyl ether	220	2.5	"	"	"	"	"	"	
Toluene	ND	2.5	"	"	"	"	"	"	
Xylenes (total)	ND	2.5	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	250	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96 %	60-135	"	"	"	"	"	
<b>MW-4 (MOD0650-04) Water</b> Sampled: 04/25/05 13:00 Received: 04/26/05 17:15									
tert-Amyl methyl ether	ND	5.0	ug/l	10	5E04001	05/04/05	05/05/05	EPA 8260B	
Benzene	8.0	5.0	"	"	"	"	"	"	
tert-Butyl alcohol	18000	200	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	170	5.0	"	"	"	"	"	"	
Toluene	5.3	5.0	"	"	"	"	"	"	
Xylenes (total)	16	5.0	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	720	500	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		100 %	60-135	"	"	"	"	"	

Sequoia Analytical - Morgan Hill

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Project:BP Heritage #11126, Emeryville, CA  
Project Number:G07TP-0019  
Project Manager:Lynelle Onishi

MOD0650  
Reported:  
05/11/05 13:50

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-5 (MOD0650-05) Water</b> <b>Sampled: 04/25/05 11:45</b> <b>Received: 04/26/05 17:15</b>									
tert-Amyl methyl ether	ND	2.5	ug/l	5	5E06007	05/06/05	05/06/05	EPA 8260B	
Benzene	7.6	2.5	"	"	"	"	"	"	
tert-Butyl alcohol	ND	100	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.5	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	"	"	"	"	"	"	
Ethanol	ND	500	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Ethylbenzene	4.3	2.5	"	"	"	"	"	"	
Methyl tert-butyl ether	12	2.5	"	"	"	"	"	"	
Toluene	4.0	2.5	"	"	"	"	"	"	
Xylenes (total)	9.9	2.5	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	5200	250	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96 %	60-135	"	"	"	"	"	
<b>MW-6 (MOD0650-06) Water</b> <b>Sampled: 04/25/05 12:15</b> <b>Received: 04/26/05 17:15</b>									
tert-Amyl methyl ether	6.0	0.50	ug/l	1	5E05002	05/05/05	05/06/05	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	45	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	IC
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	50	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	64	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		102 %	60-135	"	"	"	"	"	



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URS Corporation [Arco] 1333 Broadway, Suite 800 Oakland CA, 94612	Project:BP Heritage #11126, Emeryville, CA Project Number:G07TP-0019 Project Manager:Lynelle Onishi	MOD0650 Reported: 05/11/05 13:50
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**Volatile Organic Compounds by EPA Method 8260B**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-7 (MOD0650-07) Water    Sampled: 04/25/05 12:35    Received: 04/26/05 17:15</b>									
tert-Amyl methyl ether	2.1	0.50	ug/l	1	5E05002	05/05/05	05/06/05	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	520	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	IC
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	41	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	0.64	0.50	"	"	"	"	"	"	
<b>Gasoline Range Organics (C4-C12)</b>	<b>67</b>	<b>50</b>	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96 %	60-135	"	"	"	"	"	
<b>MW-8 (MOD0650-08) Water    Sampled: 04/25/05 13:20    Received: 04/26/05 17:15</b>									
tert-Amyl methyl ether	ND	12	ug/l	25	5E06007	05/06/05	05/06/05	EPA 8260B	
Benzene	ND	12	"	"	"	"	"	"	
tert-Butyl alcohol	45000	500	"	"	"	"	"	"	
Di-isopropyl ether	ND	12	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	12	"	"	"	"	"	"	
1,2-Dichloroethane	ND	12	"	"	"	"	"	"	
Ethanol	ND	2500	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	12	"	"	"	"	"	"	
Ethylbenzene	ND	12	"	"	"	"	"	"	
Methyl tert-butyl ether	32	12	"	"	"	"	"	"	
Toluene	ND	12	"	"	"	"	"	"	
Xylenes (total)	ND	12	"	"	"	"	"	"	
<b>Gasoline Range Organics (C4-C12)</b>	<b>1400</b>	<b>1200</b>	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		102 %	60-135	"	"	"	"	"	

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.*





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Project: BP Heritage #11126, Emeryville, CA  
Project Number: G07TP-0019  
Project Manager: Lynelle Onishi

MOD0650  
Reported:  
05/11/05 13:50

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-9 (MOD0650-09) Water</b> <b>Sampled: 04/25/05 14:00</b> <b>Received: 04/26/05 17:15</b>									
tert-Amyl methyl ether	14	5.0	ug/l	10	5E05002	05/05/05	05/06/05	EPA 8260B	
Benzene	190	5.0	"	"	"	"	"	"	
tert-Butyl alcohol	1400	200	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	IC
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	120	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	540	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	77	5.0	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	5900	500	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97 %	60-135	"	"	"	"	"	
<b>MW-10 (MOD0650-10) Water</b> <b>Sampled: 04/25/05 10:50</b> <b>Received: 04/26/05 17:15</b>									
tert-Amyl methyl ether	ND	0.50	ug/l	1	5E05002	05/05/05	05/06/05	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	IC
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	1.5	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		101 %	60-135	"	"	"	"	"	

Sequoia Analytical - Morgan Hill

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-11 (MOD0650-11) Water    Sampled: 04/25/05 11:15    Received: 04/26/05 17:15</b>									
tert-Amyl methyl ether	ND	0.50	ug/l	1	5E06007	05/06/05	05/06/05	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	50	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		101 %		60-135	"	"	"	"	



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Project:BP Heritage #11126, Emeryville, CA  
 Project Number:G07TP-0019  
 Project Manager:Lynelle Onishi

MOD0650  
 Reported:  
 05/11/05 13:50

**Conventional Chemistry Parameters by APHA/EPA Methods  
 Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-3 (MOD0650-03) Water    Sampled: 04/25/05 11:55    Received: 04/26/05 17:15</b>									
Oil & Grease (HEM)	6300	5400	ug/l	1	5E03017	05/03/05	05/03/05	EPA 1664A	



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**Extractable Hydrocarbons with Silica Gel cleanup by EPA 8015B - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5D27018 - EPA 3510C / EPA 8015B-SVOA**

<b>Blank (5D27018-BLK1)</b>										
					Prepared: 04/27/05 Analyzed: 04/28/05					
Diesel Range Organics (C10-C36)	ND	50	ug/l							
Surrogate: n-Octacosane	30.6		"	50.0		61	34-123			
<b>Laboratory Control Sample (5D27018-BS1)</b>										
					Prepared: 04/27/05 Analyzed: 04/28/05					
Diesel Range Organics (C10-C36)	276	50	ug/l	500		55	51-128			
Surrogate: n-Octacosane	35.3		"	50.0		71	34-123			
<b>Laboratory Control Sample Dup (5D27018-BSD1)</b>										
					Prepared: 04/27/05 Analyzed: 04/28/05					
Diesel Range Organics (C10-C36)	324	50	ug/l	500		65	51-128	16	27	
Surrogate: n-Octacosane	40.7		"	50.0		81	34-123			



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**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
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**Batch 5E04001 - EPA 5030B P/T / EPA 8260B**

<b>Blank (5E04001-BLK1)</b>										
										Prepared & Analyzed: 05/04/05
tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	100	"							
Ethyl tert-butyl ether	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C4-C12)	ND	50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>5.14</i>		<i>"</i>	<i>5.00</i>		<i>103</i>	<i>60-135</i>			

<b>Laboratory Control Sample (5E04001-BS1)</b>										
										Prepared & Analyzed: 05/04/05
tert-Amyl methyl ether	10.2	0.50	ug/l	10.0		102	80-115			
Benzene	9.21	0.50	"	10.0		92	65-115			
tert-Butyl alcohol	51.6	20	"	50.0		103	75-150			
Di-isopropyl ether	10.8	0.50	"	10.0		108	75-125			
1,2-Dibromoethane (EDB)	9.60	0.50	"	10.0		96	85-120			
1,2-Dichloroethane	10.6	0.50	"	10.0		106	85-130			
Ethanol	209	100	"	200		104	70-135			
Ethyl tert-butyl ether	10.8	0.50	"	10.0		108	75-130			
Ethylbenzene	9.68	0.50	"	10.0		97	75-135			
Methyl tert-butyl ether	10.7	0.50	"	10.0		107	65-125			
Toluene	9.55	0.50	"	10.0		96	85-120			
Xylenes (total)	29.2	0.50	"	30.0		97	85-125			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>5.20</i>		<i>"</i>	<i>5.00</i>		<i>104</i>	<i>60-135</i>			



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Project:BP Heritage #11126, Emeryville, CA  
Project Number:G07TP-0019  
Project Manager:Lynelle Onishi

MOD0650  
Reported:  
05/11/05 13:50

**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
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**Batch 5E04001 - EPA 5030B P/T / EPA 8260B**

Laboratory Control Sample (5E04001-BS2)				Prepared & Analyzed: 05/04/05						
Benzene	5.01	0.50	ug/l	6.40		78	65-115			
Ethylbenzene	7.51	0.50	"	7.52		100	75-135			
Methyl tert-butyl ether	9.41	0.50	"	9.92		95	65-125			
Toluene	31.5	0.50	"	31.9		99	85-120			
Xylenes (total)	38.2	0.50	"	36.6		104	85-125			
Gasoline Range Organics (C4-C12)	410	50	"	440		93	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.27		"	5.00		105	60-135			

