R0456

Atlantic Richfield Company
(a BP affiliated company)

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August 4, 2005

Re: Former BP Service Station # 11102
Soil and Water Investigation Report
100 MacArthur Boulevard
Oakland, CA

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

URS

August 4, 2005

Ms. Donna Drogos
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Re: Soil and Water Investigation Report
Former BP Service Station #11102
100 MacArthur Boulevard
Oakland, California
ACEHS Case No. RO0000456

Dear Ms. Drogos:

On behalf of the Atlantic Richfield Company (a BP affiliated company), URS Corporation (URS) has prepared this *Soil and Water Investigation (SWI) Report* for additional soil and water characterization at the above referenced facility (the Site). The purpose of the work was to further assess the extent of dissolved-phase hydrocarbons in groundwater at the request of Alameda County Environmental Health Services (ACEHS). As proposed within the *Revised Soil and Groundwater Investigation Work Plan (Revised Work Plan)* dated April 28, 2005, the SWI was to include advanceing of five on-site soil borings and three off-site borings for source area characterization and preferential pathway evaluation. This *SWI Report* discusses 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 May 4, 2005 is provided as Attachment A.

1.0 SITE FEATURES AND BACKGROUND

The Site is an active 76-branded gasoline retail outlet located at the intersection of MacArthur Boulevard and Oakland Avenue in Oakland, California (see Figure 1). The Site is located in a mixed commercial and residential area. A Quikstop station is located northwest of the Site at the intersection of Harrison Street and MacArthur Boulevard. The MacArthur Freeway (Interstate 580), an elevated freeway, is located immediately southwest of the Site.

BP acquired the property from Mobil Oil Corporation (Mobil) in 1989 (BP, 1989). In 1994, BP ceased operations at the Site and transferred the property to TOSCO Marketing Company (TOSCO).

Improvements to the property include the service station building, pump islands, and underground storage tanks (USTs). The last known renovation at the Site occurred in 1990, when new USTs, pump islands and a new canopy were installed. Existing USTs at the station include four fiberglass tanks: one 12,000 gallon tank, one 10,000 gallon tank and one 6,000

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gallon gasoline tank installed in 1990, and one 1,000 gallon waste-oil tank installed in September 1988. There are currently three monitoring wells at the Site, MW-1, MW-2 and MW-3 (see Figure 2). Groundwater is typically encountered between 10 to 15 feet below ground surface (bgs) and the wells are screened from 12 to 32 feet bgs. The screened soils are clayey sands, clayey gravels, and clays in well MW-1, silty clays, silts, and clays in well MW-2, and clays in well MW-3.

Site investigations were initiated in 1988 with Mobil Oil Company's removal of a 550-gallon waste-oil UST. Mobil Oil Company conducted soil sampling in conjunction with the waste-oil tank removal activities. Two soil samples were collected: one from below the UST at about 9-feet below ground surface (bgs) and another soil sample was collected from the stockpile of the soil excavated from the UST pit. Although the soil sample from below the UST showed low levels of total petroleum hydrocarbons as diesel (TPH-d) and total oil and grease (TOG), elevated levels of TPH-d (1,700 parts per million [ppm]) and TOG (65,000 ppm) were reported in the stockpile sample which warranted further investigations.

In October 1989, Alton conducted a subsurface investigation at the Site and installed three on-site monitoring wells, MW-1 through MW-3. Boring logs and well construction diagrams for the monitoring wells are included in Attachment B. Saturated soil was encountered at depths ranging from 16 to 19 feet bgs. The initial analysis of groundwater samples collected from these wells identified very low levels of benzene, toluene and total xylenes in soil samples collected from wells MW-2 and MW-3. Mobil Oil Company conducted quarterly groundwater monitoring at the Site until mid-1992, when RM purchased the property. It appears from the historical groundwater tables that the sampling frequency was reduced from quarterly to semi-annual after the November 1992 sampling event due to low detected concentrations. The groundwater flow direction during this period was reported to be generally towards the south-southwest (Emcon, 1994). Historical groundwater data is provided in Attachment B. Historical soil data is included as Attachment C.

In February 2000, Cambria Environmental Technology (Cambria) conducted a historical review, utility survey, and a recovery test. The utility survey was conducted in order to identify the location of potential preferential pathways and subsurface obstructions beneath the Site. The study identified several conduits (Figure 2) including sanitary sewers, storm drains, electrical, water, natural gas, telephone, and tank vent lines. A storm drain located beneath MacArthur Boulevard was believed to intersect groundwater seasonally (Cambria, 2000).

In October 2000, Alisto conducted a Potential Receptor Survey, Expanded Site Plan and Well Search (Alisto, 2000). The survey verified the existence of various utilities and determined that the Site is not within critical distance of any public or private drinking water source.

2.0 SCOPE OF WORK

The scope of this investigation was to include a preferential pathway evaluation and source area characterization. Three soil borings (SB-1 through SB-3) were proposed along the storm drain on MacArthur Boulevard to assess the potential of the storm drain being used as a preferential pathway. In addition, URS proposed coordinating with the City of Oakland to access the storm drain line to collect a sample if water is present. URS was unable to complete the entire proposed scope of work to evaluate preferential pathways on MacArthur Boulevard. A Caltrans permit was requested to complete the work within MacArthur Boulevard and to date has not been obtained. As soon as the Caltrans permit is received, the proposed preferential pathway evaluation will be completed.

The source area characterization scope of work included advancing five soil boring pairs on-site to a depth of approximately 28 to 32 feet bgs, to assess the potential presence of hydrocarbons in soil and groundwater at the Site. In addition, the three existing on-site monitoring wells (MW-1, MW-2 and MW-3) were sampled to provide complete dissolved hydrocarbon data at the Site.

2.1 SOURCE AREA CHARACTERIZATION

The scope of work performed included advancing five on-site soil borings pairs (SB-4 through SB-7), to help assess the potential presence of hydrocarbons in soil and groundwater at the Site. Soil boring SB-4 was located to assess the extent of hydrocarbons upgradient of the UST cavity and dispenser islands. Borings SB-5 and SB-6 were advanced to assess the extent of hydrocarbons down-gradient (north and northwest) of the USTs and dispenser islands. Boring SB-7 was located to assess the extent of hydrocarbons downgradient of well MW-3 and the waste-oil tank. Soil boring SB-8 was advanced in the vicinity of well MW-1 to determine nearby lithology and assess the reinstallation of well MW-1 in response to ACEHS' concern that well MW-1 was installed within fill material, resulting in skewed data collection.

2.1.1 Preliminary Field Activities

Before initiating field activities, URS obtained a soil boring permit from Alameda County Public Works Agency (ACPWA). A site-specific Health and Safety Plan (HASP) was prepared 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 a hand auger at each boring location. A copy of the soil boring permit is included in Attachment D.

2.1.2 Soil Boring Advancement and Soil Sampling

On July 13 and 14, 2005, a URS geologist observed Gregg Drilling and Testing, Inc. (Gregg) of Martinez, California advance five on-site soil borings (SB-4, SB-5, SB-6, SB-7 and SB-8) to depths of approximately 28 to 32 feet bgs for lithologic description and soil sampling. The first five feet of each boring was physically cleared to at least five feet bgs using a hand auger. The soil borings were continuously cored using direct-push technology. The approximate soil boring locations are illustrated on Figure 2. During soil boring advancement, groundwater was encountered in the lithologic borings at depths between 7.5 feet bgs and 28 feet bgs.

Soil samples were collected in clear acetate sleeves for laboratory analysis near the groundwater interface and from areas of obvious soil impacts. Soil samples were classified by URS personnel under the supervision of a State of California Professional Geologist, according to the Unified Soil Classification System (USCS) and examined using visual and manual methods for parameters including odor, staining, color, grain size, and moisture content. Samples for chemical analysis were covered at each end with Teflon™ sheeting, capped with plastic end caps, labeled, and placed in an ice-filled cooler for preservation. Soil samples were collected in clear acetate sleeves for laboratory analysis near the groundwater interface and from areas of obvious soil impacts and were submitted to Sequoia Analytical Laboratories (Sequoia) for analysis of gasoline range organics (GRO), benzene, toluene, ethylbenzene and total xylenes (BTEX), and fuel additives (methyl tert-butyl ether [MTBE], tert-butyl alcohol [TBA], di-isopropyl ether [DIPE], ethyl tert-butyl ether [ETBE], tert-amyl methyl ether [TAME], 1,2-dichloroethane [1,2-DCA], 1,2-dibromoethane [EDB], and ethanol) by EPA Method 8260B. The sample with the highest GRO concentration was analyzed for total lead by EPA Method 6010B for disposal characterization. Following completion of sampling activities, the borings were sealed to the surface using a neat Portland cement grout slurry.

2.1.3 Groundwater Sampling

On July 13 and 14, 2005, a URS geologist observed Gregg advance the depth discrete groundwater or Hydropunch® soil borings, at all five soil boring locations approximately 1 to 2 feet laterally from the respective initial soil boring location. The Hydropunch® boring locations were cleared to at least five feet bgs using a hand auger.

After clearing the depth discrete groundwater boring locations to five feet bgs using a hand auger, the Hydropunch® sampler was advanced to the appropriate depth intervals in which groundwater was observed in the initial lithologic soil boring. Care was taken to expose the hydro-punch screen only to the saturated zone, so that no cross-contamination would occur. The boring was then allowed to sit for a minimum of 1-hour for groundwater to accumulate. After a minimum of 1-hour, an attempt was made to collect a groundwater sample. If groundwater was not present in the Hydropunch® screen, then the Hydropunch® tool was retracted from the boring, a new drive tip was installed on the drive rods, and the next depth

interval was attempted for sample collection. No groundwater sample was able to be collected from any of the boring locations. Although no water samples were collected, soil samples were collected from the saturated zones. The saturated soil samples are noted on Table 1.

Following completion of the Hydropunch® boring activities, all borings were sealed to the surface with a neat Portland cement grout slurry.

On July 11, 2005, Blaine Tech Services, Inc. (Blaine Tech) of San Jose, California mobilized to the Site to sample the three on-site monitoring wells (MW-1 through MW-3). 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 ARCO approved facility. The groundwater samples were submitted to Sequoia and analyzed for GRO, BTEX, and fuel additives (MTBE, TBA, DIPE, TAME, ETBE, 1,2-DCA, EDB, and ethanol) by EPA Method 8260B. A copy of the field procedures and field data sheets are provided in Attachment E.

2.2 Geology and Hydrogeology

The general lithology of soils underlying the Site consists of interbedded gravelly silty sandy clay (fill), silty sands, and silty sandy clays extending to the bottom of the borings. Cross-sections representing the subsurface geology using soil borings from this investigation and previous/historical soil boring and well logs) are presented as Figures 2, 3 and 4. Boring logs are provided in Attachment C.

Groundwater at the Site is typically encountered between 10 to 15 feet bgs. Groundwater flow direction during the 2005 third quarter monitoring event on July 11, 2005 was to the west-southwest at a gradient of 0.06 ft/ft (Figure 5).

3.0 ANALYTICAL RESULTS

3.1 Soil Analytical Results

URS submitted soil samples collected at approximately 5-foot intervals, near the groundwater interface and from areas of obvious soil impacts to Sequoia Analytical, a State of California DHS Certified Laboratory for analysis. The soil samples were analyzed for GRO, BTEX, MTBE, ethanol, TAME, ETBE, DIPE, TBA, EDB and 1,2-DCA using EPA Method 8260B. Cumulative soil analytical results are presented in Table 1. Copies of laboratory analytical reports and chain-of-custody records are presented in Attachment F.

Soil sample analytical results can be summarized as follows:

- GRO were detected in 11 samples from borings SB-4, SB-5, SB-6 and SB-7. Concentrations ranged from 0.14 milligrams per kilogram (mg/kg) [SB-6 (9.5-10')] to 1,300 mg/kg [SB-7 (2-2.5')].
- Ethylbenzene was detected in 3 soil samples at concentrations ranging from 0.14 mg/kg [SB-5 (19.5-20')] to 3.0 mg/kg [SB-7 (2-2.5')]. Total xylenes were detected in 4 samples at concentrations ranging from 0.0054 mg/kg [SB-6 (16.5-17')] to 3.9 mg/kg [SB-7 (5-5.5')].
- MTBE was detected in 11 samples collected from borings SB-4, SB-5, SB-6 and SB-8 at concentrations ranging from 0.0055 mg/kg [SB-6 (9.5-10')] to 3.7 mg/kg [SB-4 (29-29.5')].
- TBA was detected in 2 samples at concentrations of 0.053 mg/kg [SB-5 (29-29.5')] and 0.13 mg/kg [SB-6 (19.5-20')].
- No benzene, toluene, or other fuel additives (ethanol, TAME, ETBE, DIPE, EDB, or 1,2-DCA) were detected at or above their respective laboratory reporting limits in any soil sample analyzed.

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

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

Of the 36 soil samples collected during this on-site investigation, samples SB-7 (5-5.5'), SB-7 (9.5-10'), and SB-7 (14.5-15') were above the GRO ESL with concentrations of 730 mg/kg,

340 mg/kg, and 1,300 mg/kg, respectively. Benzene and toluene were not detected at or above their respective laboratory reporting limits in soil samples collected from any of the on-site borings. The detected total xylenes concentrations of 3.0 mg/kg and 3.9 mg/kg at SB-7 (2-2.5') and SB-7 (5-5.5'), respectively, were above the ESL for total xylenes. Of the 11 samples with detectable concentrations of MTBE, 9 of the samples reported concentrations above the MTBE ESL. Only one soil sample [SB-6 (19.5-20')] exceeded the ESL for TBA with a concentration of 0.13 mg/kg.

3.2 Groundwater Analytical Results

Groundwater samples from the three monitoring wells were submitted to Sequoia for GRO, BTEX, and fuel additives (including MTBE, TAME, ETBE, DIPE, TBA, EDB, 1,2-DCA, and ethanol) analysis using EPA Method 8260B. 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 F.

The groundwater analytical results can be summarized as follows:

- GRO was detected in two of the on-site groundwater monitoring wells at concentrations of 130 micrograms per liter (µg/L) (MW-3) and 180 µg/L (MW-1).
- MTBE was detected at concentrations ranging from 36 µg/L (MW-1) to 5,300 µg/L (MW-2). TBA was detected in MW-1 and MW-2 at concentrations of 550 µg/L and 9,000 µg/L, respectively. TAME was detected in MW-2 and MW-3 at concentrations of 99 µg/L and 1.4 µg/L, respectively.
- No BTEX, ethanol, DIPE, ETBE, 1,2-DCA, or EDB were detected at or above their respective laboratory reporting limits.

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

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

Of the 3 groundwater monitoring well samples collected on July 11, 2005, samples collected from 2 of the wells exceeded the ESL for GRO with concentrations of 130 µg/L (MW-3) and 180 µg/L (MW-1). No BTEX was reported in the groundwater monitoring wells. The concentrations of MTBE detected in all three of the monitoring wells exceeded the ESL with concentrations ranging from 36 µg/L (MW-1) to 5,300 µg/L (MW-2). TBA was detected in MW-1 and MW-2 above the ESL at concentrations of 550 µg/L and 9,000 µg/L, respectively. There is no current ESL for TAME.

3.3 GeoTracker

In accordance with GeoTracker requirements, URS will upload soil and groundwater analytical data and associated information into the GeoTracker database as soon as the final electronic data files have been obtained from the laboratory.

3.4 Investigation Derived Waste Disposal

Investigation derived waste generated during Site investigation activities was stored temporarily on-site in DOT approved 55-gallon drums pending analytical results and profiling. Following waste characterization, Dillard Environmental (Dillard) will transport the soil to an RM approved disposal facility. Upon receipt, URS will forward the waste manifests to the ACEHS upon request.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The purpose of the investigation was to provide source area characterization and a preferential pathway evaluation. Fieldwork was conducted for source characterization in order to assess the lateral and vertical extent of petroleum hydrocarbons in soils in the vicinity of the source area, such as the UST complex, former and current product dispensers,

and product piping. The results of the investigation performed by URS can be summarized as follows:

- GRO was detected in 11 soil samples from borings SB-4, SB-5, SB-6 and SB-7. Concentrations ranged from 0.14 mg/kg [SB-6 (9.5-10')] to 1,300 mg/kg [SB-7 (2-2.5')].
- MTBE was detected in 11 soil samples collected from borings SB-4, SB-5, SB-6 and SB-8 at concentrations ranging from 0.0055 mg/kg [SB-6 (9.5-10')] to 3.7 mg/kg [SB-4 (29-29.5')]. TBA was detected in 2 soil samples at concentrations of 0.053 mg/kg [SB-5 (29-29.5')] and 0.13 mg/kg [SB-6 (19.5-20')].
- GRO were detected in two of the on-site groundwater monitoring wells at concentrations of 130 µg/L (MW-3) and 180 µg/L (MW-1).
- MTBE was detected at concentrations ranging from 36 µg/L (MW-1) to 5,300 µg/L (MW-2). TBA was detected in MW-1 and MW-2 at concentrations of 550 µg/L and 9,000 µg/L, respectively.
- No benzene was detected at or above the laboratory reporting limits in any soil or groundwater samples analyzed.
- Recent sampling events indicate groundwater flow direction is to the west-southwest at a calculated hydraulic gradient of 0.06 feet per foot.
- Soil boring SB-8 was advanced in the vicinity of well MW-1 to determine nearby lithology and assess the reinstallation of well MW-1 in response to ACEHS's concern that well MW-1 was installed within fill material. After reviewing and comparing the soil boring logs for well MW-1 and SB-8, the lithology is similar. Native soil appears to be present from a depth between 7.5 and 9 feet bgs. Well MW-1 appears to be screened within native soil which is representative of that area of the Site and does not require reinstallation.

Based on the low residual GRO concentrations and the absence of detectable benzene concentrations in soil and groundwater, URS contends that these constituents are no longer a concern at the Site. However, MTBE concentrations in soil and groundwater are above ESLs, making MTBE the primary constituent of concern at this Site. Based on historical MTBE concentrations in well MW-2, there appears to be evidence of an MTBE release in the vicinity of the USTs around December 1995, and again in September 1999, during ConocoPhillips' operation of the Site. While we do not believe that the MTBE detected in soil and groundwater is related to BP's former operations, we will complete the preferential pathway evaluation as previously proposed.

6.0 PROPOSED SCHEDULE

Upon obtaining final approval from the City of Oakland to access the storm drain line and receipt of the Caltrans encroachment permit to complete work within MacArthur Boulevard, URS will complete the off-site proposed scope of work. URS will submit a Supplemental Soil and Water Investigation Report within 60 days of receipt of all final laboratory analytical results from field activities.

7.0 LIMITATIONS

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

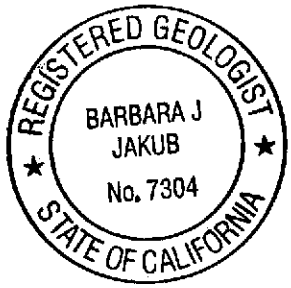
Background information, including but not limited to previous field measurements, analytical results, site plans, and other data has been furnished to URS by RM, its previous consultants, and/or third parties that URS has used in preparing this report. URS has relied on this information as furnished. 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.

We appreciate the opportunity to present this SWI Report to the ACEHS on behalf of RM and trust that this document meets with your approval. Please do not hesitate to contact Lynelle Onishi at (510) 874-1758 with any questions or comments.

Sincerely,

URS CORPORATION



Lynelle Onishi
Project Manager

Barbara J. Jakub, P.G.
Senior Geologist

cc: Mr. Kyle Christie, Remediation Management, (electronic file uploaded to ENFOS)
Mr. Ade Fagorala, San Francisco Bay Regional Water Quality Control Board, 1515 Clay Street, Suite 1400, Oakland, California 94612
Ms. Shelby Lathrop, ConocoPhillips (electronic file upload to URS FTP site)

Attachments:

Figure 1 – Site Location Map
Figure 2 – Site Map with Boring, Well, and Cross-Section Locations
Figure 3 – Cross Section A-A'
Figure 4 – Cross Section B-B'
Figure 5 – Groundwater Elevation Contour and Analytical Summary Map, Third Quarter (July 11, 2005)
Table 1 – Soil Analytical Results
Table 2 – Groundwater Elevation and Analytical Results
Table 3 – Fuel Oxygenate Analytical Results

Attachment A - ACEHS Correspondence Dated May 4, 2005
Attachment B - Historical Soil And Groundwater Analytical Data
Attachment C - Soil Boring Logs
Attachment D - Alameda County Public Works Agency Soil Boring Permit
Attachment E - Field Procedures and Field Data Sheets
Attachment F -Laboratory Analytical Reports and Chain-Of-Custody Records

REFERENCES:

URS, 2005. Revised *Soil and Groundwater Investigation Workplan for Former* BP Service Station # 11102, 100 MacArthur Boulevard, Oakland, CA. April 28, 2005.

URS, 2004. *Soil and Groundwater Investigation Workplan for Former* BP Service Station # 11102, 100 MacArthur Boulevard, Oakland, CA. April 16, 2004.