Laboratory Control Sample Dup (5E04001-BSD1)				Prepared & Analyzed: 05/04/05						
tert-Amyl methyl ether	10.7	0.50	ug/l	10.0		107	80-115	5	15	
Benzene	9.56	0.50	"	10.0		96	65-115	4	20	
tert-Butyl alcohol	51.7	20	"	50.0		103	75-150	0.2	25	
Di-isopropyl ether	11.4	0.50	"	10.0		114	75-125	5	15	
1,2-Dibromoethane (EDB)	9.89	0.50	"	10.0		99	85-120	3	15	
1,2-Dichloroethane	11.2	0.50	"	10.0		112	85-130	6	20	
Ethanol	188	100	"	200		94	70-135	11	35	
Ethyl tert-butyl ether	11.3	0.50	"	10.0		113	75-130	5	25	
Ethylbenzene	10.2	0.50	"	10.0		102	75-135	5	15	
Methyl tert-butyl ether	11.1	0.50	"	10.0		111	65-125	4	20	
Toluene	10.1	0.50	"	10.0		101	85-120	6	20	
Xylenes (total)	31.0	0.50	"	30.0		103	85-125	6	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.21		"	5.00		104	60-135			

Matrix Spike (5E04001-MS1)				Source: MOD0660-11 Prepared & Analyzed: 05/04/05						
Benzene	337	25	ug/l	320	88	78	65-115			
Ethylbenzene	2060	25	"	376	1700	96	75-135			
Methyl tert-butyl ether	480	25	"	496	ND	97	65-125			
Toluene	1880	25	"	1600	220	104	85-120			
Xylenes (total)	2890	25	"	1830	930	107	85-125			
Gasoline Range Organics (C4-C12)	32600	2500	"	22000	9800	104	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.20		"	5.00		104	60-135			

Sequoia Analytical - Morgan Hill

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Project Manager:Lynelle Onishi

MOD0650  
Reported:  
05/11/05 13:50

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

Analyte	Result	Reporting Limit	Units	Spikes Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5E04001 - EPA 5030B P/T / EPA 8260B**

Matrix Spike Dup (5E04001-MSD1)	Source: MOD0660-11			Prepared & Analyzed: 05/04/05						
Benzene	324	25	ug/l	320	88	74	65-115	4	20	
Ethylbenzene	2020	25	"	376	1700	85	75-135	2	15	
Methyl tert-butyl ether	436	25	"	496	ND	88	65-125	10	20	
Toluene	1870	25	"	1600	220	103	85-120	0.5	20	
Xylenes (total)	2870	25	"	1830	930	106	85-125	0.7	20	
Gasoline Range Organics (C4-C12)	30800	2500	"	22000	9800	95	70-124	6	20	
Surrogate: 1,2-Dichloroethane-d4	4.24		"	5.00		85	60-135			

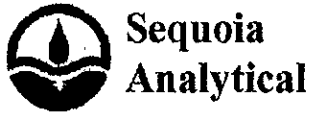
**Batch 5E05002 - EPA 5030B P/T / EPA 8260B**

Blank (5E05002-BLK1)	Prepared & Analyzed: 05/05/05									
tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	100	"							
Ethyl tert-butyl ether	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C4-C12)	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	5.10		"	5.00		102	60-135			

Laboratory Control Sample (5E05002-BS1)	Prepared & Analyzed: 05/05/05									
tert-Amyl methyl ether	9.58	0.50	ug/l	10.0		96	80-115			
Benzene	8.64	0.50	"	10.0		86	65-115			
tert-Butyl alcohol	49.1	20	"	50.0		98	75-150			
Di-isopropyl ether	10.0	0.50	"	10.0		100	75-125			
1,2-Dibromoethane (EDB)	8.74	0.50	"	10.0		87	85-120			
1,2-Dichloroethane	10.0	0.50	"	10.0		100	85-130			
Ethanol	185	100	"	200		92	70-135			
Ethyl tert-butyl ether	9.96	0.50	"	10.0		100	75-130			
Ethylbenzene	9.22	0.50	"	10.0		92	75-135			
Methyl tert-butyl ether	10.1	0.50	"	10.0		101	65-125			

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Project Number:G07TP-0019  
Project Manager:Lynelle Onishi

MOD0650  
Reported:  
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**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
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**Batch 5E05002 - EPA 5030B P/T / EPA 8260B**

**Laboratory Control Sample (5E05002-BS1)**

Prepared & Analyzed: 05/05/05

Toluene	8.71	0.50	ug/l	10.0		87	85-120			
Xylenes (total)	27.6	0.50	"	30.0		92	85-125			
Surrogate: 1,2-Dichloroethane-d4	4.83		"	5.00		97	60-135			

**Laboratory Control Sample (5E05002-BS2)**

Prepared & Analyzed: 05/05/05

Benzene	5.08	0.50	ug/l	6.40		79	65-115			
Ethylbenzene	7.72	0.50	"	7.52		103	75-135			
Methyl tert-butyl ether	9.38	0.50	"	9.92		95	65-125			
Toluene	32.0	0.50	"	31.9		100	85-120			
Xylenes (total)	39.3	0.50	"	36.6		107	85-125			
Gasoline Range Organics (C4-C12)	423	50	"	440		96	70-124			
Surrogate: 1,2-Dichloroethane-d4	5.25		"	5.00		105	60-135			

**Laboratory Control Sample Dup (5E05002-BSD1)**

Prepared & Analyzed: 05/05/05

tert-Amyl methyl ether	10.4	0.50	ug/l	10.0		104	80-115	8	15	
Benzene	9.82	0.50	"	10.0		98	65-115	13	20	
tert-Butyl alcohol	53.0	20	"	50.0		106	75-150	8	25	
Di-isopropyl ether	11.4	0.50	"	10.0		114	75-125	13	15	
1,2-Dibromoethane (EDB)	9.26	0.50	"	10.0		93	85-120	6	15	
1,2-Dichloroethane	11.4	0.50	"	10.0		114	85-130	13	20	
Ethanol	170	100	"	200		85	70-135	8	35	IC
Ethyl tert-butyl ether	11.2	0.50	"	10.0		112	75-130	12	25	
Ethylbenzene	9.92	0.50	"	10.0		99	75-135	7	15	
Methyl tert-butyl ether	11.2	0.50	"	10.0		112	65-125	10	20	
Toluene	9.67	0.50	"	10.0		97	85-120	10	20	
Xylenes (total)	30.1	0.50	"	30.0		100	85-125	9	20	
Surrogate: 1,2-Dichloroethane-d4	5.13		"	5.00		103	60-135			

Sequoia Analytical - Morgan Hill

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Project:BP Heritage #11126, Emeryville, CA  
Project Number:G07TP-0019  
Project Manager:Lynelle Onishi

MOD0650  
Reported:  
05/11/05 13:50

**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
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**Batch 5E05002 - EPA 5030B P/T / EPA 8260B**

<b>Matrix Spike (5E05002-MS1)</b>		<b>Source: MOD0650-09</b>			<b>Prepared &amp; Analyzed: 05/05/05</b>					
Benzene	249	5.0	ug/l	64.0	190	92	65-115			
Ethylbenzene	202	5.0	"	75.2	120	109	75-135			
Methyl tert-butyl ether	628	5.0	"	99.2	540	89	65-125			
Toluene	317	5.0	"	319	2.7	99	85-120			
Xylenes (total)	477	5.0	"	366	77	109	85-125			
Gasoline Range Organics (C4-C12)	9790	500	"	4400	5900	88	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>5.24</i>		<i>"</i>	<i>5.00</i>		<i>105</i>	<i>60-135</i>			

<b>Matrix Spike Dup (5E05002-MSD1)</b>		<b>Source: MOD0650-09</b>			<b>Prepared &amp; Analyzed: 05/05/05</b>					
Benzene	241	5.0	ug/l	64.0	190	80	65-115	3	20	
Ethylbenzene	198	5.0	"	75.2	120	104	75-135	2	15	
Methyl tert-butyl ether	632	5.0	"	99.2	540	93	65-125	0.6	20	
Toluene	312	5.0	"	319	2.7	97	85-120	2	20	
Xylenes (total)	468	5.0	"	366	77	107	85-125	2	20	
Gasoline Range Organics (C4-C12)	9180	500	"	4400	5900	75	70-124	6	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>5.23</i>		<i>"</i>	<i>5.00</i>		<i>105</i>	<i>60-135</i>			

**Batch 5E06007 - EPA 5030B P/T / EPA 8260B**

<b>Blank (5E06007-BLK1)</b>		<b>Prepared &amp; Analyzed: 05/06/05</b>								
tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	5.0	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	100	"							
Ethyl tert-butyl ether	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C4-C12)	ND	50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.65</i>		<i>"</i>	<i>5.00</i>		<i>93</i>	<i>60-135</i>			

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**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
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**Batch 5E06007 - EPA 5030B P/T / EPA 8260B**

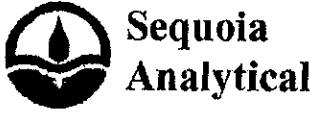
Laboratory Control Sample (5E06007-BS1)				Prepared & Analyzed: 05/06/05						
tert-Amyl methyl ether	11.0	0.50	ug/l	10.0	110	80-115				
Benzene	9.85	0.50	"	10.0	98	65-115				
tert-Butyl alcohol	54.0	5.0	"	50.0	108	75-150				
Di-isopropyl ether	11.5	0.50	"	10.0	115	75-125				
1,2-Dibromoethane (EDB)	10.2	0.50	"	10.0	102	85-120				
1,2-Dichloroethane	11.4	0.50	"	10.0	114	85-130				
Ethanol	195	100	"	200	98	70-135				
Ethyl tert-butyl ether	11.4	0.50	"	10.0	114	75-130				
Ethylbenzene	10.2	0.50	"	10.0	102	75-135				
Methyl tert-butyl ether	11.6	0.50	"	10.0	116	65-125				
Toluene	10.1	0.50	"	10.0	101	85-120				
Xylenes (total)	30.7	0.50	"	30.0	102	85-125				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>5.08</i>		<i>"</i>	<i>5.00</i>	<i>102</i>	<i>60-135</i>				