Alisto, 2000. *Potential Receptor Survey , Expanded Site Plan and Well Search*, BP Oil Company Service Station No. 11102, 100 MacArthur Boulevard, Oakland, CA. October 19, 2000.

Alton, 1989. *Preliminary Site Investigation Report,* Former Mobile Service Station No. 10-E6A, 100 MacArthur Blvd., Oakland, CA. December 20, 1989.

BP, 1989. Underground Storage Tank Registration, BP Oil Company Facilities, County of Alameda. Letter to Rafat Shahid from W.J. Hollis. July 10, 1989.

Cambria, 2000. *Historical Review, Utility Survey, and Recovery Testing Report.* BP Oil Site No. 11102, 100 MacArthur Boulevard, Oakland, CA. February, 24, 2000.

Emcon 1994. *Baseline Assessment Report,* Site Number 1102, 100 MacArthur Boulevard, Oakland, CA. December 27, 1994.

KEI, 1988. *Soil Sampling Report*, Mobile Service Station #10-E6A, 100 MacArthur Blvd., Oakland, CA. October 7, 1988.

Table 1

Soil Analytical Data
Former BP #11102
100 MacArthur Blvd., Oakland, CA

Soil Sample ID	Sample Depth (feet bgs)		Date Sampled	GRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	TBA (mg/kg)	MTBE (mg/kg)	Lead (mg/kg)
SB-4 (5-5.5')	5	U	07/14/05	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	NA
SB-4 (9.5-10')	9.5	U	07/14/05	ND<0.50	ND<0.025	ND<0.025	ND<0.025	ND<0.025	ND<0.10	**0.37**	NA
SB-4 (14.5-15')	14.5	U	07/14/05	**3.5**	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<5.0	**1.1**	NA
SB-4 (19.5-20')	19.5	U	07/14/05	**3.8**	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<5.0	**2.4**	NA
SB-4 (20-20.5')	20	S	07/14/05	ND<12	ND<0.25	ND<0.25	ND<0.25	ND<0.25	ND<25	**3.4**	NA
SB-4 (25-25.5')	25	S	07/14/05	ND<25	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<50	**3.5**	NA
SB-4 (29-29.5')	29	S	07/14/05	ND<25	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<50	**3.7**	NA
SB-5 (5-5.5')	5	U	07/14/05	ND<0.099	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	NA
SB-5 (9.5-10')	9.5	U	07/14/05	**0.15**	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	NA
SB-5 (14.5-15')	14.5	U	07/14/05	**0.25**	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	NA
SB-5 (19.5-20')	19.5	U	07/14/05	**61**	ND<0.025	ND<0.025	**0.14**	ND<0.025	ND<5.0	ND<0.025	NA
SB-5 (29-29.5')	29	S	07/14/05	**0.10**	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	**0.053**	**0.65**	NA
SB-6 5-5.5'	5	U	07/13/05	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	NA
SB-6 8.5-9'	8.5	S	07/13/05	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	NA
SB-6 9.5-10'	9.5	U	07/13/05	**0.14**	ND<0.0048	ND<0.0048	ND<0.0048	ND<0.0048	ND<0.019	ND<0.0048	**5.2**
SB-6 14.5-15'	14.5	S	07/13/05	ND<0.097	ND<0.0048	ND<0.0048	ND<0.0048	**0.0082**	ND<0.019	ND<0.0048	NA
SB-6 16.5-17'	16.5	S	07/13/05	ND<0.098	ND<0.0049	ND<0.0049	ND<0.0049	**0.0054**	ND<0.020	ND<0.0049	NA
SB-6 19.5-20'	19.5	S	07/13/05	ND<0.50	ND<0.025	ND<0.025	ND<0.025	ND<0.025	**0.13**	**0.15**	NA
SB-6 27.5-28'	27.5	S	07/13/05	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	NA

Table 1

Soil Analytical Data
Former BP #11102
100 MacArthur Blvd., Oakland, CA

Soil Sample ID	Sample Depth (feet bgs)		Date Sampled	GRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	TBA (mg/kg)	MTBE (mg/kg)	Lead (mg/kg)
SB-7 (2-2.5')	2	U	07/14/05	**1,300**	ND<1.0	ND<1.0	**3.0**	**3.0**	ND<100	ND<0.50	NA
SB-7 (5-5.5')	5	U	07/14/05	**730**	ND<1.0	ND<1.0	**2.4**	**3.9**	ND<100	ND<0.50	NA
SB-7 (9.5-10')	9.5	U	07/14/05	**340**	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<250	ND<1.2	NA
SB-7 (14.5-15')	14.5	U	07/14/05	**0.11**	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	NA
SB-7 (19.5-20')	19.5	U	07/14/05	ND<0.099	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	NA
SB-7(25.5-26')	25.5	U	07/14/05	ND<0.099	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	NA
SB-7 (28.5-29')	28.5	S	07/14/05	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	NA
SB-7 (30.5-31')	30.5	S	07/14/05	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	NA
SB-8 5-5.5'	5	U	07/13/05	ND<0.099	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	NA
SB-8 7-7.5'	7	S	07/13/05	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	NA
SB-8 9.5-10'	9.5	U	07/13/05	ND<0.099	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	NA
SB-8 11-11.5'	11	S	07/13/05	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	NA
SB-8 14.5-15	14.5	S	07/13/05	ND<0.099	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	NA
SB-8 17.5-18'	17.5	S	07/13/05	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.0050	NA
SB-8 19.5-20'	19.5	S	07/13/05	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	**0.066**	NA
SB-8 20.5-21'	20.5	S	07/13/05	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	**0.022**	NA

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

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

Table 2

Groundwater Elevation and Analytical Data

Former BP Station #11102

100 MacArthur Blvd., Oakland, CA

Well No.	Date	P/ NP	Foot Note	TOC (ft MSL)	DTW (ft bgs)	Product Thickness (feet)	GWE (ft MSL)	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	11/4/1989	–	–	90.20	13.21	–	76.99	<500	3.4	0.6	<0.3	<0.3	–	–	SAL	–	<50	<5000	---
	11/11/1989	–	–	90.20	13.32	–	76.88	–	–	–	–	–	–	–	---	–	–	---	---
	4/3/1990	–	–	90.20	12.46	–	77.74	820	64	1.9	23	34	–	–	ANA	–	–	—	—
	7/30/1990	–	–	90.20	12.92	–	77.28	190	11	<5.0	<5.0	<5.0	–	–	ANA	–	<50	<5000	---
	11/20/1990	–	–	90.20	14.08	–	76.12	50	2.4	<0.3	<0.3	<0.3	–	–	SAL	–	79	<5000	---
	3/1/1991	–	–	90.20	13.61	–	76.59	<100	0.9	<0.3	<0.3	0.3	–	–	SAL	–	<1000	14,000	---
	8/19/1991	–	–	90.20	15.74	–	74.46	370	35	0.73	6.4	5.6	–	–	SEQ	–	<50	<5000	---
	11/13/1991	–	–	90.20	14.08	–	76.12	60	0.68	<0.3	<0.3	<0.3	–	–	SEQ	–	<50	<5000	—
	2/24/1992	–	–	90.20	12.52	–	77.68	140	3.9	0.66	1.2	3.8	–	–	SEQ	–	100	<5000	—
	5/19/1992	–	–	90.20	11.80	–	78.40	4,200	440	21	250	37	–	–	SEQ	–	910	<5000	—
	6/17/1992	–	–	90.20	12.01	–	78.19	4,000	350	14	150	17	–	–	SEQ	–	560	<5000	—
	7/22/1992	–	–	90.20	12.42	–	77.78	4,000	<5.0	19	210	61	–	–	ANA	–	–	—	—
	8/14/1992	–	–	90.20	12.75	–	77.45	2,400	330	20	150	47	–	–	SEQ	–	1,700	<5000	—
	11/11/1992	–	–	90.20	13.69	–	76.51	260	30	3.4	7.6	6.8	–	–	ANA	–	92	<5000	—
	6/7/1993	–	c	90.20	–	–	–	3,700	120	12	26	9.5	–	–	PACE	–	–	—	—
	6/7/1993	–	–	90.20	10.93	–	79.27	3,400	98	11	21	7.6	–	–	PACE	–	440	—	—
	12/2/1993	–	–	90.20	12.72	–	77.48	1,100	8.3	3.6	0.6	1.5	–	–	PACE	–	120	<5000	—
	6/22/1994	–	c	90.20	–	–	–	2,100	30	3.2	2	15	2,000 d	–	PACE	–	–	—	—
	6/22/1994	–	–	90.20	11.81	–	78.39	2,100	32	3.8	2.2	17	4,000 d	3.2	PACE	–	<50	<5000	—
	1/10/1995	–	c	90.20	–	–	–	<500	120	<5	5	<10	–	–	ATI	–	–	—	—
	1/10/1995	–	–	90.20	10.97	–	79.23	<500	120	<5	<5	<10	–	3.9	ATI	–	420	—	—
	6/21/1995	–	c,e	90.20	–	–	–	3,600	<13	<5.0	<5.0	<10	–	–	ATI	–	–	—	—
	6/21/1995	–	–	90.20	9.38	–	80.82	4,700	16	<5.0	<5.0	<10	–	6.7	ATI	–	1,300	2,900	0.6
	12/27/1995	–	–	90.20	11.55	–	78.65	430	<2.5	<2.5	<2.5	<5.0	1,200	6.3	ATI	–	2,100	640	---
	6/13/1996	–	–	90.20	9.28	–	80.92	3,200	51	<12	<12	<12	4,000	6.3	SPL	–	920	2,000	---
	12/4/1996	–	f	90.20	11.91	–	78.29	1,400	6.2	<5	<5	<5	2,600	6.7	SPL	–	280	2,000	6
	6/10/1997	–	c	90.20	–	–	–	7,700	14	<25	<25	<25	13,000	–	SPL	–	–	—	—
	6/10/1997	–	–	90.20	8.97	–	81.23	7,900	12	<10	<10	<10	15,000	6	SPL	–	1,700	<5	ND
	12/12/1997	–	–	90.20	11.37	–	78.83	440	8.8	<1.0	2.6	9.4	6,700	5.5	SPL	–	760	1,200	ND
	6/18/1998	–	–	90.20	8.02	–	82.18	7,500	<2.5	<5.0	<5.0	<5.0	5,600	4.9	SPL	–	2,900	<5	ND
	3/9/1999	–	–	90.20	9.80	–	80.40	32,000	100	16	72	110	49,000	–	SPL	–	–	—	---
	9/28/1999	–	–	90.20	10.78	–	79.42	1,000	<5.0	<5.0	<5.0	<5.0	730	–	SPL	–	–	—	<1.0
	10/14/1999	–	–	90.20	10.84	–	79.36	–	–	–	–	–	–	–	SPL	–	660	---	---
	3/27/2000	–	–	90.20	9.83	–	80.37	4,300	160	19	37	43	28,000	–	PACE	–	–	—	—
	9/28/2000	–	–	90.20	11.33	–	78.87	2,700	10	2.6	1.1	2.7	28,000	–	PACE	–	–	—	—

Table 2

Groundwater Elevation and Analytical Data

Former BP Station #11102

100 MacArthur Blvd., Oakland, CA

Well No.	Date	P/ NP	Foot Note	TOC (ft MSL)	DTW (ft bgs)	Product Thickness (feet)	GWE (ft MSL)	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	3/8/2001	--	--	90.20	10.96	--	79.24	8,200	23.5	6.09	5.23	8.97	11,600	--	PACE	--	--	--	--
	9/21/2001	--	--	90.20	12.07	--	78.13	6,000	37.9	<0.5	<0.5	<1.5	7,370	--	PACE	--	--	--	--
	2/28/2002	--	--	90.20	10.48	--	79.72	6,400	60.8	<5.0	6.43	<10	7,750	--	PACE	--	--	--	--
	9/6/2002	--	--	90.20	11.20	--	79.00	1,400	<5.0	<5.0	<5.0	<5.0	6,000	--	SEQ	--	--	--	--
	2/19/2003	--	h	90.20	11.29	--	78.91	<10000	<100	110	<100	<100	4,500	--	SEQ	--	--	--	--
	7/14/2003	--	--	90.20	11.18	--	79.02	710	11	<10	<10	<10	940	--	SEQ	--	--	--	--
	01/14/2004	--	--	90.20	11.74	--	78.46	<500	<5.0	<5.0	<5.0	<5.0	220	--	SEQM	6.6	--	--	--
	04/23/2004	P	I	90.20	11.95	--	78.25	470	3.4	<2.5	<2.5	<2.5	150	--	SEQM	6.7	--	--	--
	07/01/2004	P	--	90.20	11.52	--	78.68	360	<2.5	<2.5	<2.5	<2.5	96	--	SEQM	6.0	--	--	--
	10/28/2004	P	--	90.20	12.56	--	77.64	390	0.94	<0.50	<0.50	<0.50	43	--	SEQM	6.2	--	--	--
	01/10/2005	P	--	90.20	11.85	--	78.35	490	17	<2.5	5.8	5.4	85	--	SEQM	7.6	--	--	--
	04/13/2005	P	--	90.20	10.00	--	80.20	1,000	27	<2.5	<2.5	25	48	--	SEQM	6.6	--	--	--
	07/11/2005	**P**	**--**	**90.20**	**9.27**	**--**	**80.93**	**180**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**36**	**--**	**SEQM**	**7.7**	**--**	**--**	**--**
MW-2	11/4/1989	--	--	87.91	15.84	--	72.07	<500	6.5	<0.3	<0.3	<0.3	--	--	SAL	--	--	--	--
	11/11/1989	--	--	87.91	14.75	--	73.16	--	--	--	--	--	--	--	--	--	--	--	--
	4/3/1990	--	--	87.91	15.25	--	72.66	<500	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--	--	--	--
	7/30/1990	--	--	87.91	15.59	--	72.32	61	6.5	<0.5	<0.5	<0.5	--	--	ANA	--	--	--	--
	11/20/1990	--	--	87.91	17.81	--	70.10	<50	0.3	<0.3	<0.3	<0.3	--	--	SAL	--	--	--	--
	3/1/1991	--	--	87.91	17.11	--	70.80	<100	0.4	<0.3	<0.3	<0.3	--	--	SAL	--	--	--	--
	8/19/1991	--	--	87.91	17.97	--	69.94	<30	<0.3	<0.3	<0.3	<0.3	--	--	SEQ	--	--	--	--
	11/13/1991	--	--	87.91	16.76	--	71.15	38	0.32	<0.3	<0.3	<0.3	--	--	SEQ	--	--	--	--
	2/24/1992	--	--	87.91	15.07	--	72.84	<50	<0.5	<0.5	<0.5	0.58	--	--	SEQ	--	--	--	--
	5/19/1992	--	--	87.91	14.70	--	73.21	<50	0.55	<0.5	<0.5	<0.5	--	--	SEQ	--	--	--	--
	7/22/1992	--	--	87.91	15.60	--	72.31	90	1.3	0.6	0.9	1.9	--	--	ANA	--	--	--	--
	8/14/1992	--	--	87.91	15.88	--	72.03	--	--	--	--	--	--	--	--	--	--	--	--
	11/11/1992	--	c	87.91	--	--	--	65	3.2	<0.5	<0.5	1	--	--	ANA	--	--	--	--
	11/11/1992	--	--	87.91	16.19	--	71.72	52	2.8	<0.5	<0.5	0.9	--	--	ANA	--	--	--	--
	6/7/1993	--	--	87.91	14.42	--	73.49	1,200	14	2.8	1.9	1.71	--	--	PACE	--	--	--	--
	12/2/1993	--	c	87.91	--	--	--	2,100	32	3.8	2.2	17	3,700 d	--	PACE	--	--	--	--
	12/2/1993	--	--	87.91	14.94	--	72.97	790	3.4	0.5	10	<0.5	3,700 d	--	PACE	--	--	--	--
	6/22/1994	--	--	87.91	14.25	--	73.66	110	<0.5	<0.5	<0.5	<0.5	120 d	3.9	PACE	--	--	--	--
	1/10/1995	--	--	87.91	13.64	--	74.27	<50	<0.5	<0.5	0.6	1	--	4.3	ATI	--	--	--	--
	6/21/1995	--	--	87.91	11.66	--	76.25	4,700	<10	<10	<10	<20	--	7.8	ATI	--	--	--	--
	12/27/1995	--	c	87.91	--	--	--	6,300	<25	<25	<25	<50	19,000	--	ATI	--	--	--	--

Table 2

Groundwater Elevation and Analytical Data

Former BP Station #11102
100 MacArthur Blvd., Oakland, CA

Well No.	Date	P/ NP	Foot Note	TOC (ft MSL)	DTW (ft bgs)	Product Thickness (feet)	GWE (ft MSL)	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	12/27/1995	--	--	87.91	13.11	--	74.80	6,100	<25	<25	<25	<50	20,000	6.7	ATI	--	--	---	---
	6/13/1996	--	c	87.91	--	--	--	8,700	<5	<5	<5	<5	13,000	--	SPL	--	--	---	---
	6/13/1996	--	--	87.91	10.86	--	77.05	8,300	<2.5	<2.5	<2.5	<2.5	13,000	6.5	SPL	--	--	---	---
	12/4/1996	--	c	87.91	--	--	--	5,900	<2.5	<5	<5	<5	11,000	--	SPL	--	--	---	---
	12/4/1996	--	--	87.91	13.03	--	74.88	5,900	<2.5	<5	<5	<5	11,000	6.3	SPL	--	--	---	---
	6/10/1997	--	--	87.91	10.04	--	77.87	<50	<0.5	<1.0	<1.0	<1.0	<10	5.8	SPL	--	--	---	---
	12/12/1997	--	--	87.91	12.44	--	75.47	<50	<0.5	<1.0	<1.0	<1.0	<10	5.7	SPL	--	--	---	---
	6/18/1998	--	c	87.91	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<10	--	SPL	--	--	---	---
	6/18/1998	--	--	87.91	8.89	--	79.02	50	<0.5	<1.0	<1.0	<1.0	<10	5.3	SPL	--	--	---	---
	3/9/1999	--	--	87.91	10.20	--	77.71	15,000	<5.0	<5.0	<5.0	<5.0	23,000	--	SPL	--	--	---	---
	9/28/1999	--	--	87.91	11.81	--	76.10	36,000	<5.0	12	7	26	35,000	--	SPL	--	--	---	<5.0
	10/14/1999	--	--	87.91	10.27	--	77.64	--	--	--	--	--	--	--	SPL	--	100	---	---
	3/27/2000	--	--	87.91	9.98	--	77.93	1,300	<0.5	<0.5	0.51	<0.5	5,800	--	PACE	--	--	---	---
	9/28/2000	--	--	87.91	11.40	--	76.51	1,600	1.8	1.7	0.54	2.2	15,000	--	PACE	--	--	---	---
	3/8/2001	--	--	87.91	11.16	--	76.75	20,000	<0.5	<0.5	<0.5	<0.5	29,100	--	PACE	--	--	---	---
	9/21/2001	--	--	87.91	11.65	--	76.26	5,000	<0.5	<0.5	<0.5	<1.5	6,110	--	PACE	--	--	---	---
	2/28/2002	--	--	87.91	9.86	--	78.05	3,200	35.1	<0.5	<0.5	<1.0	4,620	--	PACE	--	--	---	---
	9/6/2002	--	--	87.91	12.32	--	75.59	1,900	<10	<10	<10	<10	15,000	--	SEQ	--	--	---	---
	2/19/2003	--	h	87.91	11.63	--	76.28	45,000	<250	<250	<250	<250	32,000	--	SEQ	--	--	---	---
	7/14/2003	--	--	87.91	12.07	--	75.84	9,300	<500	<500	<500	<500	24,000	--	SEQ	--	--	---	---
	01/14/2004	P	--	87.91	11.45	--	76.46	<50,000	<500	<500	<500	<500	21,000	--	SEQM	6.9	--	--	--
	04/23/2004	P	--	87.91	11.45	--	76.46	5,100 I	<250	<250	<250	<250	22,000	--	SEQM	6.8	--	--	--
	07/01/2004	P	--	87.91	12.32	--	75.59	<5,000	<50	<50	<50	<50	5,200	--	SEQM	5.6	--	--	--
	10/28/2004	P	--	87.91	13.02	--	74.89	8,500	<50	<50	<50	<50	6,800	--	SEQM	6.2	--	--	--
	01/10/2005	P	--	87.91	14.38	--	73.53	<25,000	<250	<250	<250	<250	7,100	--	SEQM	7.6	--	--	--
	04/13/2005	P	--	87.91	14.03	--	73.88	<5,000	<50	<50	<50	<50	5,300	--	SEQM	6.6	--	--	--
	07/11/2005	**P**	**--**	**87.91**	**11.25**	**--**	**76.66**	**<5,000**	**<50**	**<50**	**<50**	**<50**	**5,300**	**--**	**SEQM**	**7.5**	**--**	**--**	**--**
MW-3	11/4/1989	--	--	87.02	15.40	--	71.62	<500	<0.3	<0.3	<0.3	<0.3	--	--	SAL	--	--	---	---
	11/11/1989	--	--	87.02	14.10	--	72.92	--	--	--	--	--	--	--	---	--	--	---	---
	4/3/1990	--	--	87.02	13.90	--	73.12	<100	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--	--	---	---
	7/30/1990	--	--	87.02	13.77	--	73.25	<50	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--	--	<5000	---
	11/20/1990	--	--	87.02	14.67	--	72.35	<50	0.3	0.8	0.4	1.5	--	--	SAL	--	--	---	---
	3/1/1991	--	--	87.02	15.22	--	71.80	<100	0.4	<0.3	<0.3	<0.3	--	--	SAL	--	--	---	---
	8/19/1991	--	--	87.02	13.15	--	73.87	<30	<0.3	<0.3	<0.3	<0.3	--	--	SEQ	--	--	---	---

Table 2

Groundwater Elevation and Analytical Data

Former BP Station #11102

100 MacArthur Blvd., Oakland, CA

Well No.	Date	P/ NP	Foot Note	TOC (ft MSL)	DTW (ft bgs)	Product Thickness (feet)	GWE (ft MSL)	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	11/13/1991	--	--	87.02	15.66	--	71.36	<30	<0.3	<0.3	<0.3	<0.3	--	--	SEQ	--	--	--	--
	2/24/1992	--	--	87.02	15.01	--	72.01	<50	0.65	1.4	0.66	4.4	--	--	SEQ	--	--	--	--
	5/19/1992	--	--	87.02	15.52	--	71.50	<50	<0.5	<0.5	<0.5	<0.5	--	--	SEQ	--	--	--	--
	7/22/1992	--	--	87.02	15.63	--	71.39	<50	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--	<50	<5000	--
	8/14/1992	--	--	87.02	13.57	--	73.45	--	--	--	--	--	--	--	--	--	--	--	--
	11/11/1992	--	--	87.02	14.13	--	72.89	<50	<0.5	0.7	<0.5	1.3	--	--	ANA	--	--	--	--
	6/7/1993	--	--	87.02	12.13	--	74.89	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	--	--	--
	12/2/1993	--	--	87.02	13.29	--	73.73	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	--	--	--
	6/22/1994	--	--	87.02	12.78	--	74.24	<50	<0.5	<0.5	<0.5	<0.5	--	2.9	PACE	--	--	--	--
	1/10/1995	--	--	87.02	12.01	--	75.01	<50	<0.5	<0.5	<0.5	<1	--	3.8	ATI	--	--	--	--
	6/21/1995	--	--	87.02	11.57	--	75.45	<50	<0.50	<0.50	<0.50	<1.0	--	7.4	ATI	--	--	--	--
	12/27/1995	--	--	87.02	13.47	--	73.55	<50	<0.50	<0.50	<0.50	<1.0	5.7	7.3	ATI	--	--	--	--
	6/13/1996	--	--	87.02	11.22	--	75.80	60	<0.5	<0.5	<0.5	<0.5	<10	6.8	SPL	--	--	--	--
	12/4/1996	--	--	87.02	13.28	--	73.74	<50	<0.5	<1	<1	<1	<10	6.7	SPL	--	--	--	--
	6/10/1997	--	--	87.02	10.22	--	76.80	<50	<0.5	<1.0	<1.0	<1.0	<10	6.1	SPL	--	--	--	--
	12/12/1997	--	c	87.02	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<10	--	SPL	--	--	--	--
	12/12/1997	--	--	87.02	12.61	--	74.41	<50	<0.5	<1.0	<1.0	<1.0	<10	5.6	SPL	--	--	--	--
	6/18/1998	--	--	87.02	12.80	--	74.22	--	--	--	--	--	--	--	--	--	--	--	--
	6/18/1998	--	--	87.02	9.07	--	77.95	50	<0.5	<1.0	<1.0	<1.0	<10	5.3	SPL	--	--	--	--
	9/28/1999	--	--	87.02	13.76	--	73.26	--	--	--	--	--	--	--	--	--	--	--	--
	3/27/2000	--	--	87.02	13.77	--	73.25	<50	<0.5	<0.5	<0.5	<0.5	1.6	--	PACE	--	--	--	--
	9/28/2000	--	--	87.02	11.28	--	75.74	<50	<0.5	7.4	<0.5	1.3	2	--	PACE	--	--	--	--
	3/8/2001	--	--	87.02	11.75	--	75.27	<50	<0.5	<0.5	<0.5	<0.5	60.4	--	PACE	--	--	--	--
	9/21/2001	--	--	87.02	11.33	--	75.69	<50	<0.5	<0.5	<0.5	<1.5	8.18	--	PACE	--	--	--	--
	2/28/2002	--	--	87.02	10.86	--	76.16	<50	<0.5	<0.5	<0.5	<1.0	25.5	--	PACE	--	--	--	--
	9/6/2002	--	--	87.02	12.73	--	74.29	<50	1.2	<0.5	<0.5	1	16	--	SEQ	--	--	--	--
	2/19/2003	--	h	87.02	11.72	--	75.30	<500	<5.0	<5.0	<5.0	<5.0	110	--	SEQ	--	--	--	--
	7/14/2003	--	--	87.02	13.76	--	73.26	<50	<0.50	<0.50	<0.50	0.67	28	--	SEQ	--	--	--	--
	01/14/2004	P	--	87.02	14.83	--	72.19	550	<5.0	<5.0	<5.0	<5.0	380	--	SEQM	8.1	--	--	--
	04/23/2004	P	--	87.02	13.17	--	73.85	<200	<25	<25	<25	<25	560	--	SEQM	6.8	--	--	--
	07/01/2004	P	--	87.02	15.19	--	71.83	<50	<0.50	<0.50	<0.50	0.50	48	--	SEQM	6.4	--	--	--
	10/28/2004	P	--	87.02	15.50	--	71.52	<500	<5.0	<5.0	<5.0	<5.0	290	--	SEQM	6.3	--	--	--
	01/10/2005	P	--	87.02	15.00	--	72.02	<50	<0.50	<0.50	<0.50	<0.50	18	--	SEQM	7.6	--	--	--
	04/13/2005	P	--	87.02	14.34	--	72.68	<50	<0.50	<0.50	<0.50	<0.50	9.0	--	SEQM	7.1	--	--	--
	07/11/2005	**P**	**k**	**87.02**	**10.82**	**--**	**76.20**	**130**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**120**	**--**	**SEQM**	**7.8**	**--**	**--**	**--**

Table 2

Groundwater Elevation and Analytical Data

Former BP Station #11102

100 MacArthur Blvd., Oakland, CA

Well No.	Date	P/ NP	Foot Note	TOC (ft MSL)	DTW (ft bgs)	Product Thickness (feet)	GWE (ft MSL)	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)
QC-2	11/11/1992	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--	--	---	---
	6/7/1993	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	--	---	---
	12/2/1993	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	--	---	---
	6/22/1994	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	--	---	---
	1/10/1995	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<1	--	--	ATI	--	--	---	---
	6/21/1995	--	g	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	--	ATI	--	--	---	---
	12/27/1995	--	g	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	ATI	--	--	---	---
	6/13/1996	--	g	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<10	--	SPL	--	--	---	---

Table 2

Groundwater Elevation and Analytical Data

Former BP Station #11102
100 MacArthur Blvd., Oakland, CA

ABBREVIATIONS & SYMBOLS:
-- = Not analyzed/applicable/measured/available
< = Not detected at or above laboratory reporting limit
DO = Dissolved oxygen
DRO = Diesel Range Organics
DTW = Depth to water in feet below ground surface
ft bgs = feet below ground surface
ft MSL = feet above mean sea level
GRO = Gasoline Range Organics, range C4-C12
GWE = Groundwater elevation measured in feet above mean sea level
HVOC = Halogenated volatile organic compounds
mg/L = Milligrams per liter
MTBE = Methyl tert butyl ether
NP = Well not purged prior to sampling
P = Well purged prior to sampling
TOC = Top of casing measured in feet above mean sea level
TOG = Total oil and grease
TPH-d = Total petroleum hydrocarbons as diesel
TPH-g = Total petroleum hydrocarbons as gasoline
ug/L = Micrograms per liter
ANA = Anametrix, Inc.
PACE = Pace, Inc.
ATI = Analytical Technologies, Inc.
CEI = Celmic Corporation
SAL Superior Analytical Laboratory
SPL = Southern Petroleum Laboratories
SEQ/SEQM= Sequoia Analytical/Sequoia Morgan Hill Laboratories
FOOTNOTES:
a = Top of casing elevations surveyed to the nearest 0.01 foot above mean sea level.
b = Groundwater elevations in feet above mean sea level.
c = Blind duplicate.
d = A copy of the documentation for this data is included in Appendix C of Alisto report 10-076-06-002.
e = Tetrachloroethene.
f = Trans-1,2-Dichloroethene
g = Travel blank.
h = TPH-g, BTEX, and MTBE analyzed by EPA Method 8260B beginning on 1st Quarter Sampling event (2/19/03)
i = Discrete peak @ C6-C7.
k = The hydrocarbon result was partly due to individual peaks in the quantification range (GRO).
l = GRO analyzed by EPA Method 8015B.
NOTES:
Beginning in the fourth quarter 2003, the laboratory modified the reported analyte list. TPHg has been changed to GRO. The resulting data may be impacted by the potential of non-TPHg analytes within the requested fuel range resulting in a higher concentration being reported.
Beginning in the second quarter 2004, the carbon range for GRO was changed from C6-C10 to C4-C12
pH and dissolved oxygen are field measurements.
The data within this table collected prior to August 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 #11102

100 MacArthur Blvd., Oakland, CA

Well Number	Date Sampled	Ethanol (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Footnotes/ Comments
MW-1	7/14/2003	<2000	2,700	940	<20	<20	<20	–	–	
	01/14/2004	<1,000	2,500	220	<5.0	<5.0	<5.0	<5.0	<5.0	
	04/23/2004	<500	2,500	150	<2.5	<2.5	<2.5	<2.5	<2.5	
	07/01/2004	<500	2,000	96	<2.5	<2.5	<2.5	<2.5	<2.5	
	10/28/2004	<5.0	1,500	43	<0.50	<0.50	0.58	<0.50	<0.50	
	01/10/2005	<500	1,900	85	<2.5	<2.5	<2.5	<2.5	<2.5	
	04/13/2005	<500	1,400	48	<2.5	<2.5	<2.5	<2.5	<2.5	
	07/11/2005	**<100**	**550**	**36**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-2	7/14/2003	<100000	<20000	24,000	<1000	<1000	<1000	–	–	
	01/14/2004	<100,000	<20,000	21,000	<500	<500	<500	<500	<500	
	04/23/2004	<50,000	11,000	22,000	<250	<250	420	<250	<250	
	07/01/2004	<10,000	2,900	5,200	<50	<50	110	<50	<50	
	10/28/2004	<5.0	6,700	6,800	<50	<50	120	<50	<50	
	01/10/2005	<50,000	<10,000	7,100	<250	<250	<250	<250	<250	
	04/13/2005	<10,000	5,300	5,300	<50	<50	95	<50	<50	
	07/11/2005	**<10,000**	**9,000**	**5,300**	**<50**	**<50**	**99**	**<50**	**<50**	
MW-3	7/14/2003	<100	<20	28	<1.0	<1.0	<1.0	–	–	
	01/14/2004	<1,000	<200	380	<5.0	<5.0	<5.0	<5.0	<5.0	
	04/23/2004	<5,000	<1,000	560	<25	<25	<25	<25	<25	
	07/01/2004	<100	<20	48	<0.50	<0.50	0.52	<0.50	<0.50	
	10/28/2004	<5.0	<200	290	<5.0	<5.0	<5.0	<5.0	<5.0	
	01/10/2005	<100	<20	18	<0.50	<0.50	<0.50	<0.50	<0.50	
	04/13/2005	<100	<20	9.0	<0.50	<0.50	<0.50	<0.50	<0.50	
	07/11/2005	**<200**	**<40**	**120**	**<1.0**	**<1.0**	**1.4**	**<1.0**	**<1.0**	**a**

Table 3

Fuel Additives Analytical Data

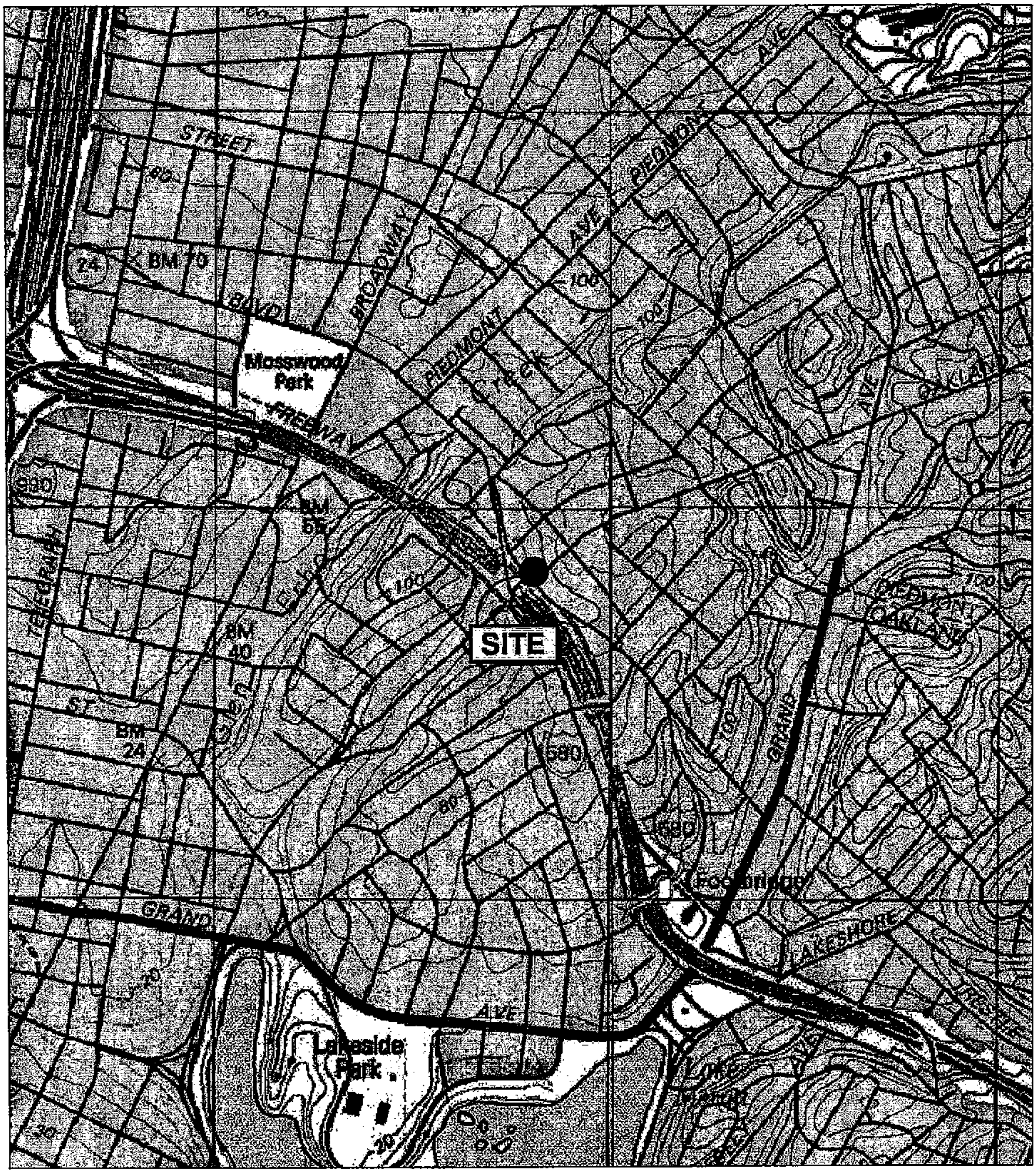
Former BP Station #11102

100 MacArthur Blvd., Oakland, CA

SYMBOLS & ABBREVIATIONS:
-- = Not analyzed/applicable/measured/available
< = Not detected at or above the laboratory reporting limit.
1,2-DCA = 1,2-Dichloroethane
DIPE = Di-isopropyl ether
EDB = 1,2-Dibromoethane
ETBE = Ethyl tert-butyl ether
MTBE = Methyl tert-butyl ether
TAME = tert-Amyl methyl ether
TBA = tert-Butyl alcohol
ug/L = Micrograms per Liter

FOOTNOTES:
a = The calibration verification for ethanol was within the method limits but outside the contract limits.

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



REF: BASE MAP FROM USGS TOPO!
7.5 MINUTE TOPOGRAPHIC
PHOTOREVISED 1998

QUADRANGLE LOCATION

NORTH

0 1200 FT

APPROXIMATE SCALE

URS	Project No. 38487349 Former BP Service Station #11102 100 MacArthur Boulevard Oakland, California	SITE LOCATION MAP	FIGURE 1

Aug 04, 2005 - 4:59pm
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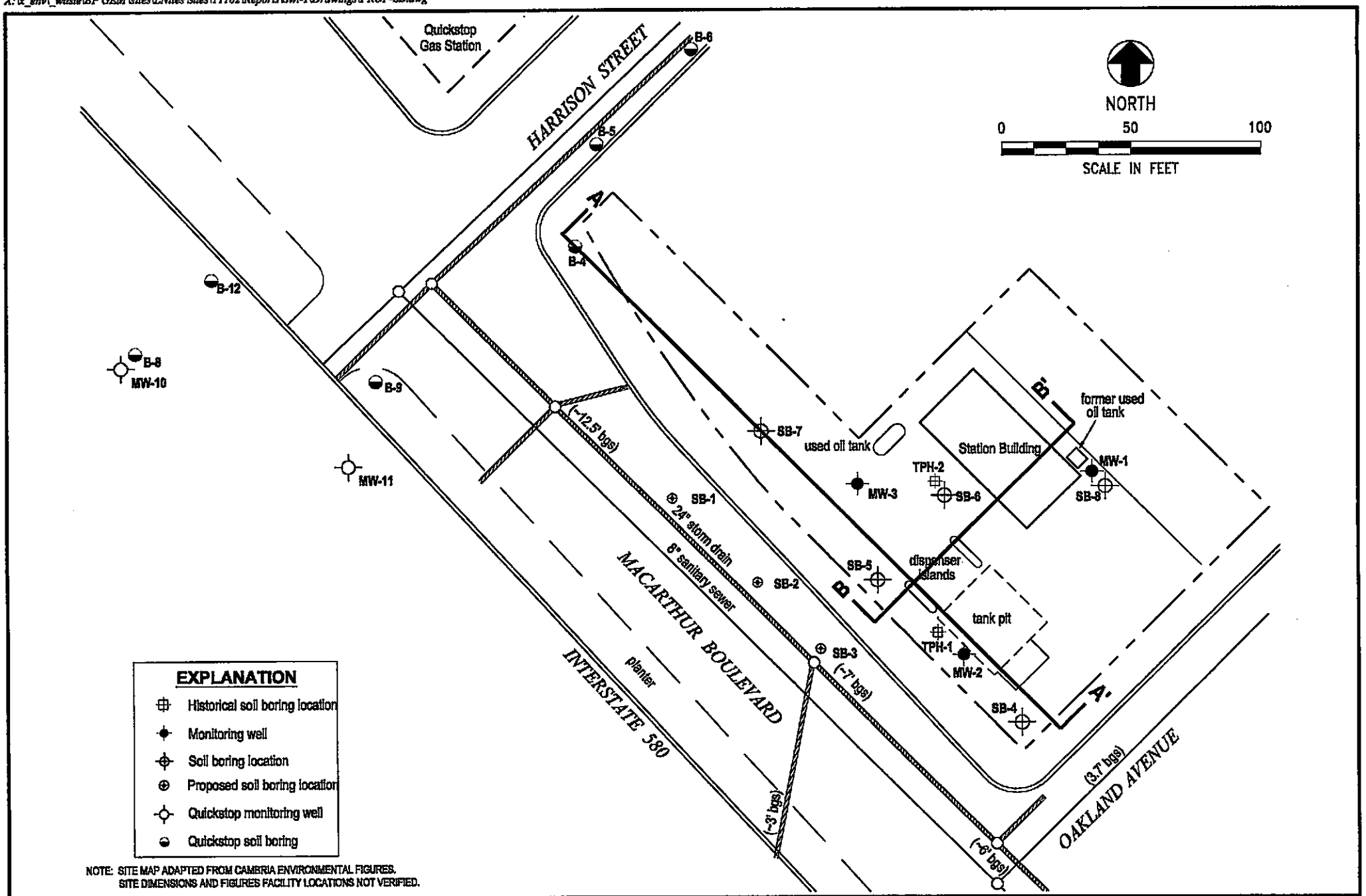
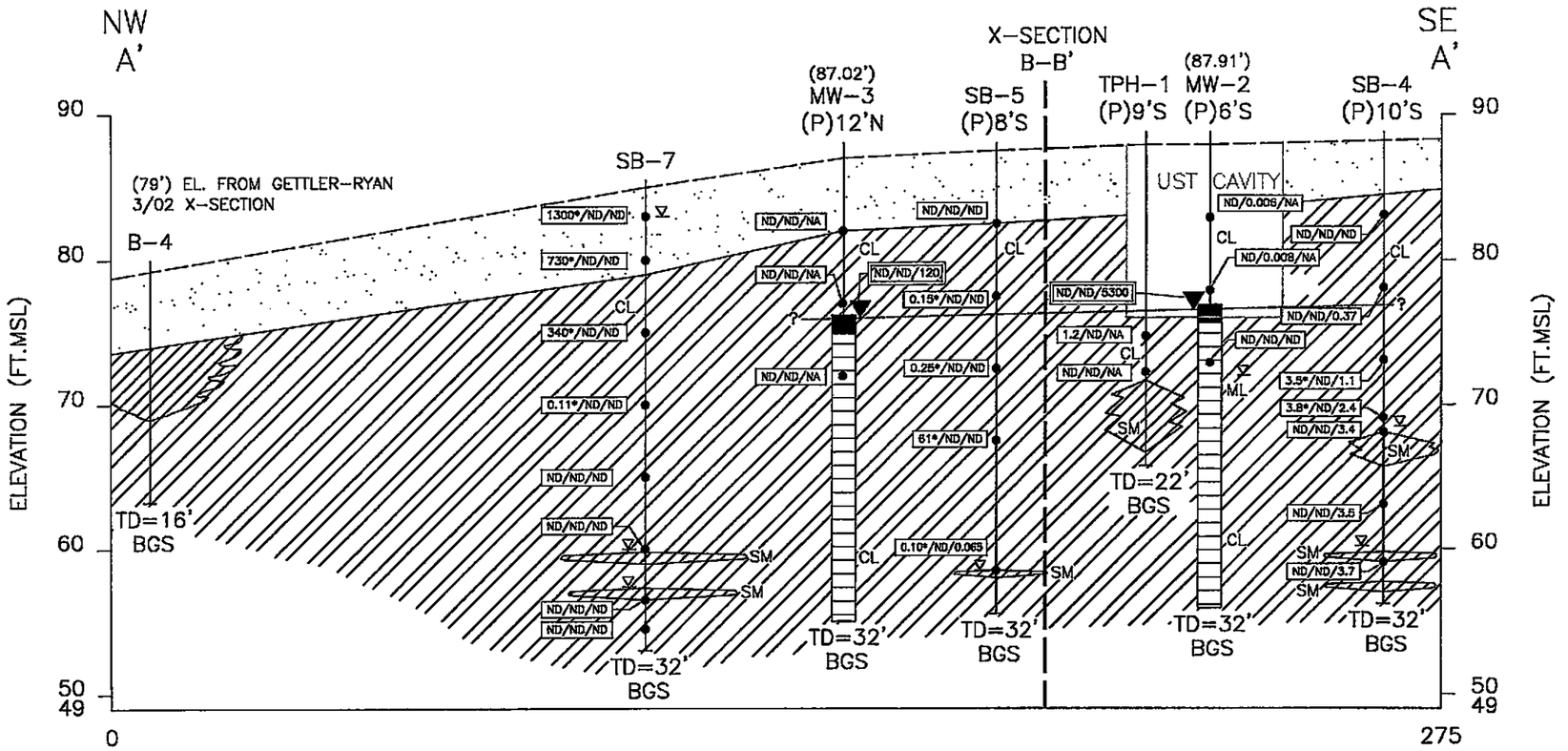