Laboratory Control Sample (5E06007-BS2)				Prepared & Analyzed: 05/06/05						
Benzene	4.72	0.50	ug/l	6.40	74	65-115				
Ethylbenzene	8.00	0.50	"	7.52	106	75-135				
Methyl tert-butyl ether	8.63	0.50	"	9.92	87	65-125				
Toluene	32.8	0.50	"	31.9	103	85-120				
Xylenes (total)	41.4	0.50	"	36.6	113	85-125				
Gasoline Range Organics (C4-C12)	418	50	"	440	95	70-124				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.90</i>		<i>"</i>	<i>5.00</i>	<i>98</i>	<i>60-135</i>				

Laboratory Control Sample Dup (5E06007-BSD1)				Prepared & Analyzed: 05/06/05						
tert-Amyl methyl ether	10.2	0.50	ug/l	10.0	102	80-115	8	15		
Benzene	9.84	0.50	"	10.0	98	65-115	0.1	20		
tert-Butyl alcohol	52.9	5.0	"	50.0	106	75-150	2	25		
Di-isopropyl ether	11.2	0.50	"	10.0	112	75-125	3	15		
1,2-Dibromoethane (EDB)	9.36	0.50	"	10.0	94	85-120	9	15		
1,2-Dichloroethane	11.0	0.50	"	10.0	110	85-130	4	20		
Ethanol	181	100	"	200	90	70-135	7	35		
Ethyl tert-butyl ether	11.2	0.50	"	10.0	112	75-130	2	25		
Ethylbenzene	9.98	0.50	"	10.0	100	75-135	2	15		
Methyl tert-butyl ether	11.0	0.50	"	10.0	110	65-125	5	20		
Toluene	9.80	0.50	"	10.0	98	85-120	3	20		
Xylenes (total)	30.2	0.50	"	30.0	101	85-125	2	20		

Sequoia Analytical - Morgan Hill

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.*



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 Morgan Hill, CA 95037  
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 FAX (408) 782-6308  
 www.sequoialabs.com

URS Corporation [Arco] 1333 Broadway, Suite 800 Oakland CA, 94612	Project:BP Heritage #11126, Emeryville, CA Project Number:G07TP-0019 Project Manager:Lynelle Onishi	MOD0650 Reported: 05/11/05 13:50
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**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%RBC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5E06007 - EPA 5030B P/T / EPA 8260B**

**Laboratory Control Sample Dup (5E06007-BSD1)** Prepared & Analyzed: 05/06/05

*Surrogate: 1,2-Dichloroethane-d4* 5.04 ug/l 5.00 101 60-135

**Matrix Spike (5E06007-MS1)** Source: MOD0657-03 Prepared & Analyzed: 05/06/05

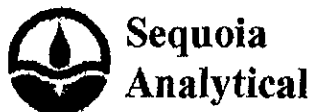
Benzene	89.0	5.0	ug/l	64.0	38	80	65-115			
Ethylbenzene	85.2	5.0	"	75.2	9.5	101	75-135			
Methyl tert-butyl ether	90.8	5.0	"	99.2	ND	92	65-125			
Toluene	419	5.0	"	319	90	103	85-120			
Xylenes (total)	460	5.0	"	366	60	109	85-125			
Gasoline Range Organics (C4-C12)	4420	500	"	4400	440	90	70-124			

*Surrogate: 1,2-Dichloroethane-d4* 4.47 " 5.00 89 60-135

**Matrix Spike Dup (5E06007-MSD1)** Source: MOD0657-03 Prepared & Analyzed: 05/06/05

Benzene	88.6	5.0	ug/l	64.0	38	79	65-115	0.5	20	
Ethylbenzene	83.5	5.0	"	75.2	9.5	98	75-135	2	15	
Methyl tert-butyl ether	99.1	5.0	"	99.2	ND	100	65-125	9	20	
Toluene	415	5.0	"	319	90	102	85-120	1	20	
Xylenes (total)	440	5.0	"	366	60	104	85-125	4	20	
Gasoline Range Organics (C4-C12)	4490	500	"	4400	440	92	70-124	2	20	

*Surrogate: 1,2-Dichloroethane-d4* 5.31 " 5.00 106 60-135



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

Project:BP Heritage #11126, Emeryville, CA  
 Project Number:G07TP-0019  
 Project Manager:Lynelle Onishi

MOD0650  
 Reported:  
 05/11/05 13:50

**Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control  
 Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 5E03017 - General Prep / EPA 1664A</b>										
<b>Blank (5E03017-BLK1)</b>										
Oil & Grease (HEM)	ND	5000	ug/l							Prepared & Analyzed: 05/03/05
<b>Laboratory Control Sample (5E03017-BS1)</b>										
Oil & Grease (HEM)	16800	5000	ug/l	20000		84	75-110			Prepared & Analyzed: 05/03/05
<b>Laboratory Control Sample Dup (5E03017-BSD1)</b>										
Oil & Grease (HEM)	16500	5000	ug/l	20000		82	75-110	2	15	



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

Project:BP Heritage #11126, Emeryville, CA  
Project Number:G07TP-0019  
Project Manager:Lynelle Onishi

MOD0650  
Reported:  
05/11/05 13:50

**Notes and Definitions**

SG A silica gel cleanup procedure was performed.  
PT Hydrocarb. in req. fuel range, but doesn't resemble req. fuel  
IC Calib. verif. is within method limits but outside contract limits  
DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference



# Chain of Custody Record

Project Name: Analytical for QMR sampling  
 BP BU/AR Region/Enfos Segment: BP > Americas > West Coast > Retail > WCBU > CA > Central > 11126 > Historical/BL  
 State or Lead Regulatory Agency: California Regional Water Quality Control Board - San Fran  
 Requested Due Date (mm/dd/yy): 10 Day TAT  
 (170120650)

On-site Time: 09:00	Temp: 62.50°F
Off-site Time: 14:30	Temp: 67.0°F
Sky Conditions: clear	
Meteorological Events: n/a	
Wind Speed: n/a	Direction: n/a

Lab Name: Sequoia	BP/AR Facility No.: 11126	Consultant/Contractor: URS
Address: 885 Jarvis Drive Morgan Hill, CA 95037	BP/AR Facility Address: 1700 Powell St., Emeryville, CA 94608	Address: 1333 Broadway, Suite 800 Oakland, CA 94612
Lab PM: Lisa Race	Site Lat/Long: 37.838926 / -122.295	Consultant/Contractor Project No.: 38487132
Tele/Fax: 408.782.8156 / 408.782.6308	California Global ID No.: T0600100208	Consultant/Contractor PM: Lynelle Onishi
BP/AR PM Contact: Kyle Christie	Enfos Project No.: G07TP-0019	Tele/Fax: 510.874.1758 / 510.874.3268
Address: 4 Centerpoints Dr. La Palma, CA 90623	Provision or RCOP: Provision	Report Type & QC Level: Level 1 with EDF
Tele/Fax: (714) 670-5303 / (714) 670-5195	Phase/WBS: 04 - Mon/Remed by Natural Attenuation	E-mail BDD To: Rachel.Lindvall@urscorp.com
	Sub Phase/Task: 03 - Analytical	Invoice to: Atlantic Richfield Company
	Cost Element: 05 - Subcontracted Costs	

Item No.	Sample Description	Time	Date	Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis				Sample Point Lat/Long and Comments		
				Soil/Solid	Water/Liquid	Air			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Methanol	PRO / BTEX (8260)	DRO w/SGC (8015M)	MTBE, TAME, ETBE (8260)	DIPR, TBA (8260)		EDR, 1,2-DCA (8260)	Ethanol (8260)
1	MW-1	1230	4/25		W		01	6					X		X	X	X			
2	MW-2	1335	4/25		W		02	3					X		X	X	X			
3	MW-3	1155	4/25		W		03	7					X	X	X	X	X			
4	MW-4	1300	4/25		W		04	3					X		X	X	X			
5	MW-5	1145	4/25		W		05	3					X		X	X	X			
6	MW-6	1215	4/25		W		06	3					X		X	X	X			
7	MW-7	1235	4/25		W		07	3					X		X	X	X			
8	MW-8	1320	4/25		W		08	3					X		X	X	X			
9	MW-9	1400	4/25		W		09	3					X		X	X	X			
10	MW-10	1050	4/26		W		10	3					X		X	X	X			

Sampler's Name: P. JARN	Relinquished By / Affiliation: [Signature]	Date: [Signature]	Time: [Signature]	Accepted By / Affiliation: Jason Lewis	Date: 4-26-05	Time: 10:53
Shipment Date:				Jannilyn	4-26-05	17:15

Special Instructions:

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



## SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: bp  
 REC. BY (PRINT) JT  
 WORKORDER: MD06SD

DATE REC'D AT LAB: 4/26/05  
 TIME REC'D AT LAB: 17K  
 DATE LOGGED IN: 4-27-05

For Regulatory Purposes?  
 DRINKING WATER YES/NO  YES  NO  
 WASTE WATER YES/NO  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) <input checked="" type="radio"/> Present / <input type="radio"/> Absent <input checked="" type="radio"/> Intact / <input type="radio"/> Broken*	01	0-F	MW-1	Voa-6	HCl	-	W	4/25/05	
2. Chain-of-Custody <input checked="" type="radio"/> Present / <input type="radio"/> Absent*	02	A-E	MW-2	Voa-3	↓				
3. Traffic Reports or Packing List: <input checked="" type="radio"/> Present / <input type="radio"/> Absent	03	A-G	MW-3	Voa-3	↓				
4. Airbill: <input type="radio"/> Airbill / <input checked="" type="radio"/> Sticker <input type="radio"/> Present / <input checked="" type="radio"/> Absent	04	B-C	MW-4	11 Amber-2	↓				
5. Airbill #: <input type="radio"/> Present / <input checked="" type="radio"/> Absent	05		MW-5	Voa-3	HCl				
6. Sample Labels: <input checked="" type="radio"/> Present / <input type="radio"/> Absent	06		MW-6	SAME	SAME				
7. Sample IDs: <input checked="" type="radio"/> Listed / <input type="radio"/> Not Listed on Chain-of-Custody	07		MW-7	↓	↓	↓	↓	↓	
8. Sample Condition: <input checked="" type="radio"/> Intact / <input type="radio"/> Broken* / <input type="radio"/> Leaking*	08		MW-8	↓	↓	↓	↓	↓	
9. Does information on chain-of-custody, traffic reports and sample labels agree? <input checked="" type="radio"/> Yes / <input type="radio"/> No*	09	✓	MW-9	↓	↓	↓	↓	↓	
10. Sample received within hold time? <input checked="" type="radio"/> Yes / <input type="radio"/> No*	10		MW-10	↓	↓	↓	↓	↓	
11. Adequate sample volume received? <input checked="" type="radio"/> Yes / <input type="radio"/> No*									
12. Proper Preservatives used? <input checked="" type="radio"/> Yes / <input type="radio"/> No*									
13. Trip Blank / Temp Blank Received? (circle which, if yes) <input checked="" type="radio"/> Yes <input type="radio"/> No*									
14. Temp Rec. at Lab: <u>4.2°C</u> Is temp 4 +/-2°C? <input checked="" type="radio"/> Yes <input type="radio"/> No**									

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



## SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: by  
 REC. BY (PRINT) JT  
 WORKORDER: MOD 6650

DATE REC'D AT LAB: 9/26/05  
 TIME REC'D AT LAB: 1750  
 DATE LOGGED IN: 9-27-05

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

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

CIRCLE THE APPROPRIATE RESPONSE	LAB	DASH	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
	SAMPLE #	#							
1. Custody Seal(s) <input checked="" type="checkbox"/> Present <input type="checkbox"/> Absent <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Broken*	11		NW-11	Voa-3	HCl	-	W	9/25/05	
2. Chain-of-Custody <input checked="" type="checkbox"/> Present / <input type="checkbox"/> Absent*	12		TB-11126-0925 2005	Voa-2	↓	↓	↓	↓	
3. Traffic Reports or Packing List: <input type="checkbox"/> Present / <input checked="" type="checkbox"/> Absent									
4. Airbill: <input type="checkbox"/> Airbill / <input checked="" type="checkbox"/> Sticker <input type="checkbox"/> Present / <input checked="" type="checkbox"/> Absent									
5. Airbill #:									
6. Sample Labels: <input checked="" type="checkbox"/> Present / <input type="checkbox"/> Absent									
7. Sample IDs: <input checked="" type="checkbox"/> Listed / <input type="checkbox"/> Not Listed on Chain-of-Custody									
8. Sample Condition: <input checked="" type="checkbox"/> Intact / <input type="checkbox"/> Broken* / <input type="checkbox"/> Leaking*									
9. Does information on chain-of-custody, traffic reports and sample labels agree? <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No*									
10. Sample received within hold time? <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No*									
11. Adequate sample volume received? <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No*									
12. Proper Preservatives used? <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No*									
13. Trip Blank / Temp Blank Received? (circle which, if yes) <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No*									
14. Temp Rec. at Lab: Is temp 4 +/- 2°C? <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No** <small>(Acceptance range for samples requiring thermal pres.)</small>									

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

**ATTACHMENT D**

**BORING AND WELLS LOGS FOR WELLS MW-10 AND MW-11**



1333 Broadway, Suite 800  
Oakland, California 94612

### MONITORING WELL LOG

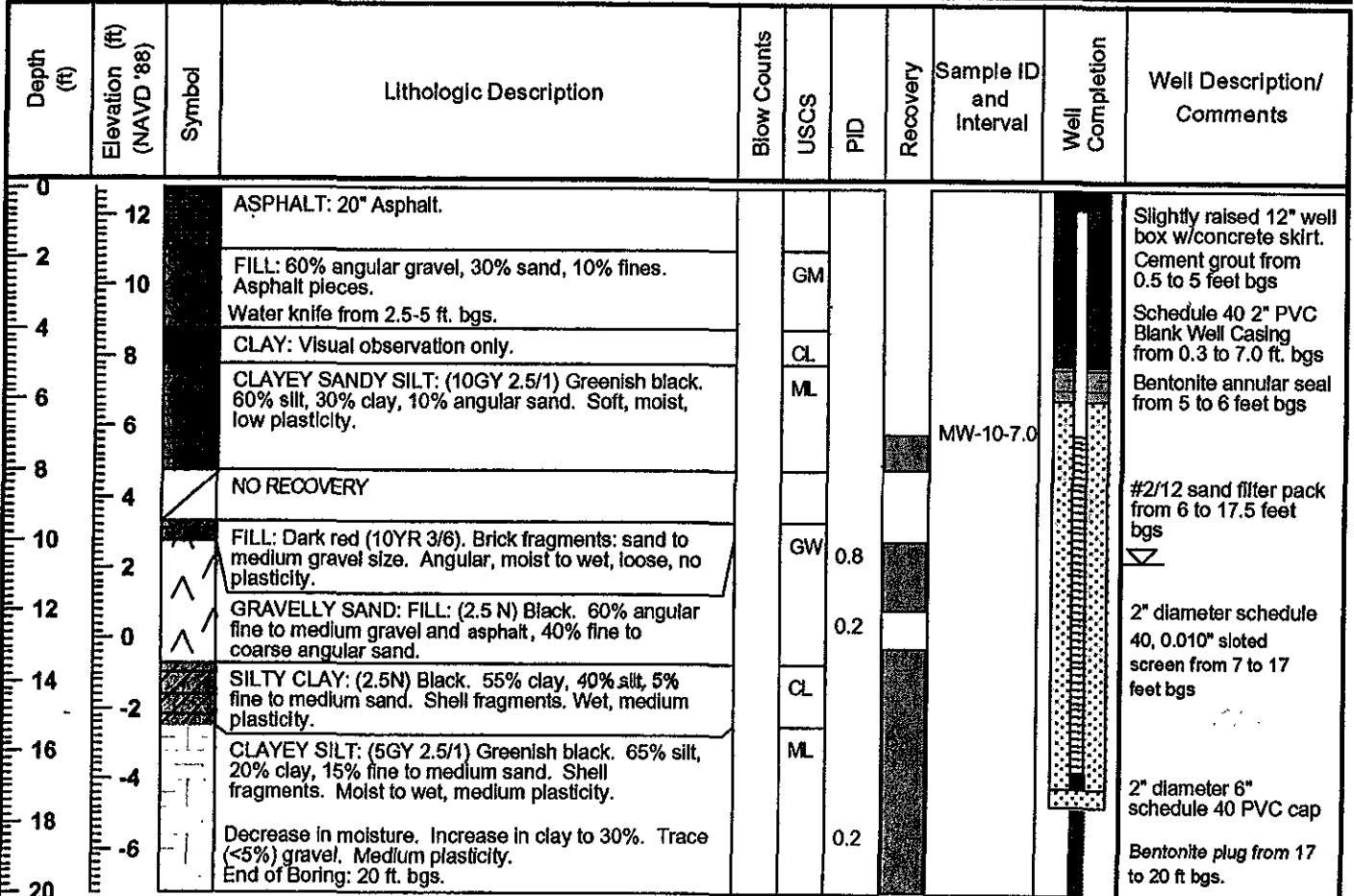
Well ID: MW-10

Total Depth: 17 ft. bgs

PROJECT INFORMATION		DRILLING INFORMATION	
Project: Offsite Well Installation		Drilling Company: Gregg Drilling	
Site Location: 5795 Christie Ave, Emeryville, CA		Driller: Robert Deason	
Site Number: Former BP 11126		Type of Drilling Rig: Marl MST Rhino	
Project Manager: Lynelle Onishi		Drilling Method: 2" Cont. Core/ 8" HSA	
Geologist: Kevin Uno		Sampling Method: Continuous Core	
Job/Cost Code Number: 38487322		Date(s) Drilled: 4/15/05	

### WELL INFORMATION

Groundwater Depth (ft bgs): Exploratory	Well Location: Near NE side of Circuit City building in parking lot
Top of Casing Elevation (ft msl): 12.53 ft.	Well Diameter: 2 inch
Coordinates: Latitude 37.8380746 Longitude -122.2952280	Screened Interval: 7'-17' bgs