EXPLANATION

- Historical soil boring location
- Monitoring well
- Soil boring location
- Proposed soil boring location
- Quickstop monitoring well
- Quickstop soil boring

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

URS	Project No. 38487349 Former BP Service Station #11102 100 MacArthur Boulevard Oakland, California	SOIL BORING, MONITORING WELL, AND CROSS-SECTION LOCATION MAP	FIGURE 2



NOTE: MW–2 AND THP–1 DO NOT PASS THROUGH UST CAVITY. BOTH ARE LOCATED OUTSIDE/SOUTHWEST OF UST CAVITY BOUNDARY. SEE FIGURE 2.

LEGEND

(87.02') — ELEVATION OF TOP OF CASING (FEET ABOVE MEAN SEA LEVEL)
MW–2
(P)15'N — SOIL BORING/MONITORING WELL (P) = PROJECTED FROM DIRECTION IN FEET FROM C/S
CL / ML — LITHOLOGIC CONTACT
SOIL SAMPLE LOCATION/DEPTH
TOP OF FILTER PACK
WELL SCREEN INTERVAL
ENCOUNTERED GROUNDWATER
BORING TOTAL DEPTH IN FEET (BELOW GROUND SURFACE)
TD=32' BGS

GC & CH FILL– MODERATE TO HIGH PERMEABILITY SOILS

SC,SM,GC,GM – MODERATE PERMEABILITY SOILS

CH,CL,ML – LOW PERMEABILITY SOILS

ND — NOT DETECTED AT OR ABOVE THE LABORATORY REPORTING LIMIT

NA — NOT ANALYZED

ND/ND/5300 — GRO/BENZENE/MTBE WATER CONCENTRATIONS μ/l

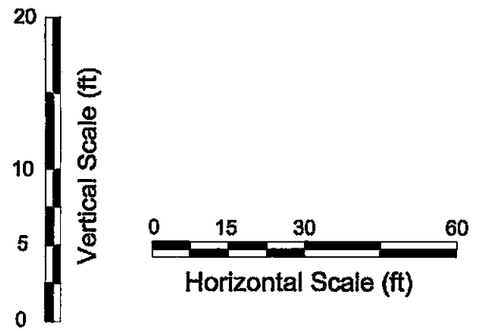
0.11/ND/0.24 — TPH/BENZENE/MTBE SOIL CONCENTRATIONS IN mg/kg

0.11*/ND/0.24 — GRO/BENZENE/MTBE SOIL CONCENTRATIONS IN mg/kg

STATIC POTENTIOMETRIC SURFACE MEASURED 7/11/05

– ELEVATION PROJECTED FOR: SB–7, SB–5, TPH–1, SB–4
– ELEVATION FOR MW–2 AND MW–3 OBTAINED FROM URS 4TH QUARTER 2004 GROUNDWATER MONITORING REPORT, DECEMBER 10, 2004.

SOURCES FOR: MW–2, MW–3 – ALTON GEOSCIENCE, INC., PRELIMINARY SITE ASSESSMENT REPORT, 12/20/89.
–B–4 – GETTLER–RYAN, INC. OFFSITE SUBSURFACE INVESTIGATION REPORT, MAY 16, 2002.
–THP–1 – EMCON, BASELINE ASSESSMENT REPORT, 12/27/94



URS	Project No. 38487349 Former BP Service Station #11102 100 MacArthur Blvd. Oakland, California	HYDROGEOLOGIC CROSS-SECTION A-A'	FIGURE 3

Aug 04, 2005 - 5:03pm
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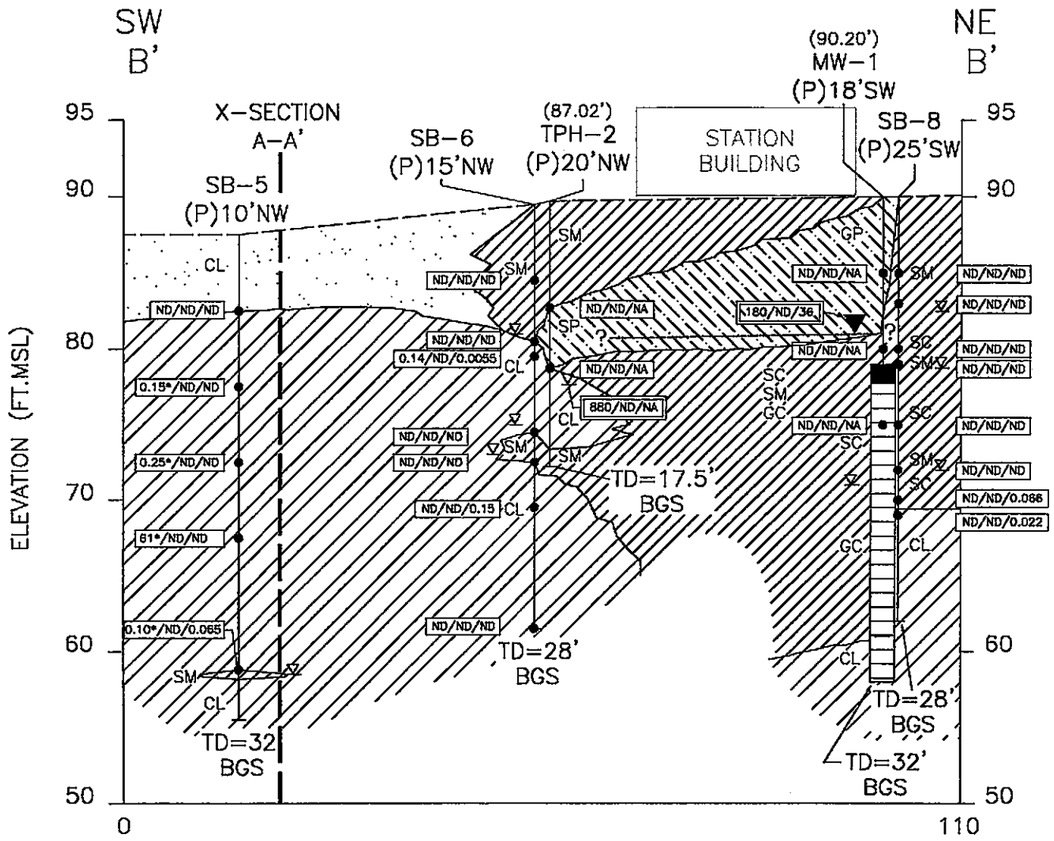


LEGEND

(90.20') MW-1 (P)15'N — ELEVATION OF TOP OF CASING (FEET ABOVE MEAN SEA LEVEL); SOIL BORING/MONITORING WELL (P) = PROJECTED FROM DIRECTION IN FEET FROM C/S

CL / ML — LITHOLOGIC CONTACT

SOIL SAMPLE LOCATION/DEPTH

TOP OF FILTER PACK

WELL SCREEN INTERVAL

ENCOUNTERED GROUNDWATER

BORING TOTAL DEPTH IN FEET (BELOW GROUND SURFACE)

TD=32' BGS

GC & CH FILL– MODERATE TO HIGH PERMEABILITY SOILS

SC,SM,GC,GM – MODERATE PERMEABILITY SOILS

CH,CL,ML – LOW PERMEABILITY SOILS

SP,SW,GP,GW – HIGH PERMEABILITY SOILS

ND — NOT DETECTED AT OR ABOVE THE LABORATORY REPORTING LIMIT

NA — NOT ANALYZED

180/ND/38 — GRO/BENZENE/MTBE WATER CONCENTRATIONS µ/l

0.11/ND/0.24 — TPH/BENZENE/MTBE SOIL CONCENTRATIONS IN mg/kg

0.11*/ND/0.24 — GRO/BENZENE/MTBE SOIL CONCENTRATIONS IN mg/kg

STATIC POTENTIOMETRIC SURFACE MEASURED 7/11/05

SOURCES FOR: MW-1 – ALTON GEOSCIENCE, INC., PRELIMINARY SITE INVESTIGATION REPORT, 12/20/89.
THP-2 – EMCON, BASELINE ASSESSMENT REPORT, 12/27/94.

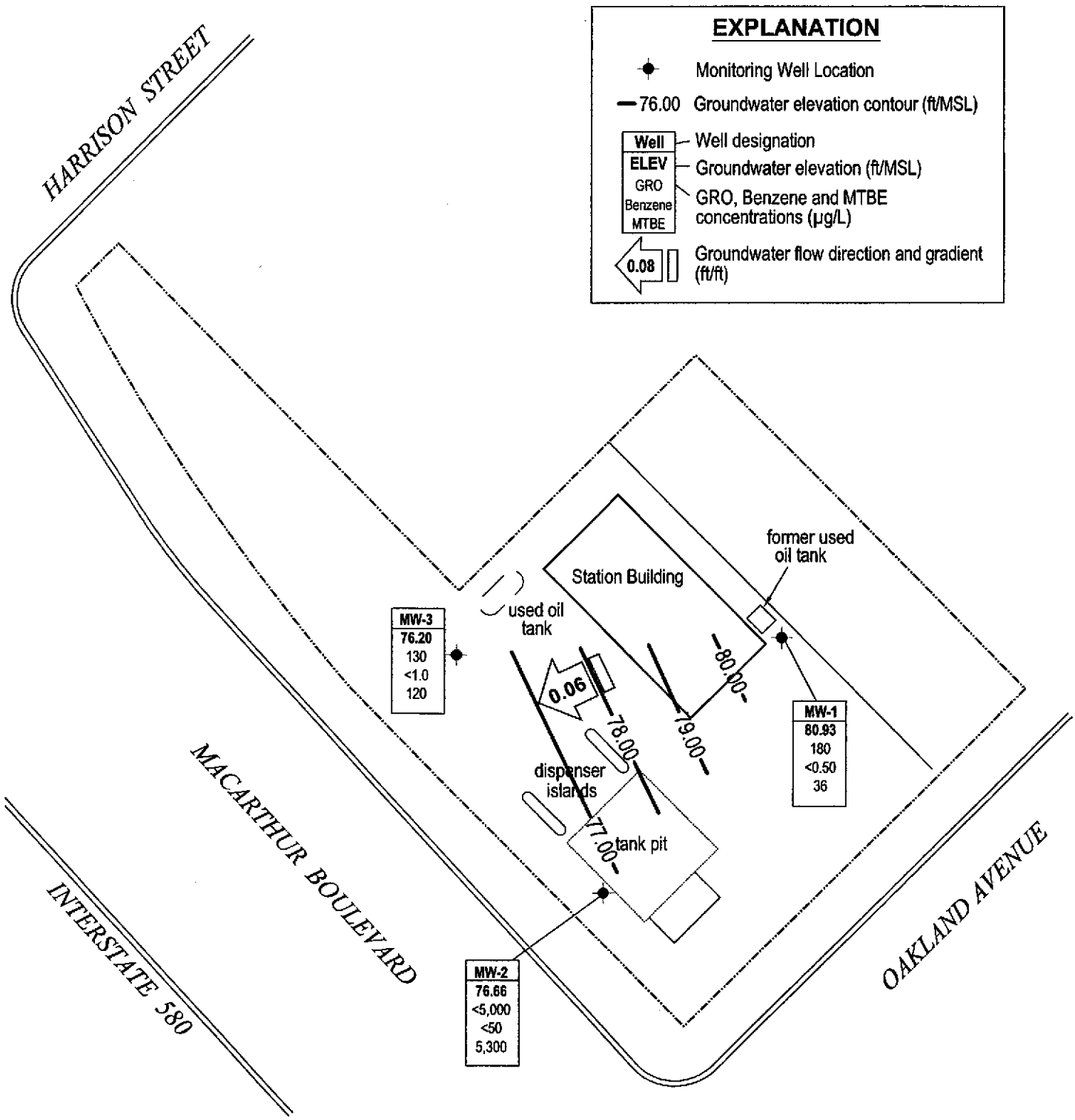
Vertical Scale (ft): 0, 5, 10, 20

Horizontal Scale (ft): 0, 10, 20, 40

– ELEVATION PROJECTED FOR: SB-5, SB-6, TPH-2, SB-8
– ELEVATION FOR MW-1 OBTAINED FROM URS 4TH QUARTER 2004 GROUNDWATER MONITORING REPORT, DECEMBER 10, 2004.

URS	Project No. 38487349 Former BP Service Station #11102 100 MacArthur Blvd. Oakland, California	HYDROGEOLOGIC CROSS-SECTION B-B'	FIGURE 4

Aug 04, 2005 - 5:03pm
X:\X_grn\X_waste\BP GEM\sites\LNiles Sites\11102\Reports\Swi-1\Drawings\Figure 4.dwg



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

URS	Project No. 38487349 Former BP Service Station #11102 100 MacArthur Boulevard Oakland, California	GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL SUMMARY MAP Third Quarter 2005 (July 11, 2005)	FIGURE 5

Aug 03, 2005 - 4:37pm
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ATTACHMENT A

ACEHS CORRESPONDENCE DATED MAY 4, 2005

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

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

May 4, 2005

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

Jennifer Sedlachek
ExxonMobil Refining and Supply Co.
7096 Piedmont Ave., #194
Oakland, CA 94611

Liz Sewell
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Subject: Fuel Leak Case No. RO0000456, BP #11102, 100 MacArthur Blvd., Oakland, California – Workplan Approval

Dear Mr. Christie, Ms. Sedlachek, and Ms. Sewell:

Alameda County Environmental Health (ACEH) has reviewed your April 28, 2005, *Revised Soil and Groundwater Investigation Workplan* prepared by URS Corporation, Inc., and the case file for the above-referenced site. URS proposes: 1) depth-discrete groundwater sampling from three soil borings immediately upgradient of the storm drain line beneath MacArthur Blvd., 2) two soil borings adjacent to the dispenser islands and USTs, and 3) two onsite soil borings to further characterize the site. The site is located near ACEH case No. RO-455, Unocal #1871. We concur with your workplan provided the following conditions are met:

1. The technical comments listed below will be addressed prior to conducting field work, and documentation will be provided in the report requested below.
2. Soil borings SB-4 and SB-5 will be drilled as close as practicable to the dispenser islands and USTs, and to the total depth of apparent source area contamination. ACEH typically recommends that soil samples be collected and analyzed from a boring within the footprint of a former UST field (or point of fuel release) to at least 10 ft below the total depth of contamination, as identified by field screening of samples.
3. 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.
4. 72-hr advance written notification (email preferred) will be provided to ACEH prior to field sampling activities.

Please implement the proposed investigation and submit technical reports following the schedule below. In addition, we request that you address the following technical comments.

TECHNICAL COMMENTS

1. Investigation Sequence

Due to the typically high rate of natural attenuation of petroleum hydrocarbons away from the source area, and to the significantly higher horizontal vs. vertical hydraulic conductivity of naturally occurring sediments (i.e. native soils), the downgradient vertical distribution in groundwater is likely to be 1) dependent on lithology, and 2) closely related to the depth(s) of source area contamination. Accordingly, ACEH recommended in our January 27, 2005, letter that the groundwater investigation consider the results of source area delineation. URS proposes sample collection from borings SB-1 through SB-3 at depths of 12, 15 and 18 ft bgs. ACEH provisionally concurs with this proposal; however, the actual depths of groundwater sampling from borings SB-1 through SB-3 and SB-6 through SB-8 need to be determined in the field based on observations of vertical contamination distribution in the source area (borings SB-4 and SB-5). Please confirm the investigation sequence in the report requested below.

2. Contaminants of Concern

URS proposes sample analysis for TPHg, BTEX, MTBE, TBA, ETBE, TAME, DIPE, 1,2-DCA, EDB and ethanol. Based on our review of the recent groundwater data, contaminants of concern (COCs) at the site include: TPHg, BTEX, MTBE, TBA, and TAME, only (TBA is a COC in part due to its potential occurrence as a MTBE degradation product). Analysis for lead scavengers, ETBE, and DIPE may not be necessary. Prior to conducting the proposed investigation, we request that you review all historical analytical data for the site in order to 1) confirm compliance with the minimum verification analyses listed in the Tri-Regional Guidelines, and 2) confirm the COCs at the site. Please identify appropriate COCs for the site in the report requested below.

REPORT REQUEST

Please submit your *Soil and Water Investigation Report* by **August 4, 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, R.G.
Hazardous Materials Specialist

cc: Lynelle Onishi, URS Corporation, 500 12th St., Ste. 200, Oakland, CA 94607-4014
Donna Drogos, ACEH
Don Hwang, ACEH
File

ATTACHMENT B

HISTORICAL SOIL AND GROUNDWATER ANALYTICAL DATA

in Table 2. The official Laboratory Reports and Chain of Custody Records are included in Appendix F.

4.2 Water Analysis and Results

Ground water samples collected from Monitoring Wells MW-2 and MW-3 were analyzed for TPH-G and BTEX. Ground water from Monitoring Well MW-1 was analyzed for the same constituents and for halogenated volatile organic compounds (HVOC) and total oil and grease (TOG). The results of the laboratory analyses are presented in Table 3. The official Laboratory Reports and Chain of Custody Record are included in Appendix F.

TABLE 2

RESULTS OF
LABORATORY ANALYSIS OF SOIL SAMPLES

006

Boring	Depth (Feet)	TOG	TPH	B	T	E	X	HVOC
		(Concentrations in parts per billion)						
MW-1	5	ND	ND	ND	ND	ND	ND	ND
	10	ND	ND	ND	ND	ND	ND	ND
	15	ND	ND	ND	ND	ND	ND	ND
MW-2	5	---	ND	6	ND	ND	ND	---
	10	---	ND	8	ND	ND	ND	---
	15	ND	ND	ND	ND	ND	ND	---
MW-3	5	---	ND	ND	6	ND	13	---
	10	---	ND	ND	ND	ND	ND	---
	15	---	ND	ND	ND	ND	ND	---

Notes:
TOG = total oil and grease
TPH = total petroleum hydrocarbons
B = benzene
T = toluene
E = ethylbenzene
X = xylenes
HVOC = halogenated volatile organic compounds
ND = not detected; see lab sheets for various detection limits
--- = not analyzed

Source: Alton. December 20, 1994

Table C-2

Table A-1

Site Number 11102
100 MacArthur Boulevard, Oakland, California

Soil Sample Results of Analyses (ppm)

Sample Number	Depth (feet)	Date Collected	California DHS LUFT Method TPH-G	California DHS LUFT Method Hydrocarbon Scan		BTEX EPA Method 5030/8020			
			TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Total Xylenes
THP1-S-12.5-13'**	12.5-13	11/22/94	1.2	*nd*	*nd*	*nd*	*nd*	*nd*	*nd*
THP1-S-15-15.5'	15-15.5	11/22/94	*nd*	*nd*	*nd*	*nd*	*nd*	*nd*	*nd*
THP2-S-6.5-7'	6.5-7	11/22/94	*nd*	*nd*	*nd*	*nd*	*nd*	*nd*	*nd*
THP2-S-9.5-10'	9.5-10	11/22/94	*nd*	*nd*	*nd*	*nd*	*nd*	*nd*	*nd*
TD1-0.5'	0.5	11/22/94	1.4	2,100	*nd**	*nd*	0.006	*nd*	0.04
TD3-0.5'	0.5	11/22/94	*nd*	470	*nd*	*nd*	*nd*	*nd*	*nd*

Groundwater Sample Results of Analyses (ppb)

Sample Number	Depth to Water (feet)	Date Sampled	California DHS LUFT Method TPH-G	California DHS LUFT Method Hydrocarbon Scan		BTEX EPA Method 5030/8020			
			TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Total Xylenes
THP2-W	12	11/22/94	880	610	*nd*	*nd*	1.8	*nd*	39
BLK-W	—	11/22/94	*nd*	—	—	*nd*	*nd*	*nd*	*nd*

NOTE:
- TPH-G = Total petroleum hydrocarbons as gasoline.
- TPH-D = Total petroleum hydrocarbons as diesel.
- TPH-O = Total petroleum hydrocarbons as oil.
- *nd* = Not detected at or above method reporting limit.
- *n/a* = Not applicable.
- — = Not analyzed.
- TW = Tosco well.
- TB = Tosco boring.
- TD = Tosco dispenser soil sample.
- THP = Tosco HydroPunch.
- SGP = Soil gas probe.
- * = Raised method reporting limits (see laboratory report in Attachment D).
- ** = THP samples are referred to a HP samples in the laboratory report.

Table 1
Groundwater Elevation and Analytical Data

BP Oil Site #11102
100 MacArthur Boulevard
Oakland, CA

WELL ID	DATE OF SAMPLING/ MONITORING	TOC (Feet)	(a) DEPTH TO WATER (Feet)	GWE (Feet)	(b) TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	1,1-DCA (ug/l)	1,2-DCA (ug/l)	HVOC's (ug/l)	DO (ppm)	LAB
MW-1	11/04/89	90.20	13.21	76.99	ND<500	ND<50	3.4	0.6	ND<0.3	ND<0.3	---	ND<5000	---	0.9	---	---	SAL
	11/11/89		13.32	76.88	---	---	---	---	---	---	---	---	---	---	---	---	---
	04/03/90		12.46	77.74	820	---	64	1.9	23	34	---	---	---	---	---	---	ANA
	07/30/90		12.92	77.28	190	ND<50	11	ND<5.0	ND<5.0	ND<5.0	---	ND<5000	---	ND	---	---	ANA
	11/20/90		14.08	76.12	50	79	2.4	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	---	4.0	---	---	SAL
	03/01/91		13.61	76.59	ND<100	ND<1000	0.9	ND<0.3	ND<0.3	0.3	---	14000	---	ND	---	---	SAL
	08/19/91		15.74	74.46	370	ND<50	35	0.73	6.4	5.6	---	ND<5000	---	1.4	---	---	SEQ
	11/13/91		14.08	76.12	60	ND<50	0.68	ND<0.3	ND<0.3	ND<0.3	---	ND<5000	---	1.0	---	---	SEQ
	02/24/92		12.52	77.68	140	100	3.9	0.66	1.2	3.8	---	ND<5000	---	1.7	---	---	SEQ
	05/19/92		11.8	78.40	4200	910	440	21	250	37	---	ND<5000	---	ND	---	---	SEQ
	06/17/92		12.01	78.19	4000	560	350	14	150	17	---	ND<5000	---	ND	---	---	SEQ
	07/22/92		12.42	77.78	4000	---	ND<5.0	19	210	61	---	---	---	---	---	---	ANA
	08/14/92		12.75	77.45	2400	1700	330	20	150	47	---	ND<5000	---	ND<2.5	---	---	SEQ
	11/11/92		13.69	76.51	260	92	30	3.4	7.6	6.8	---	ND<5000	---	ND<2.5	---	---	ANA
	06/07/93		10.93	79.27	3400	440	98	11	21	7.6	---	---	6.2	0.9	---	---	PACE
(c)	06/07/93		---	---	3700	---	120	12	26	9.5	---	---	---	---	---	---	PACE
	12/02/93		12.72	77.48	1100	120	8.3	3.6	0.6	1.5	---	ND<5000	2.6	1.8	---	---	PACE
	06/22/94		11.81	78.39	2100	ND<50	32	3.8	2.2	17	4000	(d) ND<5000	2.3	3.3	---	3.2	PACE
(c)	06/22/94		---	---	2100	---	30	3.2	2.0	15	2000	(d) ---	---	---	---	---	PACE
	01/10/95		10.97	79.23	ND<500	420	120	ND<5	ND<5	ND<10	---	---	ND<1	1	---	3.9	ATI
(c)	01/10/95		---	---	ND<500	---	120	ND<5	5	ND<10	---	---	---	---	---	---	ATI
	06/21/95		9.38	80.82	4700	1300	16	ND<5.0	ND<5.0	ND<10	---	2900	2.0	0.38	0.6	(e) 6.7	ATI
(c)	06/21/95		---	---	3600	---	ND<13	ND<5.0	ND<5.0	ND<10	---	---	---	---	---	---	ATI
	12/27/95		11.55	78.65	430	2100	ND<2.5	ND<2.5	ND<2.5	ND<5.0	1200	640	0.67	ND<0.20	---	6.3	ATI
	06/13/96		9.28	80.92	3200	920	51	ND<12	ND<12	ND<12	4000	2000	---	---	---	6.3	SPL
	12/04/96		11.91	78.29	1400	280	6.2	ND<5	ND<5	ND<5	2600	2000	ND<5.0	ND<5.0	6.0	(f) 6.7	SPL
	06/10/97		8.97	81.23	7900	1700	12	ND<10	ND<10	ND<10	15000	ND<5	ND<250	ND<250	ND	6.0	SPL
(c)	06/10/97		---	---	7700	---	14	ND<25	ND<25	ND<25	13000	---	---	---	---	---	SPL
	12/12/97		11.37	78.83	440	760	8.8	ND<1.0	2.6	9.4	6700	1200	ND<1.0	ND<1.0	ND	5.5	SPL
	06/18/98		8.02	82.18	7500	2900	ND<2.5	ND<5.0	ND<5.0	ND<5.0	5600	ND<5	ND<5.0	ND<5.0	ND	4.9	SPL
	03/09/99		9.80	80.40	32000	---	100	16	72	110	49000	---	---	---	---	---	SPL
	09/28/99		10.78	79.42	1000	---	ND<5.0	ND<5.0	ND<5.0	ND<5.0	730	---	ND<1.0	ND<1.0	ND<1.0	---	SPL
	10/14/99		10.84	79.36	---	660	---	---	---	---	---	---	---	---	---	---	SPL
	03/27/00		9.83	80.37	4300	---	160	19	37	43	28000	---	---	ND<500	---	---	PACE
	09/28/00		11.33	78.87	2700	---	10	2.6	1.1	2.7	28000	---	---	---	---	---	PACE
	03/08/01		10.96	79.24	8200	---	23.5	6.09	5.23	8.97	11600	---	---	---	---	---	PACE
	09/21/01		12.07	78.13	6000	---	37.9	ND<0.5	ND<0.5	ND<1.5	7370	---	---	---	---	---	PACE
	02/28/02		10.48	79.72	6400	---	60.8	ND<5.0	6.43	ND<10	7750	---	---	---	---	---	PACE
	09/06/02*		11.20	79.00	1400	---	ND<5.0	ND<5.0	ND<5.0	ND<5.0	6000	---	---	---	---	---	SEQ
	02/19/03	**(h)**	**11.29**	**78.91**	**ND<10,000**	**---**	**ND<100**	**110**	**ND<100**	**ND<100**	**4,500**	**---**	**---**	**---**	**---**	**---**	**SEQ**

Table 1
Groundwater Elevation and Analytical Data

BP Oil Site #11102
100 MacArthur Boulevard
Oakland, CA

WELL ID	DATE OF SAMPLING/ MONITORING	TOC (Feet)	(a) DEPTH TO WATER (Feet)	GWE (Feet)	(b) TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	1,1-DCA (ug/l)	1,2-DCA (ug/l)	HVOC's (ug/l)	DO (ppm)	LAB
MW-2	11/04/89	87.91	15.84	72.07	ND<500	---	6.5	ND<0.3	ND<0.3	ND<0.3	—	---	---	---	---	---	SAL
	11/11/89		14.75	73.16	---	---	---	---	---	---	—	---	---	---	---	---	---
	04/03/90		15.25	72.66	ND<500	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	—	---	---	---	ANA
	07/30/90		15.59	72.32	61	---	6.5	ND<0.5	ND<0.5	ND<0.5	---	---	—	---	---	---	ANA
	11/20/90		17.81	70.10	ND<50	---	0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	—	—	SAL
	03/01/91		17.11	70.80	ND<100	---	0.4	ND<0.3	ND<0.3	ND<0.3	---	---	---	4.0	—	—	SAL
	08/19/91		17.97	69.94	ND<30	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	---	---	SEQ
	11/13/91		16.76	71.15	38	---	0.32	ND<0.3	ND<0.3	ND<0.3	—	---	---	---	---	---	SEQ
	02/24/92		15.07	72.84	ND<50	---	ND<0.5	ND<0.5	ND<0.5	0.58	—	---	---	16	---	---	SEQ
	05/19/92		14.7	73.21	ND<50	---	0.55	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	SEQ
	07/22/92		15.6	72.31	90	---	1.3	0.6	0.9	1.9	---	---	---	—	---	---	ANA
	08/14/92		15.88	72.03	---	---	---	---	---	---	---	---	---	—	---	---	---
	11/11/92		16.19	71.72	52	---	2.8	ND<0.5	ND<0.5	0.9	---	---	---	---	---	---	ANA
	(c) 11/11/92		—	---	65	---	3.2	ND<0.5	ND<0.5	1.0	---	---	---	---	---	---	ANA
	06/07/93		14.42	73.49	1200	---	14	2.8	1.9	1.7	—	---	---	---	---	---	PACE
	12/02/93		14.94	—	790	---	3.4	0.5	10	ND<0.5	3700 (d)	---	---	---	---	---	PACE
	(c) 12/02/93		---	---	2100	—	32	3.8	2.2	17	3700 (d)	---	2.3	---	---	---	PACE
	06/22/94		14.25	73.66	110	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	120 (d)	---	—	—	—	3.9	PACE
	01/10/95		13.64	74.27	ND<50	---	ND<0.5	ND<0.5	0.6	1	---	---	---	---	---	4.3	ATI
	06/21/95		11.66	76.25	4700	---	ND<10	ND<10	ND<10	ND<20	—	---	---	---	---	7.8	ATI
	12/27/95		13.11	74.80	6100	---	ND<25	ND<25	ND<25	ND<50	20000	—	---	---	---	6.7	ATI
	(c) 12/27/95		---	---	6300	—	ND<25	ND<25	ND<25	ND<50	19000	—	—	---	---	---	ATI
	06/13/96		10.86	77.05	8300	—	ND<2.5	ND<2.5	ND<2.5	ND<2.5	13000	---	—	---	---	6.5	SPL
	(c) 06/13/96		---	---	8700	---	ND<5	ND<5	ND<5	ND<5	13000	---	---	---	---	—	SPL
	12/04/96		13.03	74.88	5900	---	ND<2.5	ND<5	ND<5	ND<5	11000	---	---	---	---	6.3	SPL
	(c) 12/04/96		---	---	5900	---	ND<2.5	ND<5	ND<5	ND<5	11000	---	---	---	---	---	SPL
	06/10/97		10.04	77.87	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	—	---	---	---	5.8	SPL
	12/12/97		12.44	75.47	ND<50	—	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	—	—	---	---	5.7	SPL
	06/18/98		8.89	79.02	50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	—	—	---	---	5.3	SPL
	(c) 06/18/98		---	---	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	—	---	SPL
	03/09/99		10.20	77.71	15000	---	ND<5.0	ND<5.0	ND<5.0	ND<5.0	23000	---	---	---	—	---	SPL
	09/28/99		11.81	76.10	36000	---	ND<5.0	12	7.0	26	35000	---	ND<5.0	7.7	ND<5.0	---	SPL
	10/14/99		10.27	77.64	—	100	---	---	---	---	—	---	---	---	---	---	SPL
	03/27/00		9.98	77.93	1300	---	ND<0.5	ND<0.5	0.51	ND<0.5	5800	---	—	ND<100	---	---	PACE
	09/28/00		11.40	76.51	1600	---	1.8	1.7	0.54	2.2	15000	---	---	---	---	---	PACE
	03/08/01		11.16	76.75	20000	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	29100	---	---	---	---	---	PACE
	09/21/01		11.65	76.26	5000	---	ND<0.5	ND<0.5	ND<0.5	ND<1.5	6110	---	---	---	---	---	PACE
	02/28/02		9.86	78.05	3200	—	35.1	ND<0.5	ND<0.5	ND<1.0	4620	---	---	---	---	---	PACE
	09/06/02*		12.32	75.59	1900	---	ND<10	ND<10	ND<10	ND<10	15000	---	—	—	---	---	SEQ
	02/19/03 (h)		**11.63**	**76.28**	**45,000**	---	**ND<250**	**ND<250**	**ND<250**	**ND<250**	**32,000**	---	—	—	---	---	**SEQ**

Table 1
Groundwater Elevation and Analytical Data

BP Oil Site #11102
100 MacArthur Boulevard
Oakland, CA

WELL ID	DATE OF SAMPLING/ MONITORING	TOC (Feet)	(a) DEPTH TO WATER (Feet)	GWE (Feet)	(b) TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	1,1-DCA (ug/l)	1,2-DCA (ug/l)	HVOC's (ug/l)	DO (ppm)	LAB
MW-3	11/04/89	87.02	15.4	71.62	ND<500	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	---	---	SAL
	11/11/89		14.1	72.92	---	---	---	---	---	---	---	---	---	---	---	---	---
	04/03/90		13.90	73.12	ND<100	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	ANA
	07/30/90		13.77	73.25	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	---	---	---	---	ANA
	11/20/90		14.67	72.35	ND<50	---	0.3	0.8	0.4	1.5	---	---	---	---	---	---	SAL
	03/01/91		15.22	71.80	ND<100	---	0.4	ND<0.3	ND<0.3	ND<0.3	---	---	---	ND	---	---	SAL
	08/19/91		13.15	73.87	ND<30	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	---	---	SEQ
	11/13/91		15.66	71.36	ND<30	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	---	---	SEQ
	02/24/92		15.01	72.01	ND<50	---	0.65	1.4	0.66	4.4	---	---	---	ND	---	---	SEQ
	05/19/92		15.52	71.50	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	SEQ
	07/22/92		15.63	71.39	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	---	ND<0.50	---	---	ANA
	08/14/92		13.57	73.45	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/11/92		14.13	72.89	ND<50	---	ND<0.5	0.7	ND<0.5	1.3	---	---	---	---	---	---	ANA
	06/07/93		12.13	74.89	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
	12/02/93		13.29	73.73	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
	06/22/94		12.78	74.24	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	2.9	PACE
	01/10/95		12.01	75.01	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	---	1	---	3.8	ATI
	06/21/95		11.57	75.45	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	---	7.4	ATI
	12/27/95		13.47	73.55	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	5.7	---	---	---	---	7.3	ATI
	06/13/96		11.22	75.80	60	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<10	---	---	---	---	6.8	SPL
	12/04/96		13.28	73.74	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	---	---	6.7	SPL
	06/10/97		10.22	76.80	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	---	6.1	SPL
	12/12/97		12.61	74.41	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	---	5.6	SPL
(c)	12/12/97		---	---	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	---	---	SPL
	06/18/98		9.07	77.95	50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	---	5.3	SPL
	06/18/98		12.80	74.22	---	---	---	---	---	---	---	---	---	---	---	---	---
	09/28/99		13.76	73.26	---	---	---	---	---	---	---	---	---	---	---	---	---
	03/27/00		13.77	73.25	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.6	---	---	---	---	---	PACE
	09/28/00		11.28	75.74	ND<50	---	ND<0.5	7.4	ND<0.5	1.3	2.0	---	---	---	---	---	PACE
	03/08/01		11.75	75.27	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	60.4	---	---	---	---	---	PACE
	09/21/01		11.33	75.69	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1.5	8.18	---	---	---	---	---	PACE
	02/28/02		10.86	76.16	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1.0	25.5	---	---	---	---	---	PACE
	09/06/02*		12.73	74.29	ND<50	---	1.2	ND<0.5	ND<0.5	1.0	16	---	---	---	---	---	SEQ
	02/19/03 (h)		11.72	75.30	ND<500	---	ND<5.0	ND<5.0	ND<5.0	ND<5.0	110	---	---	---	---	---	SEQ

Table 1
Groundwater Elevation and Analytical Data

BP Oil Site #11102
100 MacArthur Boulevard
Oakland, CA

WELL ID		DATE OF SAMPLING/ MONITORING	TOC (Feet)	(a) DEPTH TO WATER (Feet)	GWE (Feet)	(b)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	1,1-DCA (ug/l)	1,2-DCA (ug/l)	HVOCs (ug/l)	DO (ppm)	LAB
QC-2	(g)	11/11/92	—	—	—		ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	—	—	—	ANA
QC-2	(g)	06/07/93	—	—	—		ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	—	—	—	PACE
QC-2	(g)	12/02/93	—	—	—		ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	—	—	—	PACE
QC-2	(g)	06/22/94	—	—	—		ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	—	—	—	PACE
QC-2	(g)	01/10/95	—	—	—		ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<1	—	—	—	—	—	—	ATI
QC-2	(g)	06/21/95	—	—	—		ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	—	—	—	—	—	—	ATI
QC-2	(g)	12/27/95	—	—	—		ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	—	—	—	—	—	ATI
QC-2	(g)	06/13/96	—	—	—		ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<10	—	—	—	—	—	SPL

Table 1
Groundwater Elevation and Analytical Data

BP Oil Site #11102
100 MacArthur Boulevard
Oakland, CA

WELL ID	DATE OF SAMPLING/ MONITORING	TOC (Feet) (a)	DEPTH TO WATER (Feet)	GWE (Feet) (b)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	1,1-DCA (ug/l)	1,2-DCA (ug/l)	HVOC's (ug/l)	DO (ppm)	LAB

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
TPH-D	Total petroleum hydrocarbons as diesel
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
TOG	Total oil and grease
1,1-DCA	1,1-Dichloroethane
1,2-DCA	1,2-Dichloroethane
1,2-DBA	1,2-Dibromoethane
HVOC's	Halogenated volatile organic compounds
MTBE	Methyl tert butyl ether
DIPE	Di-Isopropyl Ether
ETBE	Ethyl t-Butyl Ether
TAME	t-Amyl Methyl Ether
DO	Dissolved oxygen
ug/l	Micrograms per liter
ppm	Parts per million
ND	Not detected above reported detection limit
---	Not analyzed/measured/applicable
SAL	Superior Analytical Laboratory
ANA	Anametrix, Inc.
SEQ	Sequoia Analytical Laboratory
PACE	Pace, Inc.
ATI	Analytical Technologies, Inc.
SPL	Southern Petroleum Laboratories

(a) Top of casing elevations surveyed to the nearest 0.01 foot above mean sea level.

(b) Groundwater elevations in feet above mean sea level.

(c) Blind duplicate.

(d) A copy of the documentation for this data is included in Appendix C of Alisto report 10-076-06-002.

(e) Tetrachloroethene.

(f) Trans-1,2-Dichloroethene

(g) Travel blank.