1333 Broadway, Suite 800  
Oakland, California 94612

**MONITORING WELL LOG**

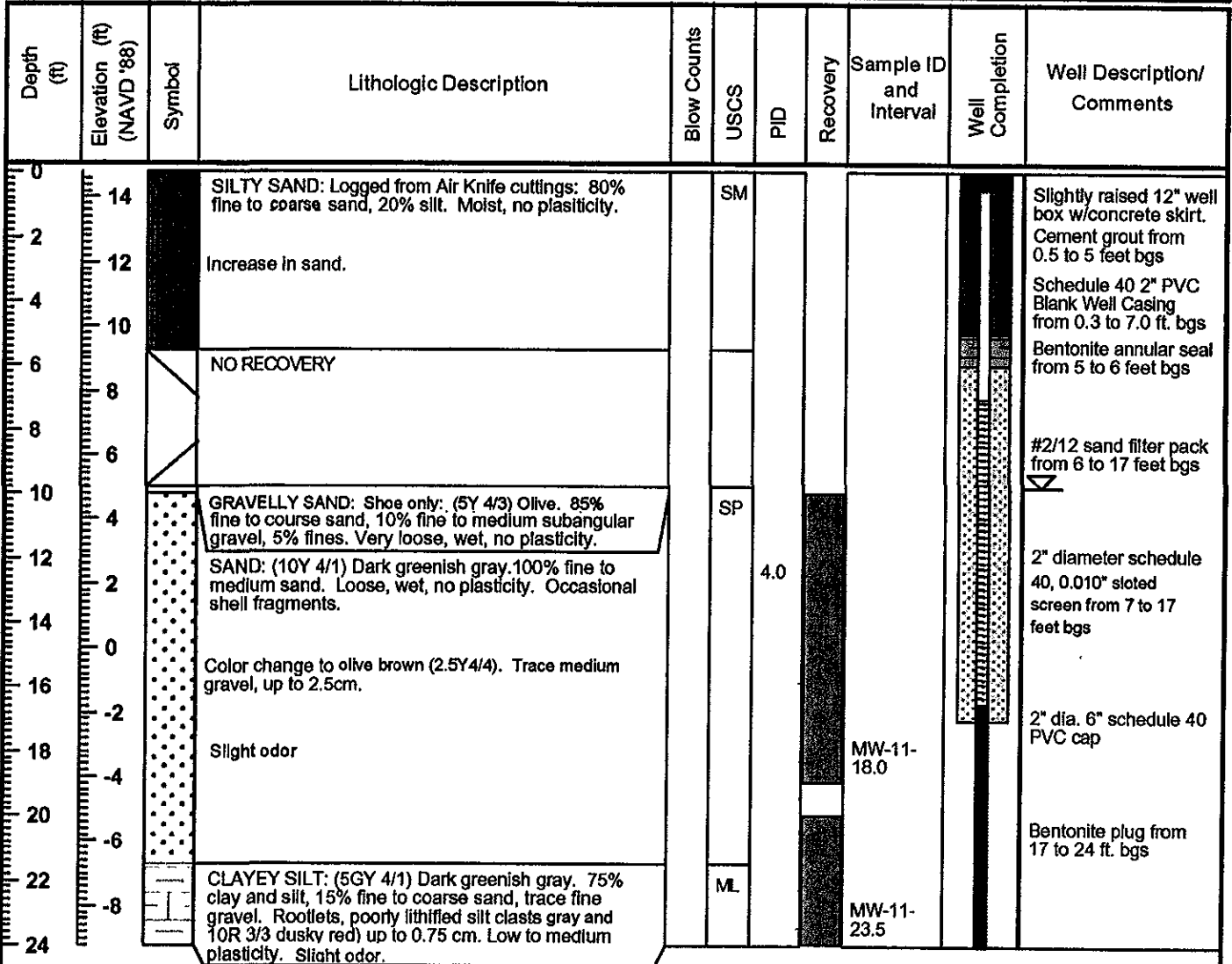
Well ID: MW-11

Total Depth: 17 ft. bgs

PROJECT INFORMATION		DRILLING INFORMATION	
<b>Project:</b> Offsite Well Installation		<b>Drilling Company:</b> Gregg Drilling	
<b>Site Location:</b> 5795 Christie Ave, Emeryville, CA		<b>Driller:</b> Robert Deason	
<b>Site Number:</b> Former BP 11126		<b>Type of Drilling Rig:</b> Marl M5T Rhino	
<b>Project Manager:</b> Lynelle Onishi		<b>Drilling Method:</b> 2" Cont. Core/ 8" HSA	
<b>Geologist:</b> Kevin Uno		<b>Sampling Method:</b> Continuous Core	
<b>Job/Cost Code Number:</b> 38487322		<b>Date(s) Drilled:</b> 4/15/05	

**WELL INFORMATION**

<b>Groundwater Depth (ft bgs):</b> Exploratory	<b>Well Location:</b> West side of Circuit City building in landscaped area.
<b>Top of Casing Elevation (ft msl):</b> 14.55 ft.	<b>Well Diameter:</b> 2 inch
<b>Coordinates:</b> Latitude 37.8377200 Longitude -122.2958459	<b>Screened Interval:</b> 7'-17' bgs



**ATTACHMENT E**

**WELL DEVELOPMENT AND GROUNDWATER DATA RECORDS**



## WELL DEVELOPMENT DATA SHEET

Project #: 050420-BP1	Client: Arco 11126
Developer: B Prand	Date Developed: 4-20-05
Well I.D. MV-11	Well Diameter: (circle one) ② 3 4 6
Total Well Depth: Before 17.25 After 17.25	Depth to Water: Before 9.12 After 9.90
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF): (12 x (d <sup>2</sup> /4) x π) / 231	Well dia.	VCF
where	2" =	0.16
12 = in / foot	3" =	0.37
d = diameter (in.)	4" =	0.65
π = 3.1416	6" =	1.47
231 = in <sup>3</sup> /gal	10" =	4.08
	12" =	6.87

<u>1.30</u>	X	<u>10</u>	=	<u>13.0</u>	gallons
1 Case Volume		Specified Volumes			

Purging Device:       Bailer       Electric Submersible  
 Suction Pump       Positive Air Displacement

Type of Installed Pump \_\_\_\_\_  
 Other equipment used 2' surge float

TIME	TEMP (F)	pH	Cond. (mS or <del>µS</del> )	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
816	62.2	6.9	1310	>1000	1.5	Grey water
818	63.4	7.1	1294	>1000	3.0	
820	63.6	7.1	1223	>1000	4.0	
823	63.7	7.1	1076	>1000	5.5	Hard Bottom
825	63.9	7.1	1064	>1000	6.5	
827	63.9	7.1	1032	>1000	8.0	DN=10.02
829	63.9	7.2	1023	>1000	9.5	
831	64.0	7.1	1019	>1000	10.5	Cleaning up
833	64.3	7.1	1001	>1000	12.0	
835	64.2	7.1	988	>1000	13.0	White/Cloudy
Did Well Dewater? <input checked="" type="checkbox"/>	If yes, note above.		Gallons Actually Evacuated:		13.0	

## WELL DEVELOPMENT DATA SHEET

Project #: <i>050420-Bp1</i>	Client: <i>Arco 11126</i>
Developer: <i>B Proud</i>	Date Developed: <i>4-20-05</i>
Well I.D. <i>MW-10</i>	Well Diameter: (circle one) <u>2</u> 3 4 6
Total Well Depth: Before <i>17.22</i> After <i>17.22</i>	Depth to Water: Before <i>8.26</i> After <i>15.81</i>
Reason not developed:	If Free Product, thickness:
Additional Notations:	

<p>Volume Conversion Factor (VCF):  <math>(12 \times (d^2/4) \times \pi) / 231</math>          where          12 = in / foot          d = diameter (in.)  <math>\pi = 3.1416</math>          231 = in<sup>3</sup>/gal</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Well dia.</th> <th style="text-align: left;">VCF</th> </tr> <tr> <td>2" =</td> <td>0.16</td> </tr> <tr> <td>3" =</td> <td>0.37</td> </tr> <tr> <td>4" =</td> <td>0.65</td> </tr> <tr> <td>6" =</td> <td>1.47</td> </tr> <tr> <td>10" =</td> <td>4.08</td> </tr> <tr> <td>12" =</td> <td>6.87</td> </tr> </table>	Well dia.	VCF	2" =	0.16	3" =	0.37	4" =	0.65	6" =	1.47	10" =	4.08	12" =	6.87
Well dia.	VCF														
2" =	0.16														
3" =	0.37														
4" =	0.65														
6" =	1.47														
10" =	4.08														
12" =	6.87														

<u>1.43</u>	X	<u>10</u>	=	<u>14.3</u>	gallons
1 Case Volume		Specified Volumes			

Purging Device:       Bailer                                       Electric Submersible  
                                   Suction Pump                                       Positive Air Displacement

Type of Installed Pump \_\_\_\_\_  
 Other equipment used 2" surge block

TIME	TEMP (F)	pH	Cond. (mS or $\mu$ S)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
731	61.6	6.2	2751	7000	1.5	Black H <sub>2</sub> O
733	62.3	6.4	2228	7000	3.0	
735	67.6	6.4	1977	7000	4.5	
737	63.8	6.5	2000	7000	6.0	Slowly clearing up
739	64.0	6.5	1989	7000	7.5	Hard Bottom
741	63.8	6.6	2004	7100	9.0	DMV=12.10
744	63.1	6.8	2342	7100	10.5	
746	63.4	6.8	2491	7100	12.0	
749	63.2	7.0	2388	7100	13.5	
752	63.0	7.2	2542	7100	15.0	
Did Well Dewater? <i>N</i>		If yes, note above.		Gallons Actually Evacuated:		<i>15.0</i>



**BP GEM OIL COMPANY TYPE A BILL OF LADING**

**SOURCE RECORD BILL OF LADING FOR NON-HAZARDOUS PURGEWATER RECOVERED FROM GROUNDWATER WELLS AT BP GEM OIL COMPANY FACILITIES IN THE STATE OF CALIFORNIA. THE NON-HAZARDOUS PURGE- WATER WHICH HAS BEEN RECOVERED FROM GROUND- WATER WELLS IS COLLECTED BY THE CONTRACTOR, MADE UP INTO LOADS OF APPROPRIATE SIZE AND HAULED BY DILLARD ENVIRONMENTAL TO THE ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY IN LIVERMORE, CALIFORNIA.**

The contractor performing this work is BLAINE TECH SERVICES, INC. (BTS), 1680 Rogers Avenue, San Jose, CA 95112 (phone [408] 573-0555). Blaine Tech Services, Inc. is authorized by BP GEM OIL COMPANY to recover, collect, apportion into loads the Non-Hazardous Well Purgewater that is drawn from wells at the BP GEM Oil Company facility indicated below and deliver that purgewater to BTS. Transport routing of the Non-Hazardous Well Purgewater may be direct from one BP GEM facility to the designated destination point; from one BP GEM facility to the designated destination point via another BP GEM facility; from a BP GEM facility to the designated destination point via the contractor's facility, or any combination thereof. The Non-Hazardous Well Purgewater is and remains the property of BP GEM Oil Company.