(h) TPH, BTEX, and MTBE analyzed by EPA Method 8260B beginning on 1st Quarter Sampling event (2/19/03)

(i) Discrete peak @ C6-C7.

* During the second quarter of 2002, URS Corporation assumed groudnwater monitoring activities for BP

ATTACHMENT C

SOIL BORING LOGS

URS

1333 Broadway, Suite 800
Oakland, California 94612

LOG OF BORING

Borehole ID: SB-4

Total Depth: 32 ft bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP #11102 Soil and Water Investigation	**Drilling Company:** Gregg Drilling & Testing
Site Location: 100 MacArthur Blvd, Oakland, CA	**Driller:** Jesse Pattison
Project Manager: Lynelle Onishi	**Type of Drilling Rig:** Marl M2.5 DP
RG: John McCain	**Drilling Method:** Direct Push
Geologist: John McCain	**Sampling Method:** Continuous Macro-Core with acetate sleeve.
Job Number: 38487349.0A034	**Date(s) Drilled:** 07/14/05
BORING INFORMATION	
Groundwater Depth: 20 ft bgs	**Boring Location:** SE corner of site
Air Knife or Hand Auger Depth: 5.0 feet bgs/Hand Auger	**Boring Diameter:** 2-inch
Coordinates: X Y	**Boring Type:** Exploratory

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample ID	Recovery	Comments
0		AC/Baserock: AC cover (6") with baserock (3") beneath	FILL				
2		SILTY SANDY CLAY w/ GRAVEL: FILL, black (10YR 2/1), 75% clay, 15% sand, 5% silt, 5% gravel, fine to coarse sands, trace angular gravel and brick fragments to 2" diameter, soft, moist, med. plasticity, no petroleum odor			Borehole grouted to grade with neat Portland cement		
4		SILTY SANDY CLAY: dark brown (10YR 3/3), 75% clay, 15% sand, 5% silt, 5% gravel, fine to coarse sands, trace sub-angular gravel to 0.5" diameter, soft, moist, med. plasticity, no petroleum odor	CL	0	SB-4 (5-5.5')		
6		@ 6' - same as above, no gravel, no petroleum odor					
8							
10		@ 10' - Silty Sandy Clay continues, reddish-brown, (5YR 5/4), 70% clay, 10% silt, 10% sand, 5% gravel, fine to coarse sands, trace sub-rounded gravels to 0.25", moist, med. stiff, no petroleum odor		0.2	SB-4 (9.5-10')		
12							
14							
16		@ 15' - Silty Sandy Clay continues, dark reddish gray (2.5YR 4/2), 80% clay, 10% silt, 10% sand, no gravels, fine sands, moist, med. stiff, no petroleum odor		0.2	SB-4 (14.5-15')		
18							
20				1.9	SB-4 (19.5-20')		
22		SILTY SAND: brown (7.5YR 5/3), 90% sand, 10% silt, fine sands, loose, wet, no petroleum odor	SM	9.6	SB-4 (20-20.5')		▽
24		SILTY SANDY CLAY: brown (7.5YR 5/3), 70% clay, 15% silt, 15% sand, fine sands, med. stiff, moist to wet, no petroleum odor, med. plasticity	CL				

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample I.D.	Recovery	Comments
26		@ 25' - Silty Sandy Clay (CL) continues, light brown (7.5YR 6/3), 70% clay, 15% silt, 15% sand, med. stiff, moist to wet, no petroleum odor @ 26' - Silty Sandy Clay continues, color change to gray (Gley 1 5/10Y) at 26', no petroleum odor		0.5	SB-4 (25-25.5')		
28							
30		SILTY SAND: brown (7.5YR 5/3), 90%sand, 10%silt, fine sands, loose, wet, no petroleum odor	SM	0.5	SB-4 (29-29.5')		
		SILTY SANDY CLAY: gray (Gley 1 5/10Y), 70% clay, 15% silt, 15% sand, fine sands, stiff, moist, no petroleum odor, med. plasticity	CL				
32		SILTY SAND: brown (7.5YR 5/3), 90% sand, 10% silt, fine sands, loose, wet, no petroleum odor	SM				
		SILTY SANDY CLAY: gray (Gley 1 5/10Y), 70% clay, 15% silt, 15% sand, fine sands, stiff, moist, no petroleum odor, med. plasticity	CL				
34		lost sample at 31.5-32' when cutting acetate liner; no sample Bottom of Boring= 32' bgs Depth discrete groundwater samples were attempted within a boring 1 foot laterally from this location and were not successful.					
36							

URS 1333 Broadway, Suite 800 Oakland, California 94612

LOG OF BORING

Borehole ID: SB-5

Total Depth: 32 ft bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP #11102 Soil and Water Investigation	**Drilling Company:** Gregg Drilling & Testing
Site Location: 100 MacArthur Blvd, Oakland, CA	**Driller:** Jesse Pattison
Project Manager: Lynelle Onishi	**Type of Drilling Rig:** Marl M2.5 DP
RG: John McCain	**Drilling Method:** Direct Push
Geologist: John McCain	**Sampling Method:** Continuous Macro-Core with acetate sleeve.
Job Number: 38487349.0A034	**Date(s) Drilled:** 07/14/05

BORING INFORMATION

Groundwater Depth: 29 ft bgs	**Boring Location:** Southwest of dispenser islands
Air Knife or Hand Auger Depth: 5.0 feet bgs/Hand Auger	**Boring Diameter:** 2-inch
Coordinates: X Y	**Boring Type:** Exploratory

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample ID	Recovery	Comments
0		AC/Baserock: AC cover (6") with baserock (2") beneath	FILL				
2		SANDY CLAY: FILL, black (Gley 1 2.5/N), 80% clay, 15% sand, 5% gravel, fine to coarse sands, trace angular gravels to 0.25" diameter, soft, moist, low plasticity, no petroleum odor @ 2' - Sandy Clay FILL continues, greenish gray (Gley 1 5/5GY), 85% clay, 15% sand, soft, moist, low plasticity, no petroleum odor			Borehole grouted to grade with neat Portland cement		
4		@ 5' - same as above, gray (Gley 2 4/5BG), angular gravels and concrete fragments to 3" diameter, soft, moist, slight petroleum odor					
6		SILTY SANDY CLAY: brown (7.5YR 5/4), 75% clay, 10% sand, 10% silt, 5% gravel, fine sands, trace sub-rounded gravels to 0.25", med. stiff, moist, med. plasticity, no petroleum odor	CL	0.0	SB-5 (5-5.5')		
8							
10		@ 10' - Silty Sandy Clay continues, brown (7.5YR 5/4), 75% clay, 10%silt, 10% sand, 5% gravel, trace angular gravel to 0.25" diameter, med. stiff, moist, med. plasticity, no petroleum odor		0.1	SB-5 (9.5-10')		
12							
14							
16		@ 15' - Silty Sandy Clay continues, brown (7.5YR 5/3), 75% clay, 10%silt, 10% sand, 5% gravel, trace angular gravel to 0.25" diameter, med. stiff, moist, med. plasticity, no petroleum odor		0.4	SB-5 (14.5-15')		
18							
20		@ 20' - Silty Sandy Clay continues, light olive brown (2.5YR 5/4), 80% clay, 10% silt, 10% sand, med. stiff, moist, med. plasticity, slight petroleum odor		40.9	SB-5 (19.5-20')		
22							
24							

URS

LOG OF BORING

Borehole ID: SB-5

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample I.D.	Recovery	Comments
26		@ 25' - Silty Sandy Clay (CL) continues, brown (7.5YR 5/3), 78% clay, 10%silt, 10% sand, 2% gravel, trace gravel to 0.25" diameter, med. stiff, moist, med. plasticity, no petroleum odor					
28							
30		SILTY SAND: brown (7.5YR 5/3), 85% sand, 10% silt, 5% clay, fine to coarse sands, loose, wet, no petroleum odor	SM	0.4	SB-5 (29-29.5')		⊠
		SILTY SANDY CLAY: brown (7.5YR 5/3), 85% clay, 10% silt, 5% sand, fine to coarse sands, stiff, moist, med. plasticity, no petroleum odor	CL				
32		Bottom of Boring= 32' bgs					
34		Depth discrete groundwater samples were attempted within a boring 1 foot laterally from this location and were not successful.					

URS

1333 Broadway, Suite 800
Oakland, California 94612

LOG OF BORING

Borehole ID: SB-6

Total Depth: 28 ft bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP #11102 Soil and Water Investigation	**Drilling Company:** Gregg Drilling & Testing
Site Location: 100 MacArthur Blvd, Oakland, CA	**Driller:** Jesse Pattison
Project Manager: Lynelle Onishi	**Type of Drilling Rig:** Marl M2.5 DP
RG: John McCain	**Drilling Method:** Direct Push
Geologist: John McCain	**Sampling Method:** Continuous Macro-Core with acetate sleeve.
Job Number: 38487349.0A034	**Date(s) Drilled:** 07/13/05

BORING INFORMATION

Groundwater Depth: 8.5 ft bgs	**Boring Location:** Between station building and dispensers
Air Knife or Hand Auger Depth: 5.0 feet bgs/Hand Auger	**Boring Diameter:** 2-inch
Coordinates: X Y	**Boring Type:** Exploratory

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample ID	Recovery	Comments
0		AC/Baserock: AC cover (3") with baserock (4") beneath	FILL		Borehole grouted to grade with neat Portland cement		
2		SILTY SAND: FILL, red (2.5YR 5/6), 85% sand, 10% silt, 5% gravel, fine sands, trace angular gravels to 0.25" diameter, loose, moist, no petroleum odor					
4							
6				0	SB-6 (5-5.5')		
		@ 7' - Silty Sand continues, same color as above, angular gravels to 0.5" diameter, loose, moist, no petroleum odor					
8		@ 8.5' - Silty Sand continues, red (2.5YR 5/6), loose, wet at 8.5', petroleum odor					
				289	SB-6 (8.5-9')		
10		SILTY SANDY CLAY: dark grayish brown (10YR 4/2), 75% clay, 15% sand, 15% silt, 5%, fine sands, med. stiff, moist, no petroleum odor	CL	0.9	SB-6 (9.5-10')		
12							
14							
		SILTY CLAYEY SAND: brown (10YR 5/3), 75% sand, 10% silt, 10% clay, 5% gravels, fine to coarse sands, angular gravels to 0.25", loose, wet, no petroleum odor	SM	0.4	SB-6 (14.5-15')		
16				0.6	SB-6 (16.5-17')		
18		SILTY SANDY CLAY: dark yellowish brown (10YR 4/4), 80% clay, 10% silt, 10% sand, fine to coarse sands, med. stiff, moist, no petroleum odor, med. plasticity	CL				
				0.0	SB-6 (19.5-20')		
20		@ 20' - Silty Sandy Clay continues, yellowish brown (10YR 5/4), trace angular gravel to 0.25" diameter, med. stiff, moist, no odor					
22		no recovery from 20 - 24' push, soil in shoe @ 24'- Silty Sandy Clay continues, yellowish brown (10YR 5/4), fine to coarse sands, med. stiff, med. plasticity, slight petroleum odor					
24							

URS

LOG OF BORING

Borehole ID: SB-6

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample I.D.	Recovery	Comments
26		Silty Sandy Clay (CL) continues, grayish brown (10YR 5/2), fine sands, stiff, med. plasticity, no petroleum odor		0.0	SB-6 (27.5-28')		
28		Bottom of Boring= 28' bgs Depth discrete groundwater samples were attempted within a boring 1 foot laterally from this location and were not successful.					
30							
32							

URS 1333 Broadway, Suite 800 Oakland, California 94612

LOG OF BORING

Borehole ID: SB-7

Total Depth: 32 ft bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP #11102 Soil and Water Investigation	**Drilling Company:** Gregg Drilling & Testing
Site Location: 100 MacArthur Blvd, Oakland, CA	**Driller:** Jesse Pattison
Project Manager: Lynelle Onishi	**Type of Drilling Rig:** Marl M2.5 DP
RG: John McCain	**Drilling Method:** Direct Push
Geologist: John McCain	**Sampling Method:** Continuous Macro-Core with acetate sleeve.
Job Number: 38487349.0A034	**Date(s) Drilled:** 07/14/05

BORING INFORMATION

Groundwater Depth: 28.5 ft bgs	**Boring Location:** Southwest of used oil UST
Air Knife or Hand Auger Depth: 5.0 feet bgs/Hand Auger	**Boring Diameter:** 2-inch
Coordinates: X Y	**Boring Type:** Exploratory

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample ID	Recovery	Comments
0		AC/Baserock: AC cover (4") with baserock (2") beneath	FILL				
2		SILTY CLAYEY SAND: FILL, very dark gray brown (Gley 1 3/10Y), 80% sand, 7.5% silt, 7.5% clay, 5% gravel, fine sands, trace angular gravels to 0.25" diameter, loose, moist to wet, petroleum odor		668	SB-7 (2-2.5')		
4		SILTY SANDY CLAY: FILL, dark gray brown (Gley 1 3/10Y), 70% clay, 15% sand, 10% silt, 5% gravels, fine sands, soft, moist to wet, med. plasticity, petroleum odor					
6				429	SB-7 (5-5.5')		
8		SILTY SANDY CLAY: light olive brown (2.5Y 5/3), 85% clay, 10% silt, 5% sand, fine sands, stiff, moist, med. plasticity, no petroleum odor	CL				
10		@ 10' - Sandy Silty Clay continues, 80% clay, 10% silt, 10% sand, same color as above, stiff, moist, med. plasticity, no petroleum odor		7.5	SB-7 (9.5-10')		
12							
14		SANDY CLAYEY SILT: olive brown (2.5Y 4/3), 80% silt, 10% clay, 10% sand, fine sands, stiff, moist, low plasticity, no petroleum odor	ML	1.5	SB-7 (14.5-15')		
16					SB-7 (16.5-17')		
18							
20		@ 20' - Sandy Clayey Silt continues, light olive brown (2.5Y 5/4), 80% silt, 10% clay, 10% sand, very stiff, moist, low plasticity, no petroleum odor		0.6	SB-7 (19.5-20')		
22							
24							

URS 1333 Broadway, Suite 800
Oakland, California 94612

LOG OF BORING

Borehole ID: SB-7
Total Depth: 32 ft bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP #11102 Soil and Water Investigation	**Drilling Company:** Gregg Drilling & Testing
Site Location: 100 MacArthur Blvd, Oakland, CA	**Driller:** Jesse Pattison
Project Manager: Lynelle Onishi	**Type of Drilling Rig:** Marl M2.5 DP
RG: John McCain	**Drilling Method:** Direct Push
Geologist: John McCain	**Sampling Method:** Continuous Macro-Core with acetate sleeve.
Job Number: 38487349.0A034	**Date(s) Drilled:** 07/14/05

BORING INFORMATION	
Groundwater Depth: 28.5 ft bgs	**Boring Location:** Southwest of used oil UST
Air Knife or Hand Auger Depth: 5.0 feet bgs/Hand Auger	**Boring Diameter:** 2-inch
Coordinates: X Y	**Boring Type:** Exploratory

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample ID	Recovery	Comments
0		AC/Baserock: AC cover (4") with baserock (2") beneath	FILL				
		SILTY CLAYEY SAND: FILL, very dark gray brown (Gley 1 3/10Y), 80% sand, 7.5% silt, 7.5% clay, 5% gravel, fine sands, trace angular gravels to 0.25" diameter, loose, moist to wet, petroleum odor					
2		SILTY SANDY CLAY: FILL, dark gray brown (Gley 1 3/10Y), 70% clay, 15% sand, 10% silt, 5% gravels, fine sands, soft, moist to wet, med. plasticity, petroleum odor		668	SB-7 (2-2.5')		
4							
6				429	SB-7 (5-5.5')		
8		SILTY SANDY CLAY: light olive brown (2.5Y 5/3), 85% clay, 10% silt, 5% sand, fine sands, stiff, moist, med. plasticity, no petroleum odor	CL				
10		@ 10' - Sandy Silty Clay continues, 80% clay, 10% silt, 10% sand, same color as above, stiff, moist, med. plasticity, no petroleum odor		7.5	SB-7 (9.5-10')		
12							
14		SANDY CLAYEY SILT: olive brown (2.5Y 4/3), 80% silt, 10% clay, 10% sand, fine sands, stiff, moist, low plasticity, no petroleum odor	ML	1.5	SB-7 (14.5-15')		
16							
18					SB-7 (18.5-17')		
20		@ 20' - Sandy Clayey Silt continues, light olive brown (2.5Y 5/4), 80% silt, 10% clay, 10% sand, very stiff, moist, low plasticity, no petroleum odor		0.5	SB-7 (19.5-20')		
22							
24							

URS

LOG OF BORING

Borehole ID: SB-7

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample I.D.	Recovery	Comments
		@ 24.5' - Sandy Clayey Silt continues, light olive brown (2.5Y 5/4), 80% silt, 10% clay, 10% sand, very stiff, moist, low plasticity, no petroleum odor					
26		SILTY SAND: brown (2.5Y 4/3), 90% sand, 10% silt, fine sands, loose, moist to wet, no petroleum odor	SM	4.2	SB-7 (25.5-26')		
		SILTY SANDY CLAY: olive brown (2.5Y 4/3), 80% clay, 10% silt, 10% sand, fine sands, med. stiff, moist, med. plasticity, no petroleum odor	CL				
28		SILTY SAND: brown (2.5Y 5/4), 90% sand, 10% silt, fine sands, loose, wet, no petroleum odor	SM	0.1	SB-7 (28.5-29')		
30		SILTY SANDY CLAY: brown (2.5Y 4/3), 80% clay, 10% silt, 10% sand, fine sands, med. stiff, moist, med. plasticity, no petroleum odor	CL	0.1	SB-7 (30.5-31')		
32		Bottom of Boring= 32' bgs Depth discrete groundwater samples were attempted within a boring 1 foot laterally from this location and were not successful.			Borehole grouted to grade with neat Portland cement		
34							

URS

1333 Broadway, Suite 800
Oakland, California 94612

LOG OF BORING

Borehole ID: SB-8

Total Depth: 28 ft bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP #11102 Soil and Water Investigation	**Drilling Company:** Gregg Drilling & Testing
Site Location: 100 MacArthur Blvd, Oakland, CA	**Driller:** Jesse Pattison
Project Manager: Lynelle Onishi	**Type of Drilling Rig:** Marl M2.5 DP
RG: John McCain	**Drilling Method:** Direct Push
Geologist: John McCain	**Sampling Method:** Continuous Macro-Core with acetate sleeve.
Job Number: 38487349.0A034	**Date(s) Drilled:** 07/13/05

BORING INFORMATION

Groundwater Depth: 7 ft bgs	**Boring Location:** East of MW-1
Air Knife or Hand Auger Depth: 5.0 feet bgs/Hand Auger	**Boring Diameter:** 2-inch
Coordinates: X Y	**Boring Type:** Exploratory

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample ID	Recovery	Comments
0		AC/Baserock: AC cover (4") with baserock (2") beneath	FILL				
2		SILTY GRAVELY SAND: FILL, olive (5YR 4/4), 80% sand, 5% silt, 5% clay, 10% gravel, fine to coarse sands, trace sub-angular gravels to 0.25" diameter, loose, moist, no petroleum odor					
4							
6				0.4	SB-8 (5-5.5')		
		@ 7' - Silty Sand seam (3" thick) with gravels, 80% sand, 10% silt, 10% gravels, reddish brown (2.5YR 5/4), angular gravels to 0.25", loose, wet, no petroleum odor		0.0	SB-8 (7-7.5')		
8		SILTY CLAYEY SAND: brown (2.5YR 4/4), 75% sand, 10% silt, 10% clay, 5% gravels, fine sands, dense, moist, no petroleum odor	SM				
10				24.1	SB-8 (9.5-10')		
		@ 11' - Silty Sand seam (3" thick) with gravels, 80% sand, 10% silt, 10% gravels, brown (2.5YR 5/4), angular gravels to 0.25", loose, wet, no petroleum odor		0.0	SB-8 (11-11.5')		
12							
14				0.1	SB-8 (14.5-15')		
16							
18		@ 17.5' - Silty Clayey Sand seam (6" thick), 80% sand, 10% silt, 10% clay, reddish brown (2.5YR 5/4), loose, wet, no petroleum odor		0.0	SB-8 (17.5-18')		
20				0.0	SB-8 (19.5-20')		
				0.0	SB-8 (20.5-21')		
22							
24							

URS

LOG OF BORING

Borehole ID: SB-8

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample I.D.	Recovery	Comments
26		SILTY CLAY: reddish brown (5YR 5/3), 85% clay, 10% silt, 5% sand, trace fine sands, stiff, moist, med. plasticity, no petroleum odor	CL		Borehole grouted to grade with neat Portland cement		
28		Bottom of Boring= 28' bgs Depth discrete groundwater samples were attempted within a boring 1 foot laterally from this location and were not successful.					
30							
32							

BORING LOG

PROJECT: 30-063 BORING DATE: 10-26-89

LOCATION: 100 MacArthur Boulevard, Oakland GEOLOGIST: M. Hopwood

TYPE: 10" HSA BORING NO.: MW-1

DRILLING COMPANY: Bay Area Exploration

DEPTH (FEET)	I	BLOW CTS	MATERIAL ENCOUNTERED	USCS
			Asphalt Over Road Base Loose, dry, tan to orange, gravelly SAND.	GP
5		5,14,16	Loose, damp, tan to orange, gravelly SAND; wood fragments. CGI = ND.	GP
10		6,10,13	Loose, damp, tan to light brown, clayey SAND; poorly sorted. CGI = ND.	SC
15		8,8,25	Loose, very moist, tan to light brown, clayey SAND; some iron staining.	SC
20		9,9,12	Loose, saturated, tan to brown, gravelly SAND, with clay. CGI = ND.	GC
25				
30			Medium stiff, moist, tan CLAY.	CL
35			Total Depth = 32 Feet	
40				

TPH = Total Petroleum Hydrocarbons
TRPH = Total Recoverable Petroleum Hydrocarbons
▽ = Ground Water Piezometric Surface
ND = Not Detected
CGI = Combustible Gas Indicator

↔ = Sample Analyzed for Hydrocarbon Concentration
I = Sampling Interval
ppm = Parts per Million
LEL = Lower Explosive Limit

B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylene
Total Depth = 32 Feet

BORING LOG

PROJECT: 30-063

BORING DATE: 10-25-89

LOCATION: 100 MacArthur Boulevard, Oakland

GEOLOGIST: M. Hopwood

TYPE: 10" HSA

BORING NO.: MW-2

DRILLING COMPANY: Bay Area Exploration

DEPTH (FEET)	I	BLOW CTS	MATERIAL ENCOUNTERED	USCS
			Asphalt Over Road Base Very loose, damp, dark brown, silty CLAY.	
5		3,4,7	Loose, damp, greenish gray, silty CLAY with some coarse sand; very slight odor. CGI = 75 ppm.	CL
10		2,4,6	Medium stiff, damp, tan, sandy SILTY/CLAY. CGI = ND.	CL
15 ▽		5,7,12	Moderately stiff, damp, tan, clayey SILT.	ML
20				
25			Stiff, damp, gray, silty CLAY; iron stains; calcite stringers.	CL
30				
35			Total Depth - 32 Feet	
40				

TPH = Total Petroleum Hydrocarbons
TRPH = Total Recoverable Petroleum Hydrocarbons
▽ = Ground Water Piezometric Surface
ND = Not Detected
CGI = Combustible Gas Indicator

++ = Sample Analyzed for Hydrocarbon Concentration
I = Sampling Interval
ppm = Parts per Million
LEL = Lower Explosive Limit

B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylene
Total Depth = 32 Feet

BORING LOG

PROJECT: 30-063

BORING DATE: 10-26-89

LOCATION: 100 MacArthur Boulevard, Oakland

GEOLOGIST: M. Hopwood

TYPE: 10" HSA

BORING NO.: MW-3

DRILLING COMPANY: Bay Area Explored

DEPTH (FEET)	I	BLOW CTS	MATERIAL ENCOUNTERED	USCS
			Asphalt Over Road Base Loose, dry, tan to orange, gravelly SAND.	GP
5		7,11,14	Moderately stiff, damp, tan to gray/green, silty CLAY, with gravel; some iron staining.	CL
10		3,5,6		
15 ▼		6,8,13	Moderately soft, damp, brown, silty CLAY.	CL
20			Moderately loose, damp, tan to brown, sandy CLAY.	CL
25			Soft, moist, tan CLAY. Becomes silty.	CL
30				
35			Total Depth - 32 Feet	
40				

TPH = Total Petroleum Hydrocarbons
TRPH = Total Recoverable Petroleum Hydrocarbons
▼ = Ground Water Piezometric Surface
ND = Not Detected
CGI = Combustible Gas Indicator

++ = Sample Analyzed for Hydrocarbon Concentration
I = Sampling Interval
ppm = Parts per Million
LEL = Lower Explosive Limit

B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylene
Total Depth = 32 Feet

ATTACHMENT D

ALAMEDA COUNTY PUBLIC WORKS AGENCY SOIL BORING PERMIT

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 06/27/2005 By suel
Permits Issued: W2005-0683 **Permits Valid from 07/20/2005 to 07/21/2005**

Application Id: 1119915257454 **City of Project Site:** Oakland
Site Location: Former BP Service Station #11102
100 MacArthur Blvd.
Oakland, CA
Project Start Date: 07/20/2005 **Completion Date:** 07/21/2005

Applicant: URS Corporation - Lynelle Onishi **Phone:** 510-874-1758
1333 Broadway, Suite 800, Oakland, CA 94612
Property Owner: Conoco Phillips **Phone:** 916-558-7604
76 Broadway, Sacramento, CA 95818
Client: Atlantic Richfield Company **Phone:** 714-670-5303
4 Centerpointe Drive, Rm. 172, La Palma, CA 90623

Total Due: $200.00
Total Amount Paid: $200.00
Paid By: CHECK **PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Geo Probes-Sampling 24 to 72 hours only - 13 Boreholes
Driller: Gregg Drilling - Lic #: 57485165 - Method: other **Work Total: $200.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2005-0683	06/27/2005	10/18/2005	13	2.50 in.	40.00 ft

Specific Work Permit Conditions

1. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

2. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

3. Applicant shall contact Mike Chun for a inspection time at 510-670-5786 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

ATTACHMENT E

FIELD PROCEDURES AND FIELD DATA SHEETS

WELL GAUGING DATA

Project # 050711-PM2 Date 7-11-05 Client Arco 11102

Site 100 Macarthur Blvd. Oakland

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	
MW-1	4					9.27	31.95		
MW-2	4					11.25	32.00		
MW-3	4					10.82	32.25		
	All cap removed			15 min.	BY	gauging			

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 050711-PM2	Station # 11102
Sampler: PM	Date: 7-11-05
Well I.D.: MW-1	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 31.95	Depth to Water: 9.27
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) 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	radius² * 0.163

Purge Method:
- Bailer
- Disposable Bailer
- Positive Air Displacement
- X Electric Submersible
- Extraction Pump
- Other: _____

Sampling Method:
- Bailer
- X 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.

14.7 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 44.1 Gals. (Calculated Volume)

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
1510	79.3	8.1	1040	14.7	clear/odor
1513	76.6	7.0	729	29.4	"
1516	75.1	7.7	739	44.1	"

Did well dewater? Yes (No)		Gallons actually evacuated: 44.1	
Sampling Time: 1520		Sampling Date: 7-11-05	
Sample I.D.: MW-1		Laboratory: Pace (Sequoia) Other ___	
Analyzed for: (GRO) (BTEX) (MTBE) DRO		Other: see Scope	
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 #: 050711-PM2	Station # 11102
Sampler: PM	Date: 7-11-05
Well I.D.: MW-2	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 32.00	Depth to Water: 11.25
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) 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	radius² * 0.163

Purge Method:
- Bailer
- Disposable Bailer
- Positive Air Displacement
- X Electric Submersible
- Extraction Pump
- Other: _____

Sampling Method:
- Bailer
- X 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.

13.5 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 40.5 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
1557	76.2	7.1	792	13.5	clear/odor
1600	73.4	7.8	817	27	
1603	73.8	7.5	832	40.5	

Did well dewater? Yes (No) Gallons actually evacuated: 40.5

Sampling Time: 1610 Sampling Date: 7-11-05

Sample I.D.: MW-2 Laboratory: Pace (Sequoia) Other_____

Analyzed for: GRO (BTEX) (MTBE) DRO Other: See Scope

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 #: 050711-PM2	Station # 11102
Sampler: PM	Date: 7-11-05
Well I.D.: MW-3	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 32.25	Depth to Water: 10.82
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) 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^2 * 0.163

Purge Method:
- Bailer
- Disposable Bailer
- Positive Air Displacement
- X Electric Submersible
- Extraction Pump
- Other: _____

Sampling Method:
- Bailer
- X 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.

13.9 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 41.7 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
1536	73.7	8.0	659	13.9	clear / odor
1539	72.8	7.9	660	27.8	"
1542	72.1	7.8	663	41.7	"

Did well dewater? Yes (No)		Gallons actually evacuated: 41.7	
Sampling Time: 1545		Sampling Date: 7-11-05	
Sample I.D.: MW-3		Laboratory: Pace (Sequoia) Other_____	
Analyzed for: (GRO) BTEX (MTBE) DRO		Other: See Scope	
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 > 11102 > HistoricalBL

State or Lead Regulatory Agency: California Regional Water Quality Control Board - San Fr

Requested Due Date (mm/dd/yy): 10 Day TAT

On-site Time: 1345	Temp: 82
Off-site Time:	Temp:
Sky Conditions: clear	
Meteorological Events:	
Wind Speed: @	Direction:

Lab Name: Sequoia	BP/AR Facility No.: 11102	Consultant/Contractor: URS
Address: 885 Jarvis Drive	BP/AR Facility Address: 100 MacArthur Blvd., Oakland, CA 94610	Address: 1333 Broadway, Suite 800
Morgan Hill, CA 95037	Site Lat/Long: 37.819113 / -122.253	Oakland, CA 94612
Lab PM: Lisa Race	California Global ID No.: T0600100908	Consultant/Contractor Project No.: 38487119
Tele/Fax: 408.782.8156 / 408.782.6308	Enfos Project No.: G07T9-0020	Consultant/Contractor PM: Lynelle Onishi
BP/AR PM Contact: Kyle Christie	Provision or RCOP: Provision	Tele/Fax: 510.874.1758 / 510.874.3268
Address: 4 Centerpointe Dr.	Phase/WBS: 04 - Mon/Remed by Natural Attenuation	Report Type & QC Level: Level 1 with EDF
La Palma, CA 90623	Sub Phase/Task: 03 - Analytical	E-mail EDD To: Donna_Cosper@urscorp.com
Tele/Fax: (714) 670-5303 / (714) 670-5195	Cost Element: 05 - Subcontracted Costs	Invoice to: Atlantic Richfield Company

Lab Bottle Order No: 11102

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: GRO / BTEX (8260)	Requested Analysis: MTBE, TAME, ETBE, DIPE, TBA (8260)	Requested Analysis: EDB, 1,2-DCA (8260)	Requested Analysis: Ethanol (8260)	Sample Point Lat/Long and Comments
1	MW-1	1520	7/1/05		W			3				X		X	X	X	X	
2	MW-2	1545	7/1/05		W			3				X		X	X	X	X	
3	MW-3	1010	7/1/05		W			3				X		X	X	X	X	
4	TB-11102-07112005																	on MW-3
5																		
6																		
7																		
8																		
9																		
10																		

Sampler's Name: Paul Monroe	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Blaine Tech	Paul Monroe	7/1/05	5:49	Patti Tippee / Sample Custodian	7/1/05	1749
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:

11102

Station #

100 Macarthur

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

120

added equip. rinse water 10

any other adjustments _____

TOTAL GALS. RECOVERED 130

loaded onto BTS vehicle # 22

BTS event # 050711-PM2

time _____ date __/__/__

signature Paul Manuel

* *

REC'D AT _____ time _____ date __/__/__

unloaded by signature _____

ATTACHMENT F

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY RECORDS

Sequoia
Analytical

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

27 July, 2005

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

RE: BP Heritage #11102, Oakland, CA
Work Order: MOG0331

Enclosed are the results of analyses for samples received by the laboratory on 07/12/05 16:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kekobad

Jamshid Kekobad
Project Manager

CA ELAP Certificate #1210

Sequoia Analytical

1885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
www.sequoialabs.com

URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0331
1333 Broadway, Suite 800	Project Number:G07T9-0020	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	07/27/05 14:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MOG0331-01	Water	07/11/05 15:20	07/12/05 16:50
MW-2	MOG0331-02	Water	07/11/05 15:45	07/12/05 16:50
MW-3	MOG0331-03	Water	07/11/05 16:10	07/12/05 16:50
TB1112007112005	MOG0331-04	Water	07/11/05 00:00	07/12/05 16:50

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

These samples were received with no custody seals.

Sequoia Analytical

1885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
www.sequoialabs.com

URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0331
1333 Broadway, Suite 800	Project Number:G07T9-0020	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	07/27/05 14:56

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MOG0331-01) Water Sampled: 07/11/05 15:20 Received: 07/12/05 16:50									
tert-Amyl methyl ether	ND	0.50	ug/l	1	5G21013	07/21/05	07/22/05	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	**550**	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	**36**	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	**180**	50	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*60-135*		"	"	"	"	
MW-2 (MOG0331-02) Water Sampled: 07/11/05 15:45 Received: 07/12/05 16:50									
tert-Amyl methyl ether	**99**	50	ug/l	100	5G21013	07/21/05	07/22/05	EPA 8260B	
Benzene	ND	50	"	"	"	"	"	"	
tert-Butyl alcohol	**9000**	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	ND	50	"	"	"	"	"	"	
Methyl tert-butyl ether	**5300**	50	"	"	"	"	"	"	
Toluene	ND	50	"	"	"	"	"	"	
Xylenes (total)	ND	50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	5000	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*98 %*	*60-135*		"	"	"	"	

Sequoia Analytical

1885 Jarvis Drive
Morgan Hill, CA 95037
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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0331
1333 Broadway, Suite 800	Project Number:G07T9-0020	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	07/27/05 14:56

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (MOG0331-03) Water Sampled: 07/11/05 16:10 Received: 07/12/05 16:50									
tert-Amyl methyl ether	**1.4**	1.0	ug/l	2	5G21012	07/21/05	07/21/05	EPA 8260B	
Benzene	ND	1.0	"	"	"	"	"	"	
tert-Butyl alcohol	ND	40	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
Ethanol	ND	200	"	"	"	"	"	"	IC
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**120**	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	**130**	100	"	"	"	"	"	"	PV
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*60-135*		"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0331
1333 Broadway, Suite 800	Project Number:G07T9-0020	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	07/27/05 14:56

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G21012 - EPA 5030B P/T / EPA 8260B										
Blank (5G21012-BLK1)				Prepared & Analyzed: 07/21/05						
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	"							IC
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	*5.77*		"	*5.00*		*115*	*60-135*			
Blank (5G21012-BLK2)				Prepared & Analyzed: 07/21/05						
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	*5.57*		"	*5.00*		*111*	*60-135*			

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1333 Broadway, Suite 800	Project Number:G07T9-0020	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	07/27/05 14:56

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G21012 - EPA 5030B P/T / EPA 8260B										
Laboratory Control Sample (5G21012-BS1)				Prepared & Analyzed: 07/21/05						
tert-Amyl methyl ether	10.5	0.50	ug/l	10.0		105	80-115			
Benzene	9.50	0.50	"	10.0		95	65-115			
tert-Butyl alcohol	49.6	20	"	50.0		99	75-150			
Di-isopropyl ether	9.02	0.50	"	10.0		90	75-125			
1,2-Dibromoethane (EDB)	8.42	0.50	"	10.0		84	85-120			HM
1,2-Dichloroethane	9.44	0.50	"	10.0		94	85-130			
Ethanol	124	100	"	200		62	70-135			IC, HM
Ethyl tert-butyl ether	9.08	0.50	"	10.0		91	75-130			
Ethylbenzene	8.57	0.50	"	10.0		86	75-135			
Methyl tert-butyl ether	9.74	0.50	"	10.0		97	65-125			
Toluene	8.66	0.50	"	10.0		87	85-120			
Xylenes (total)	27.6	0.50	"	30.0		92	85-125			
Surrogate: 1,2-Dichloroethane-d4	*5.44*		"	*5.00*		*109*	*60-135*			
Laboratory Control Sample (5G21012-BS2)				Prepared & Analyzed: 07/21/05						
Benzene	5.17	0.50	ug/l	6.08		85	65-115			
Ethylbenzene	6.92	0.50	"	7.84		88	75-135			
Methyl tert-butyl ether	7.97	0.50	"	9.60		83	65-125			
Toluene	32.3	0.50	"	32.9		98	85-120			
Xylenes (total)	39.0	0.50	"	38.5		101	85-125			
Gasoline Range Organics (C4-C12)	448	50	"	440		102	70-124			
Surrogate: 1,2-Dichloroethane-d4	*5.29*		"	*5.00*		*106*	*60-135*			
Matrix Spike (5G21012-MS1)	**Source: MOG0291-02**			Prepared & Analyzed: 07/21/05						
Benzene	58.8	5.0	ug/l	60.8	6.0	87	65-115			
Ethylbenzene	98.1	5.0	"	78.4	25	93	75-135			
Methyl tert-butyl ether	283	5.0	"	96.0	190	97	65-125			
Toluene	340	5.0	"	329	ND	103	85-120			
Xylenes (total)	391	5.0	"	385	ND	102	85-125			
Gasoline Range Organics (C4-C12)	5550	500	"	4400	500	115	70-124			
Surrogate: 1,2-Dichloroethane-d4	*6.01*		"	*5.00*		*120*	*60-135*			

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0331
1333 Broadway, Suite 800	Project Number:G07T9-0020	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	07/27/05 14:56

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G21012 - EPA 5030B P/T / EPA 8260B										
Matrix Spike Dup (5G21012-MSD1)	**Source: MOG0291-02**			Prepared & Analyzed: 07/21/05						
Benzene	56.0	5.0	ug/l	60.8	6.0	82	65-115	5	20	
Ethylbenzene	91.5	5.0	"	78.4	25	85	75-135	7	15	
Methyl tert-butyl ether	281	5.0	"	96.0	190	95	65-125	0.7	20	
Toluene	322	5.0	"	329	ND	98	85-120	5	20	
Xylenes (total)	364	5.0	"	385	ND	95	85-125	7	20	
Gasoline Range Organics (C4-C12)	5040	500	"	4400	500	103	70-124	10	20	
Surrogate: 1,2-Dichloroethane-d4	*6.04*		"	*5.00*		*121*	*60-135*			
Batch 5G21013 - EPA 5030B P/T / EPA 8260B										
Blank (5G21013-BLK1)				Prepared & Analyzed: 07/21/05						
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	"							
Surrogate: 1,2-Dichloroethane-d4	*2.40*		"	*2.50*		*96*	*60-135*			
Blank (5G21013-BLK2)				Prepared: 07/21/05 Analyzed: 07/22/05						
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	"							

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0331
1333 Broadway, Suite 800	Project Number:G07T9-0020	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	07/27/05 14:56

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G21013 - EPA 5030B P/T / EPA 8260B										
Blank (5G21013-BLK2)				Prepared: 07/21/05 Analyzed: 07/22/05						
Toluene	ND	0.50	ug/l							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C4-C12)	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	*2.40*		"	*2.50*		*96*	*60-135*			
Laboratory Control Sample (5G21013-BS1)				Prepared & Analyzed: 07/21/05						
tert-Amyl methyl ether	10.3	0.50	ug/l	10.0		103	80-115			
Benzene	10.0	0.50	"	10.0		100	65-115			
tert-Butyl alcohol	54.5	20	"	50.0		109	75-150			
Di-isopropyl ether	9.96	0.50	"	10.0		100	75-125			
1,2-Dibromoethane (EDB)	10.3	0.50	"	10.0		103	85-120			
1,2-Dichloroethane	9.53	0.50	"	10.0		95	85-130			
Ethanol	197	100	"	200		98	70-135			
Ethyl tert-butyl ether	9.78	0.50	"	10.0		98	75-130			
Ethylbenzene	11.0	0.50	"	10.0		110	75-135			
Methyl tert-butyl ether	8.79	0.50	"	10.0		88	65-125			
Toluene	10.1	0.50	"	10.0		101	85-120			
Xylenes (total)	33.9	0.50	"	30.0		113	85-125			
Surrogate: 1,2-Dichloroethane-d4	*2.33*		"	*2.50*		*93*	*60-135*			
Laboratory Control Sample (5G21013-BS2)				Prepared & Analyzed: 07/21/05						
Benzene	5.46	0.50	ug/l	6.08		90	65-115			
Ethylbenzene	8.32	0.50	"	7.84		106	75-135			
Methyl tert-butyl ether	8.11	0.50	"	9.60		84	65-125			
Toluene	33.3	0.50	"	32.9		101	85-120			
Xylenes (total)	41.5	0.50	"	38.5		108	85-125			
Gasoline Range Organics (C4-C12)	388	50	"	440		88	70-124			
Surrogate: 1,2-Dichloroethane-d4	*2.40*		"	*2.50*		*96*	*60-135*			

Sequoia Analytical

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0331
1333 Broadway, Suite 800	Project Number:G07T9-0020	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	07/27/05 14:56