This Source Record **BILL OF LADING** was initiated to cover the recovery of Non-Hazardous Well Purgewater from wells at the BP GEM Oil Company facility described below:

11126		
Station #		
1700 Powell St Emeryville		
Station Address		
Total Gallons Collected From Groundwater Monitoring Wells:		
28		
added equip. rinse water	2.0	any other adjustments
<b>TOTAL GALS. RECOVERED</b>	30.0	loaded onto BTS vehicle #
		60
BTS event #	time	date
050420-BP1	730	4, 20, 05
signature	<i>[Signature]</i>	
*****		
REC'D AT	time	date
BTS ST	1600	4, 20, 05
unloaded by signature	<i>[Signature]</i>	



# WELL GAUGING DATA

Project # 050425-BL1 Date 4/25/05 Client Arco 11/26

Site 1700 Powell St., Emeryville

	Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC
# 6	MW-1	2					3.75	11.35	TOC
10	MW-2	2					4.00	12.10	
# 3	MW-3	2					4.75	11.80	
9	MW-4	2	#				7.25	11.03	
7	MW-5	2					5.52	12.35	
4	MW-6	2					5.22	12.57	
5	MW-7	2					4.88	13.65	
9	MW-8	2					4.66	13.84	
# 11	MW-9	4	No SPH detected				3.31 <del>6.37</del>	13.74	
1	MW-10	2					8.37	17.25	
2	MW-11	2					9.24	17.33	
			# Under Pressure - Allowed to stabilize						

\* 6

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: DS0425-RCL	Station # 11126
Sampler: P. CMMW	Date: 4/25/05
Well I.D.: MW-1	Well Diameter: $\varnothing$ 3 4 6 8
Total Well Depth: 11.55	Depth to Water: 3.75
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: $\text{HVO}$ Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

7.9

Purge Method:  Bailer      Sampling Method:  Bailer

Disposable Bailer —       Disposable Bailer ✓

Positive Air Displacement       Extraction Port

Electric Submersible      Other: \_\_\_\_\_

Extraction Pump

Other: \_\_\_\_\_

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

<u>1.3</u>	X	<u>3</u>	=	<u>3.9</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
1240	63.4	6.9	1127	1.3	
1242	65.0	6.9	1154	2.6	
1244	64.7	6.6	1173	3.9	

Did well dewater? Yes  No  Gallons actually evacuated: 3.9

Sampling Time: 1250      Sampling Date: 4/25/05

Sample I.D.: MW-1      Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for:  GRO  BTEX MTBE DRO  Oxy  1,2-DCA  ESB  EBRAC Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>050425-BC1</u>	Station # <u>1126</u>
Sampler: <u>P. CLARK</u>	Date: <u>4/25/05</u>
Well I.D.: <u>MW-2</u>	Well Diameter: <u>2</u> 3 4 6 8 _____
Total Well Depth: <u>12.10</u>	Depth to Water: <u>4.00</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVO</u> Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

8.1

Purge Method: <u>Bailer</u> Disposable Bailer <input checked="" type="checkbox"/> Positive Air Displacement Electric Submersible Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> Disposable Bailer <input checked="" type="checkbox"/> Extraction Port Other: _____
--	--

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

<u>1.3</u>	X	<u>3</u>	=	<u>3.9</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
1324	67.7	6.9	12.13	1.3	
1326	68.2	6.8	815.3	2.6	
1330	67.2	6.8	815.9	3.9	

Did well dewater? Yes <input checked="" type="checkbox"/> <u>NO</u>	Gallons actually evacuated: <u>3.9</u>
Sampling Time: <u>1335</u>	Sampling Date: <u>4/25/05</u>
Sample I.D.: <u>MW-2</u>	Laboratory: Pace <u>Seqoia</u> Other _____

Analyzed for: <input checked="" type="checkbox"/> GRO <input checked="" type="checkbox"/> STER <input type="checkbox"/> MTBE <input type="checkbox"/> DRO <input checked="" type="checkbox"/> OXY <input checked="" type="checkbox"/> 1,2-DCA <input checked="" type="checkbox"/> EDB <input checked="" type="checkbox"/> Ethanol	Other: _____	
D.O. (if req'd):	Pre-purge: _____ mg/L	Post-purge: _____ mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV

# ARCO / BP WELL MONITORING DATA SHEET

\* 3

BTS #: 050425-BC1	Station # 11126
Sampler: P. C. MAN	Date: 4/25/05
Well I.D.: MW-3	Well Diameter: <input checked="" type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8
Total Well Depth: 11.76	Depth to Water: 4.75
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Grade	D.O. Meter (if req'd):    YSI    HACH

Well Diameter	Multiplier	Well Diameter	Multiplier	7.01
1"	0.04	4"	0.65	
2"	0.16	6"	1.47	
3"	0.37	Other	radius <sup>2</sup> * 0.163	

Purge Method: <input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Disposable Bailer <input type="checkbox"/> Positive Air Displacement <input type="checkbox"/> Electric Submersible <input type="checkbox"/> Extraction Pump Other: _____	Sampling Method: <input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Disposable Bailer <input type="checkbox"/> Extraction Port Other: _____
---	---

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

1.1	X	3	=	3.3	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
1149	64.6	6.9	1033	1.1	
1150	65.0	6.8	1072	2.2	
1151	64.5	6.8	1085	3.3	

Did well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Gallons actually evacuated: 3.3
Sampling Time: 1155	Sampling Date: 4/25/05
Sample I.D.: MW-3	Laboratory: Pace Sequoia    Other _____

Analyzed for: <input checked="" type="checkbox"/> PFOA <input checked="" type="checkbox"/> PTEX <input type="checkbox"/> MTBE <input type="checkbox"/> DRO <input checked="" type="checkbox"/> Dxy <input checked="" type="checkbox"/> 2-DCA <input checked="" type="checkbox"/> BDA <input checked="" type="checkbox"/> Ethano	Other: DRO w/500, T00
D.O. (if req'd):	Pre-purge: _____ mg/L    Post-purge: _____ mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV    Post-purge: _____ mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: 050425-RC1	Station # 11126
Sampler: P. Chan	Date: 4/25/08
Well I.D.: mw-4	Well Diameter: <u>3</u> 3 4 6 8
Total Well Depth: 11.03	Depth to Water: 7.25
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

3.78

Purge Method: <u>Bailer</u> Disposable Bailer <input checked="" type="checkbox"/> Positive Air Displacement Electric Submersible Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> Disposable Bailer <input checked="" type="checkbox"/> Extraction Port Other: _____
--	--

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

<u>0.6</u>	x	<u>3</u>	=	<u>1.8</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
1254	64.8	7.0	2067	0.6	
1256	64.9	7.1	2156	1.2	
1258	65.0	7.1	2244	1.4	

Did well dewater? Yes  Gallons actually evacuated: 4.9

Sampling Time: 1300 Sampling Date: 4/25/08

Sample I.D.: mw-4 Laboratory: Pace Sequicia Other \_\_\_\_\_

Analyzed for:  PCE  BTEX  MTBE  DRO  SVOC  2-DGA  ED  Other

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: 050425 - Bc1	Station # 11126
Sampler: P. CARROLL	Date: 4/25/08
Well I.D.: MW-5	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth: 1235	Depth to Water: 5.52
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVO</u> Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

6.53

Purge Method: <u>Bailer</u> Disposable Bailer <input checked="" type="checkbox"/> Positive Air Displacement Electric Submersible Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> Disposable Bailer <input checked="" type="checkbox"/> Extraction Port Other: _____
--	--

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

<u>1.1</u>	X	<u>3</u>	=	<u>3.3</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u> )	Gals. Removed	Observations
1140	66.6	7.1	766.6	1.1	
1141	66.7	6.8	757.4	2.2	
1142	67.1	6.7	756.6	3.3	

Did well dewater? Yes <input type="checkbox"/> <u>No</u>	Gallons actually evacuated: 3.3	
Sampling Time: 1145	Sampling Date: 4/25/08	
Sample I.D.: MW-5	Laboratory: Pace <u>Sequoia</u> Other _____	
Analyzed for: <u>GRX</u> <u>BTX</u> MTBE DRO <u>Oxy</u> <u>1,2-DCA</u> <u>EDB</u> <u>Ediano</u>	Other: _____	
D.O. (if req'd):	Pre-purge: _____ mg/L	Post-purge: _____ mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV



## ARCO / BP WELL MONITORING DATA SHEET

BTS #: 050425-1361	Station # 11126
Sampler: P. CANN	Date: 4/25/08
Well I.D.: mw-6	Well Diameter: <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 6 <input type="checkbox"/> 8 <input type="checkbox"/> _____
Total Well Depth: 12.57	Depth to Water: 5.22
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="checkbox"/> Grade	D.O. Meter (if req'd):                      YSI                      HACH

Well Diameter	Multiplier	Well Diameter	Multiplier	7.35
1"	0.04	4"	0.65	
2"	0.16	6"	1.47	
3"	0.37	Other	radius <sup>2</sup> * 0.163	

Purge Method:                      Bailer Disposable Bailer <input checked="" type="checkbox"/> Positive Air Displacement Electric Submersible Extraction Pump Other: _____	Sampling Method:                      Bailer Disposable Bailer <input checked="" type="checkbox"/> Extraction Port Other: _____
--	--

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

1.2	X	3	=	3.6	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <del>µS</del> )	Gals. Removed	Observations
12:04	67.2	6.4	1608	1.2	
12:10	67.4	7.0	1501	2.4	
12:11	66.1	<del>6.7</del> 7.0	1482	3.6	

Did well dewater? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: 3.6
Sampling Time: 12:15	Sampling Date: 4/25/08
Sample I.D.: mw-6	Laboratory: Pace <input checked="" type="checkbox"/> Sequoia    Other _____

Analyzed for: <input checked="" type="checkbox"/> GRO <input checked="" type="checkbox"/> STEK    MTBE    DRO <input checked="" type="checkbox"/> DMS <input checked="" type="checkbox"/> 1,2-DCA <input checked="" type="checkbox"/> PCB <input checked="" type="checkbox"/> Ethanol    Other: _____	
D.O. (if req'd):	Pre-purge: _____ mg/L                      Post-purge: _____ mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV                      Post-purge: _____ mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>050425-BC1</u>	Station # <u>11126</u>
Sampler: <u>P. CHAM</u>	Date: <u>4/25/00</u>
Well I.D.: <u>MW-7</u>	Well Diameter: <u>②</u> 3 4 6 8 _____
Total Well Depth: <u>13.65</u>	Depth to Water: <u>4.88</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>EVG</u> Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier	8-77
1"	0.04	4"	0.65	
2"	0.16	6"	1.47	
3"	0.37	Other	radius <sup>2</sup> * 0.163	

Purge Method:	Bailer	Sampling Method:	Bailer
	Disposable Bailer <input checked="" type="checkbox"/>		Disposable Bailer <input checked="" type="checkbox"/>
	Positive Air Displacement		Extraction Port
	Electric Submersible	Other: _____	
	Extraction Pump		
	Other: _____		

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

1.4	X	3	=	4.2	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
1224	69.6	6.8	1516	1.4	
1226	70.0	6.8	1509	2.8	
1228	70.5	6.8	1524	4.2	

Did well dewater? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>4.2</u>
Sampling Time: <u>1235</u>	Sampling Date: <u>4/25/00</u>

Sample I.D.: <u>MW-7</u>	Laboratory: Pace <u>Sequoia</u> Other _____
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Analyzed for: <input checked="" type="checkbox"/> BRO <input checked="" type="checkbox"/> MTBE <input type="checkbox"/> DRO <input checked="" type="checkbox"/> OxyS <input checked="" type="checkbox"/> 1,2-DCA <input checked="" type="checkbox"/> EDH <input checked="" type="checkbox"/> Ethano	Other: _____	
D.O. (if req'd):	Pre-purge: _____ mg/L	Post-purge: _____ mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV



# ARCO / BP WELL MONITORING DATA SHEET

BTS #: 950425-1301	Station # 11126
Sampler: P. CARIC	Date: 4/25/00
Well I.D.: mw-4	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <del>13.47</del> <sup>pc</sup> 13.74	Depth to Water: 3.91
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>FVO</u> Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

10.49  
80% = 5.41

Purge Method:  Bailer  Disposable Bailer  Positive Air Displacement  Electric Submersible Extraction Pump  Other: \_\_\_\_\_

Sampling Method:  Bailer  Disposable Bailer  Extraction Port  Other: \_\_\_\_\_

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

$$\frac{7.0 \text{ Gals.}}{1 \text{ Case Volume (Gals.)}} \times \frac{3 \text{ Specified Volumes}}{3} = \frac{21.0 \text{ Gals.}}{\text{Calculated Volume}}$$

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
1345	65.3	7.0	348.6	7	0002/glcw
1346	65.5	7.0	346.5	14	0002/glcw
Well Dewatered @			14 gal		DTW 13.03
1400	65.2	7.2	401.5	—	
Sample Taken Prior to			80% - Site	Departure	DTW 11.90

Did well dewater?  Yes  No Gallons actually evacuated: 14

Sampling Time: 1400 Sampling Date: 4/25/00

Sample I.D.: mw-4 Laboratory: Pace Sequoia Other: \_\_\_\_\_

Analyzed for:  GRO  BTEX  MTBE  DRO  OXY  2-DCA  EDB  Ethanol Other: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: 050425-BL1	Station # 11126
Sampler: P. CARU	Date: 4/25/01
Well I.D.: MW-10	Well Diameter: <input checked="" type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8    _____
Total Well Depth: 17.25	Depth to Water: 8.37
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="radio"/> PVC <input type="radio"/> Grade	D.O. Meter (if req'd):    YSI    HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

8.98

Purge Method:                      Bailer Disposable Bailer ✓ Positive Air Displacement Electric Submersible Extraction Pump Other: _____	Sampling Method:                  Bailer Disposable Bailer ✓ Extraction Port Other: _____
--	--

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

1.5	X	3	=	4.5	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
1044	65.7	6.8	1602	1.5	
1045	66.0	6.7	1723	3.0	
1046	65.7	6.8	1761	4.5	

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: 4.5
Sampling Time: 1050	Sampling Date: 4/25/01
Sample I.D.: MW-10	Laboratory: Pace <input checked="" type="radio"/> Sequoia    Other _____
Analyzed for: <input checked="" type="checkbox"/> GRO <input checked="" type="checkbox"/> BTX    MTBE    DRO <input checked="" type="checkbox"/> Dry's <input checked="" type="checkbox"/> 2-DCP <input checked="" type="checkbox"/> EDB <input checked="" type="checkbox"/> Ethanol    Other: _____	
D.O. (if req'd):	Pre-purge: _____ mg/L    Post-purge: _____ mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV    Post-purge: _____ mV

# ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>050412-BL1</u>	Station # <u>11/26</u>
Sampler: <u>P. CARR</u>	Date: <u>4/25/05</u>
Well I.D.: <u>MW-11</u>	Well Diameter: <u>3</u> 3 4 6 8 _____
Total Well Depth: <u>9.24</u> <sup>m</sup> 17.33	Depth to Water: <u>9.24</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

8.04

Purge Method: <input type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Positive Air Displacement <input type="checkbox"/> Electric Submersible <input type="checkbox"/> Extraction Pump Other: _____	Sampling Method: <input type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Extraction Port Other: _____
--	--

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

<u>1.3</u>	X	<u>3</u>	=	<u>3.9</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or $\mu$ S)	Gals. Removed	Observations
1108	65.3	7.3	982.2	1.3	0002
1104	65.2	7.1	945.1	2.4	0002
1110	65.2	7.1	936.7	3.4	0002

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>3.9</u>
Sampling Time: <u>1115</u>	Sampling Date: <u>4/25/05</u>
Sample I.D.: <u>MW-11</u>	Laboratory: Pace <u>Sequoia</u> Other _____

Analyzed for: <input checked="" type="checkbox"/> GRO <input checked="" type="checkbox"/> PTE <input type="checkbox"/> MTBE <input type="checkbox"/> DRO <input checked="" type="checkbox"/> DRY <input checked="" type="checkbox"/> 2,4-DCA <input checked="" type="checkbox"/> EDB <input checked="" type="checkbox"/> Ethanol	Other: _____	
D.O. (if req'd):	Pre-purge: _____ mg/L	Post-purge: _____ mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV



# Chain of Custody Record

Project Name: Analytical for QMR sampling  
 BP BU/AR Region/Enfos Segment: BP > Americas > West Coast > Retail > WCBU > CA > Central > 11126 > Historical/BL  
 State or Lead Regulatory Agency: California Regional Water Quality Control Board - San Francisco  
 Requested Due Date (mm/dd/yy): 10 Day TAT

On-site Time: <u>09:00</u>	Temp: <u>47.50°F</u>
Off-site Time: <u>14:30</u>	Temp: <u>67.0°F</u>
Sky Conditions: <u>clear</u>	
Meteorological Events: <u>N/A</u>	
Wind Speed: <u>N/A</u>	Direction: <u>N/A</u>

Lab Name: <u>Sequoia</u>	BP/AR Facility No.: <u>11126</u>	Consultant/Contractor: <u>URS</u>
Address: <u>885 Jarvis Drive</u> <u>Morgan Hill, CA 95037</u>	BP/AR Facility Address: <u>1700 Powell St., Emeryville, CA 94608</u>	Address: <u>1333 Broadway, Suite 800</u> <u>Oakland, CA 94612</u>
Lab PM: <u>Lisa Race</u>	California Global ID No.: <u>T0600100208</u>	Consultant/Contractor Project No.: <u>38487132</u>
Tele/Fax: <u>408.782.8156 / 408.782.6308</u>	Enfos Project No.: <u>G07TP-0019</u>	Consultant/Contractor PM: <u>Lynelle Omishi</u>
BP/AR PM Contact: <u>Kyle Christie</u>	Provision or RCOP: <u>Provision</u>	Tele/Fax: <u>510.874.1758 / 510.874.3268</u>
Address: <u>4 Centerpointe Dr.</u> <u>La Palma, CA 90623</u>	Phase/WBS: <u>04 - Mon/Remed by Natural Attenuation</u>	Report Type & QC Level: <u>Level 1 with EDF</u>
Tele/Fax: <u>(714) 670-5303 / (714) 670-5195</u>	Sub Phase/Task: <u>03 - Analytical</u>	E-mail EDD To: <u>Rachel.Lindvall@urscorp.com</u>
	Cost Element: <u>05 - Subcontracted Costs</u>	Invoice to: <u>Atlantic Richfield Company</u>

Item No.	Sample Description	Time	Date	Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis					Sample Point Lat/Long and Comments				
				Soil/Solid	Water/Liquid	Air			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Methanol	ORO / BTEX (8260)	DRO w/SGC (8015M)	MTBE, TAME, ETBB (8260)	DPE, TBA (8260)	EDB, 1,2-DCA (8260)		Ethanol (8260)	TOG (1664)		
1	MW-1	1250	4/25		W			6							X	X	X	X					
2	MW-2	1335	4/25		W			3							X	X	X	X					
3	MW-3	1155	4/25		W			7							X	X	X	X	X				
4	MW-4	1300	4/25		W			3							X	X	X	X					
5	MW-5	1145	4/25		W			3							X	X	X	X					
6	MW-6	1215	4/25		W			3							X	X	X	X					
7	MW-7	1235	4/25		W			3							X	X	X	X					
8	MW-8	1320	4/25		W			3							X	X	X	X					
9	MW-9	1400	4/25		W			3							X	X	X	X					
10	MW-10	1050	4/26		W			3							X	X	X	X					

Sampler's Name: <u>P. CLARK</u>	Relinquished By / Affiliation: <u>[Signature]</u>	Date: <u>4/25</u>	Time: <u></u>	Accepted By / Affiliation: <u></u>	Date: <u></u>	Time: <u></u>
Sampler's Company: <u>Blaine Tech Services</u>						
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

Special Instructions:

Custody Seals in Place Yes  No  Temp Blank Yes  No  Cooler Temperature on Receipt  F/C  Trip Blank Yes  No



# Chain of Custody Record

Project Name: Analytical for QMR sampling  
 BP BU/AR Region/Enfos Segment: BP > Americas > West Coast > Retail > WCBU > CA > Central > 11126 > HistoricalBL  
 State or Lead Regulatory Agency: California Regional Water Quality Control Board - San Francisco  
 Requested Due Date (mm/dd/yy): 10 Day TAT

On-site Time: 0600	Temp: 50°F
Off-site Time: 1430	Temp: 67°F
Sky Conditions: clear	
Meteorological Events: N/A	
Wind Speed: N/A	Direction: N/A

Lab Name: Sequoia	BP/AR Facility No.: 11126	Consultant/Contractor: URS
Address: 885 Jarvis Drive Morgan Hill, CA 95037	BP/AR Facility Address: 1700 Powell St., Emeryville, CA 94608	Address: 1333 Broadway, Suite 800 Oakland, CA 94612
Lab PM: Lisa Race	Site Lat/Long: 37.838926 / -122.295	Consultant/Contractor Project No.: 38487132
Tele/Fax: 408.782.8156 / 408.782.6308	California Global ID No.: T0600100208	Consultant/Contractor PM: Lynelle Onishi
BP/AR PM Contact: Kyle Christie	Enfos Project No.: G07TP-0019	Tele/Fax: 510.874.1758 / 510.874.3268
Address: 4 Centerpointe Dr. La Palma, CA 90623	Provision or RCOP: Provision	Report Type & QC Level: Level 1 with EDP
Tele/Fax: (714) 670-5303 / (714) 670-5195	Phase/WBS: 04 - Mon/Remed by Natural Attenuation	E-mail EDD To: Rachel.Lindvall@urscorp.com
	Sub Phase/Task: 03 - Analytical	Invoice to: Atlantic Richfield Company
	Cost Element: 05 - Subcontracted Costs	

Item No.	Sample Description	Time	Date	Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis					Sample Point Lat/Long and Comments			
				Soil/Solid	Water/Liquid	Air			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Methanol	ORO / ETEX (8260)	DRO w/SOC (8013A)	MTBE, TAME, ETBE (DPE, TBA) (8260)	EDB, 1,2-DCA (8260)	Ethanol (8260)		TOG (1664)		
1	mw-11	1115	4/25	W				3				X			X	X						
2	T3-#1210-04252005	-	4/26	W				2														"ON HOLD"
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Sampler's Name: P. Clark	Relinquished By / Affiliation: P. Clark	Date:	Time:	Accepted By / Affiliation:	Date:	Time:
Sampler's Company: Blake Tech Service						
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

Special Instructions:

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



BP GEM OIL COMPANY TYPE **A** BILL OF LADING

SOURCE RECORD BILL OF LADING FOR NON-HAZARDOUS PURGEWATER RECOVERED FROM GROUNDWATER WELLS AT BP GEM OIL COMPANY FACILITIES IN THE STATE OF CALIFORNIA. THE NON-HAZARDOUS PURGE- WATER WHICH HAS BEEN RECOVERED FROM GROUND- WATER WELLS IS COLLECTED BY THE CONTRACTOR, MADE UP INTO LOADS OF APPROPRIATE SIZE AND HAULED BY DILLARD ENVIRONMENTAL TO THE ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY IN LIVERMORE, CALIFORNIA.

The contractor performing this work is BLAINE TECH SERVICES, INC. (BTS), 1680 Rogers Avenue, San Jose, CA 95112 (phone [408] 573-0555). Blaine Tech Services, Inc. is authorized by BP GEM OIL COMPANY to recover, collect, apportion into loads the Non-Hazardous Well Purgewater that is drawn from wells at the BP GEM Oil Company facility indicated below and deliver that purgewater to BTS. Transport routing of the Non-Hazardous Well Purgewater may be direct from one BP GEM facility to the designated destination point; from one BP GEM facility to the designated destination point via another BP GEM facility; from a BP GEM facility to the designated destination point via the contractor's facility, or any combination thereof. The Non-Hazardous Well Purgewater is and remains the property of BP GEM Oil Company.

This Source Record BILL OF LADING was initiated to cover the recovery of Non-Hazardous Well Purgewater from wells at the BP GEM Oil Company facility described below:

11126

Station #

1700 Powell st., Emeryville

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

53.70

added equip. any other  
rinse water 5.70 adjustments 0

TOTAL GALS. RECOVERED 59.0 loaded onto  
BTS vehicle # 51

BTS event # time date  
05M25-BL1 1430 4/25/05

signature *[Signature]*

\*\*\*\*\*

REC'D AT time date  
BTS SAC 1600 4 25 05

unloaded by signature *[Signature]*



**ATTACHMENT F**  
**WELL SURVEY DATA**



**ATTACHMENT G**

**GEOTRACKER CONFIRMATION AND ERROR CHECK REPORTS**

11126

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### SUCCESSFUL GEO\_WELL CHECK - NO ERRORS

<u>ORGANIZATION NAME:</u>	URS Corporation-Oakland Office
<u>USER NAME:</u>	URSCORP-OAKLAND
<u>DATE CHECKED:</u>	5/23/2005 2:57:46 PM

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**Facility Global ID:** T0600100208  
**Facility Name:** BP MOBIL  
**Submittal Title:** 2Q 2005 QMR EDF Site 11126  
**Submittal Type:** GW Monitoring Report

Click [here](#) to view the detections report for this upload.

<b>BP MOBIL</b> 1700 POWELL ST EMERYVILLE, CA 94608	<b>Regional Board - Case #: 01-0222</b> SAN FRANCISCO BAY RWQCB (REGION 2) - (BG) <b>Local Agency (lead agency) - Case #: 4050</b> ALAMEDA COUNTY LOP - (RWS)
---	--

<b>CONF #</b>	<b>TITLE</b>	<b>QUARTER</b>
9223026812	2Q 2005 QMR EDF Site 11126	Q2 2005
<b>SUBMITTED BY</b>	<b>SUBMIT DATE</b>	<b>STATUS</b>
Srijesh Thapa	5/23/2005	PENDING REVIEW

### SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	11
# FIELD POINTS WITH DETECTIONS	10
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	8
SAMPLE MATRIX TYPES	WATER

### METHOD QA/QC REPORT

METHODS USED 8260FA,E1664A,SW8015B

TESTED FOR REQUIRED ANALYTES? N

MISSING PARAMETERS NOT TESTED:

- 8260FA REQUIRES DBFM TO BE TESTED
- 8260FA REQUIRES BR4FBZ TO BE TESTED
- 8260FA REQUIRES BZMED8 TO BE TESTED

LAB NOTE DATA QUALIFIERS Y

### QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS	0
METHOD HOLDING TIME VIOLATIONS	0
LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT	0
LAB BLANK DETECTIONS	0
DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?	
- LAB METHOD BLANK	Y
- MATRIX SPIKE	N
- MATRIX SPIKE DUPLICATE	N
- BLANK SPIKE	Y
- SURROGATE SPIKE - NON-STANDARD SURROGATE USED	Y

### WATER SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	Y
---	---

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y	
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	Y	
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	Y	
<b>SOIL SAMPLES FOR 8021/8260 SERIES</b>		
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	n/a	
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	n/a	
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%	n/a	
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	n/a	
<b>FIELD QC SAMPLES</b>		
<u>SAMPLE</u>	<u>COLLECTED</u>	<u>DETECTIONS &gt; REPD</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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11126

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