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G21013 - EPA 5030B P/T / EPA 8260B										
Laboratory Control Sample Dup (5G21013-BSD1)				Prepared & Analyzed: 07/21/05						
tert-Amyl methyl ether	10.9	0.50	ug/l	10.0		109	80-115	6	15	
Benzene	10.9	0.50	"	10.0		109	65-115	9	20	
tert-Butyl alcohol	52.7	20	"	50.0		105	75-150	3	25	
Di-isopropyl ether	10.4	0.50	"	10.0		104	75-125	4	15	
1,2-Dibromoethane (EDB)	10.9	0.50	"	10.0		109	85-120	6	15	
1,2-Dichloroethane	10.4	0.50	"	10.0		104	85-130	9	20	
Ethanol	172	100	"	200		86	70-135	14	35	
Ethyl tert-butyl ether	10.4	0.50	"	10.0		104	75-130	6	25	
Ethylbenzene	11.8	0.50	"	10.0		118	75-135	7	15	
Methyl tert-butyl ether	9.28	0.50	"	10.0		93	65-125	5	20	
Toluene	11.0	0.50	"	10.0		110	85-120	9	20	
Xylenes (total)	36.1	0.50	"	30.0		120	85-125	6	20	
Surrogate: 1,2-Dichloroethane-d4	*2.47*		*"*	*2.50*		*99*	*60-135*			
Matrix Spike (5G21013-MS1)	**Source: MOG0331-02**			Prepared: 07/21/05		Analyzed: 07/22/05				
Benzene	537	50	ug/l	608	ND	88	65-115			
Ethylbenzene	831	50	"	784	ND	106	75-135			
Methyl tert-butyl ether	6060	50	"	960	5300	79	65-125			
Toluene	3250	50	"	3290	ND	99	85-120			
Xylenes (total)	4120	50	"	3850	ND	107	85-125			
Gasoline Range Organics (C4-C12)	42000	5000	"	44000	4200	86	70-124			
Surrogate: 1,2-Dichloroethane-d4	*2.37*		*"*	*2.50*		*95*	*60-135*			
Matrix Spike Dup (5G21013-MSD1)	**Source: MOG0331-02**			Prepared: 07/21/05		Analyzed: 07/22/05				
Benzene	569	50	ug/l	608	ND	94	65-115	6	20	
Ethylbenzene	862	50	"	784	ND	110	75-135	4	15	
Methyl tert-butyl ether	5990	50	"	960	5300	72	65-125	1	20	
Toluene	3430	50	"	3290	ND	104	85-120	5	20	
Xylenes (total)	4310	50	"	3850	ND	112	85-125	5	20	
Gasoline Range Organics (C4-C12)	41900	5000	"	44000	4200	86	70-124	0.2	20	
Surrogate: 1,2-Dichloroethane-d4	*2.37*		*"*	*2.50*		*95*	*60-135*			

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0331
1333 Broadway, Suite 800	Project Number:G07T9-0020	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	07/27/05 14:56

Notes and Definitions

PV	Hydrocarbon result partly due to individ. peak(s) in quant. range
IC	Calib. verif. is within method limits but outside contract limits
HM	Analyte recovery below established limit
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 > 11102 > HistoricalBL
State or Lead Regulatory Agency: California Regional Water Quality Control Board - San Fr
Requested Due Date (mm/dd/yy): 10 Day TAT

On-site Time: 1345	Temp: 82
Off-site Time:	Temp:
Sky Conditions: clear	
Meteorological Events:	
Wind Speed: ø	Direction:

Lab Name: Sequoia	BP/AR Facility No.: 11102	Consultant/Contractor: URS
Address: 885 Jarvis Drive Morgan Hill, CA 95037	BP/AR Facility Address: 100 MacArthur Blvd., Oakland, CA 94610	Address: 1333 Broadway, Suite 800 Oakland, CA 94612
Lab PM: Lisa Race	Site Lat/Long: 37.819113 / -122.253	Consultant/Contractor Project No.: 38487119
Tele/Fax: 408.782.8156 / 408.782.6308	California Global ID No.: T0600100908	Consultant/Contractor PM: Lynelle Onishi
BP/AR PM Contact: Kyle Christie	Enfos Project No.: G07T9-0020	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 EDF
Tele/Fax: (714) 670-5303 / (714) 670-5195	Phase/WBS: 04 - Mon/Remed by Natural Attenuation	E-mail EDD To: Donna_Cosper@urscorp.com
Lab Bottle Order No: 11102	Sub Phase/Task: 03 - Analytical	Invoice to: Atlantic Richfield Company
	Cost Element: 05 - Subcontracted Costs	MOG0331

Item No.	Sample Description	Time	Date	Soil/Solid	Water/Liquid	Air	Laboratory No.	No. of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		GRO / BTEX (8260)	MTBE, TAME, ETBE DIPE, TBA (8260)	EDB, 1,2-DCA (8260)	Ethanol (8260)							Sample Point Lat/Long and Comments
1	MW-1	1520	7/11/05		W		01	3				X			X	X	X	X							
2	MW-2	1545	7/11/05		W		02	3				X			X	X	X	X							
3	MW-3	1610	7/11/05		W		03	3				X			X	X	X	X							
4	TB11102071120055	—	—		W		04	2																	on HOLD
5																									
6																									
7																									
8																									
9																									
10																									

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Paul Monroe	[signature]	7/11/05	5:49	[signature] / Sample Custodian	7/11/05	1749
Sampler's Company: Blainetech	[signature] Sample Custodian	7/12/05	1345	[signature]	7/12/05	1345
Shipment Date:	[signature]	7/12/05	14:50	[signature]	7/12/05	16:50
Shipment Method:						
Shipment Tracking No:						

Special Instructions:

Custody Seals In Place Yes X No — Temp Blank Yes X No — Cooler Temperature on Receipt 5.6 °F/C — Trip Blank Yes X No

Distribution: White Copy - Laboratory / Yellow Copy - BP/Atlantic Richfield Co. / Pink Copy - Consultant/Contractor

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: BP
REC. BY (PRINT): Phuc Pham
WORKORDER: MOG0331

DATE REC'D AT LAB: 7/12/05
TIME REC'D AT LAB: 16:30
DATE LOGGED IN: 7-13-05

For Regulatory Purposes?
DRINKING WATER YES / NO
WASTE WATER YES / NO
(For clients requiring preservation checks at receipt, document here ⬇)

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) Present / Absent Intact / Broken*	01	A-C	MW-1	VOA-3	HCl		W	7/11/05	
	02		2						
2. Chain-of-Custody Present / Absent*	03		3						
3. Traffic Reports or Packing List: Present / Absent	04	AB	TB111200711@05	VOA-2					
4. Airbill: Airbill / Sticker Present / Absent									
5. Airbill #:									
6. Sample Labels: Present / Absent									
7. Sample IDs: Listed / Not Listed on Chain-of-Custody									
8. Sample Condition: Intact / Broken* / Leaking*									
9. Does information on chain-of-custody, traffic reports and sample labels agree? Yes / No*									
10. Sample received within hold time? Yes / No*			P.P. 7/12/05						
11. Adequate sample volume received? Yes / No*									
12. Proper Preservatives used? Yes / No*									
13. Trip Blank / Temp Blank Received? (circle which, if yes) Yes / No*									
14. Temp Rec. at Lab: 5.6°C Is temp 4 +/-2°C? Yes / No*									
(Acceptance range for samples requiring thermal pres.) **									
**Exception (if any): METALS / OFF ON ICE or Problem COC									

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

Sequoia
Analytical

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3 August, 2005

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

RE: BP Heritage #11102, Oakland, CA
Work Order: MOG0344

Enclosed are the results of analyses for samples received by the laboratory on 07/13/05 18:36. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race
Senior Project Manager

CA ELAP Certificate #1210

Sequoia Analytical

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0344
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-6 5-5.5'	MOG0344-01	Soil	07/13/05 09:15	07/13/05 18:36
SB-6 8.5-9'	MOG0344-02	Soil	07/13/05 09:41	07/13/05 18:36
SB-6 19.5-20'	MOG0344-03	Soil	07/13/05 09:48	07/13/05 18:36
SB-6 27.5-28'	MOG0344-04	Soil	07/13/05 10:31	07/13/05 18:36
SB-6 16.5-17'	MOG0344-05	Soil	07/13/05 10:30	07/13/05 18:36
SB-6 14.5-15'	MOG0344-06	Soil	07/13/05 09:29	07/13/05 18:36
SB-6 9.5-10'	MOG0344-07	Soil	07/13/05 09:24	07/13/05 18:36
SB-8 5-5.5'	MOG0344-08	Soil	07/13/05 12:40	07/13/05 18:36
SB-8 7-7.5'	MOG0344-09	Soil	07/13/05 13:00	07/13/05 18:36
SB-8 11-11.5'	MOG0344-10	Soil	07/13/05 13:30	07/13/05 18:36
SB-8 9.5-10'	MOG0344-11	Soil	07/13/05 12:50	07/13/05 18:36
SB-8 14.5-15'	MOG0344-12	Soil	07/13/05 12:55	07/13/05 18:36
SB-8 17.5-18'	MOG0344-13	Soil	07/13/05 14:00	07/13/05 18:36
SB-8 19.5-20'	MOG0344-14	Soil	07/13/05 14:05	07/13/05 18:36
SB-8 20.5-21'	MOG0344-15	Soil	07/13/05 13:15	07/13/05 18:36
Trip Blank	MOG0344-16	Water	07/13/05 16:15	07/13/05 18:36

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

These samples were received with no custody seals.

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1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

Total Metals by EPA 6000/7000 Series Methods

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-6 9.5-10' (MOG0344-07) Soil	**Sampled: 07/13/05 09:24**	**Received: 07/13/05 18:36**							
Lead	**5.2**	5.0	mg/kg	1	5H01022	08/01/05	08/02/05	EPA 6010B	

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1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-6 5-5.5' (MOG0344-01) Soil Sampled: 07/13/05 09:15 Received: 07/13/05 18:36									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	5G14003	07/14/05	07/14/05	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	"	"	"	"	"	"	
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		*81 %*	*60-125*		"	"	"	"	
SB-6 8.5-9' (MOG0344-02) Soil Sampled: 07/13/05 09:41 Received: 07/13/05 18:36									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	5G14003	07/14/05	07/14/05	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	"	"	"	"	"	"	
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		*76 %*	*60-125*		"	"	"	"	

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1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-6 19.5-20' (MOG0344-03) Soil	**Sampled: 07/13/05 09:48**	**Received: 07/13/05 18:36**							
tert-Amyl methyl ether	ND	0.025	mg/kg	5	5G15003	07/15/05	07/15/05	EPA 8260B	
Benzene	ND	0.025	"	"	"	"	"	"	
tert-Butyl alcohol	**0.13**	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.025	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.025	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.025	"	"	"	"	"	"	
Ethanol	ND	0.50	"	"	"	"	"	"	LQ, IC
Ethyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
Ethylbenzene	ND	0.025	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.15**	0.025	"	"	"	"	"	"	
Toluene	ND	0.025	"	"	"	"	"	"	
Xylenes (total)	ND	0.025	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.50	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*108 %*	*60-125*		"	"	"	"	
SB-6 27.5-28' (MOG0344-04) Soil	**Sampled: 07/13/05 10:31**	**Received: 07/13/05 18:36**							
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	5G14003	07/14/05	07/14/05	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	"	"	"	"	"	"	
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		*78 %*	*60-125*		"	"	"	"	

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1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-6 16.5-17' (MOG0344-05) Soil	**Sampled: 07/13/05 10:30**	**Received: 07/13/05 18:36**							
tert-Amyl methyl ether	ND	0.0049	mg/kg	0.98	5G15003	07/15/05	07/15/05	EPA 8260B	
Benzene	ND	0.0049	"	"	"	"	"	"	
tert-Butyl alcohol	ND	0.020	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0049	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0049	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0049	"	"	"	"	"	"	
Ethanol	ND	0.098	"	"	"	"	"	"	IC, LQ
Ethyl tert-butyl ether	ND	0.0049	"	"	"	"	"	"	
Ethylbenzene	ND	0.0049	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0049	"	"	"	"	"	"	
Toluene	ND	0.0049	"	"	"	"	"	"	
Xylenes (total)	**0.0054**	0.0049	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.098	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*105 %*	*60-125*		"	"	"	"	
SB-6 14.5-15' (MOG0344-06) Soil	**Sampled: 07/13/05 09:29**	**Received: 07/13/05 18:36**							
tert-Amyl methyl ether	ND	0.0048	mg/kg	0.97	5G14003	07/14/05	07/14/05	EPA 8260B	
Benzene	ND	0.0048	"	"	"	"	"	"	
tert-Butyl alcohol	ND	0.019	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0048	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0048	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0048	"	"	"	"	"	"	
Ethanol	ND	0.097	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0048	"	"	"	"	"	"	
Ethylbenzene	ND	0.0048	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0048	"	"	"	"	"	"	
Toluene	ND	0.0048	"	"	"	"	"	"	
Xylenes (total)	**0.0082**	0.0048	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.097	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*92 %*	*60-125*		"	"	"	"	

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1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-6 9.5-10' (MOG0344-07) Soil Sampled: 07/13/05 09:24 Received: 07/13/05 18:36									
tert-Amyl methyl ether	ND	0.0048	mg/kg	0.95	5G25003	07/25/05	07/25/05	EPA 8260B	
Benzene	ND	0.0048	"	"	"	"	"	"	
tert-Butyl alcohol	ND	0.019	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0048	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0048	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0048	"	"	"	"	"	"	
Ethanol	ND	0.095	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0048	"	"	"	"	"	"	
Ethylbenzene	ND	0.0048	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.0055**	0.0048	"	"	"	"	"	"	
Toluene	ND	0.0048	"	"	"	"	"	"	
Xylenes (total)	ND	0.0048	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	**0.14**	0.095	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*60-125*		"	"	"	"	
SB-8 5-5.5' (MOG0344-08) Soil Sampled: 07/13/05 12:40 Received: 07/13/05 18:36									
tert-Amyl methyl ether	ND	0.0050	mg/kg	0.99	5G15003	07/15/05	07/15/05	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	"	"	"	"	"	"	IC, LQ
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.099	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*93 %*	*60-125*		"	"	"	"	

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1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-8 7-7.5' (MOG0344-09) Soil Sampled: 07/13/05 13:00 Received: 07/13/05 18:36									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	5G15003	07/15/05	07/15/05	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	"	"	"	"	"	"	IC, LQ
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.10	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*60-125*		"	"	"	"	
SB-8 11-11.5' (MOG0344-10) Soil Sampled: 07/13/05 13:30 Received: 07/13/05 18:36									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	5G15003	07/15/05	07/15/05	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	"	"	"	"	"	"	IC, LQ
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.10	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*60-125*		"	"	"	"	

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1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-8 9.5-10' (MOG0344-11) Soil Sampled: 07/13/05 12:50 Received: 07/13/05 18:36									
tert-Amyl methyl ether	ND	0.0050	mg/kg	0.99	5G15003	07/15/05	07/15/05	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	"	"	"	"	"	"	IC, LQ
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.099	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*97 %*	*60-125*		"	"	"	"	
SB-8 14.5-15' (MOG0344-12) Soil Sampled: 07/13/05 12:55 Received: 07/13/05 18:36									
tert-Amyl methyl ether	ND	0.0050	mg/kg	0.99	5G15003	07/15/05	07/15/05	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	"	"	"	"	"	"	IC, LQ
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.099	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*95 %*	*60-125*		"	"	"	"	

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1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-8 17.5-18' (MOG0344-13) Soil	**Sampled: 07/13/05 14:00**	**Received: 07/13/05 18:36**							
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	5G15003	07/15/05	07/15/05	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	"	"	"	"	"	"	IC, LQ
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.10	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*99 %*	*60-125*		"	"	"	"	
SB-8 19.5-20' (MOG0344-14) Soil	**Sampled: 07/13/05 14:05**	**Received: 07/13/05 18:36**							
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	5G15003	07/15/05	07/15/05	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	"	"	"	"	"	"	IC, LQ
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.066**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.10	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*60-125*		"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0344
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-8 20.5-21' (MOG0344-15) Soil Sampled: 07/13/05 13:15 Received: 07/13/05 18:36									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	5G25003	07/25/05	07/25/05	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	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.022**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.10	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*97 %*		*60-125*	"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0344
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

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
Batch 5H01022 - EPA 3050B / EPA 6010B										
Blank (5H01022-BLK1)				Prepared: 08/01/05 Analyzed: 08/02/05						
Lead	ND	5.0	mg/kg							
Laboratory Control Sample (5H01022-BS1)				Prepared: 08/01/05 Analyzed: 08/02/05						
Lead	49.3	5.0	mg/kg	50.0		99	75-120			
Matrix Spike (5H01022-MS1)	**Source: MOG1012-01**			Prepared: 08/01/05 Analyzed: 08/02/05						
Lead	59.7	5.0	mg/kg	50.0	14	91	75-120			
Matrix Spike Dup (5H01022-MSD1)	**Source: MOG1012-01**			Prepared: 08/01/05 Analyzed: 08/02/05						
Lead	58.6	5.0	mg/kg	50.0	14	89	75-120	2	20	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0344
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G14003 - EPA 5030B P/T / EPA 8260B										
Blank (5G14003-BLK1)				Prepared & Analyzed: 07/14/05						
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	"							
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	*0.00424*		"	*0.00500*		*85*	*60-125*			
Laboratory Control Sample (5G14003-BS1)				Prepared & Analyzed: 07/14/05						
tert-Amyl methyl ether	0.0109	0.0050	mg/kg	0.0100		109	80-130			
Benzene	0.00982	0.0050	"	0.0100		98	65-125			
tert-Butyl alcohol	0.0491	0.020	"	0.0500		98	80-165			
Di-isopropyl ether	0.0104	0.0050	"	0.0100		104	85-115			
1,2-Dibromoethane (EDB)	0.0108	0.0050	"	0.0100		108	85-130			
1,2-Dichloroethane	0.0122	0.0050	"	0.0100		122	63-124			
Ethanol	0.220	0.10	"	0.200		110	35-150			
Ethyl tert-butyl ether	0.0105	0.0050	"	0.0100		105	80-125			
Ethylbenzene	0.0116	0.0050	"	0.0100		116	80-135			
Methyl tert-butyl ether	0.0111	0.0050	"	0.0100		111	75-115			
Toluene	0.0113	0.0050	"	0.0100		113	85-125			
Xylenes (total)	0.0356	0.0050	"	0.0300		119	80-140			
Surrogate: 1,2-Dichloroethane-d4	*0.00497*		"	*0.00500*		*99*	*60-125*			

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0344
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G14003 - EPA 5030B P/T / EPA 8260B										
Laboratory Control Sample (5G14003-BS2)				Prepared & Analyzed: 07/14/05						
Benzene	0.00482	0.0050	mg/kg	0.00608		79	65-125			
Ethylbenzene	0.00829	0.0050	"	0.00784		106	80-135			
Methyl tert-butyl ether	0.00874	0.0050	"	0.00960		91	75-115			
Toluene	0.0325	0.0050	"	0.0329		99	85-125			
Xylenes (total)	0.0405	0.0050	"	0.0385		105	80-140			
Gasoline Range Organics (C4-C12)	0.378	0.10	"	0.440		86	53-126			
Surrogate: 1,2-Dichloroethane-d4	*0.00487*		"	*0.00500*		*97*	*60-125*			
Laboratory Control Sample Dup (5G14003-BSD1)				Prepared & Analyzed: 07/14/05						
tert-Amyl methyl ether	0.0110	0.0050	mg/kg	0.0100		110	80-130	0.9	25	
Benzene	0.0102	0.0050	"	0.0100		102	65-125	4	20	
tert-Butyl alcohol	0.0498	0.020	"	0.0500		100	80-165	1	25	
Di-isopropyl ether	0.0107	0.0050	"	0.0100		107	85-115	3	20	
1,2-Dibromoethane (EDB)	0.0108	0.0050	"	0.0100		108	85-130	0	15	
1,2-Dichloroethane	0.0125	0.0050	"	0.0100		125	63-124	2	25	LQ
Ethanol	0.215	0.10	"	0.200		108	35-150	2	40	
Ethyl tert-butyl ether	0.0108	0.0050	"	0.0100		108	80-125	3	25	
Ethylbenzene	0.0117	0.0050	"	0.0100		117	80-135	0.9	20	
Methyl tert-butyl ether	0.0116	0.0050	"	0.0100		116	75-115	4	35	LQ
Toluene	0.0106	0.0050	"	0.0100		106	85-125	6	15	
Xylenes (total)	0.0357	0.0050	"	0.0300		119	80-140	0.3	20	
Surrogate: 1,2-Dichloroethane-d4	*0.00504*		"	*0.00500*		*101*	*60-125*			
Laboratory Control Sample Dup (5G14003-BSD2)				Prepared & Analyzed: 07/14/05						
Benzene	0.00535	0.0050	mg/kg	0.00608		88	65-125	10	20	
Ethylbenzene	0.00876	0.0050	"	0.00784		112	80-135	6	20	
Methyl tert-butyl ether	0.00868	0.0050	"	0.00960		90	75-115	0.7	35	
Toluene	0.0319	0.0050	"	0.0329		97	85-125	2	15	
Xylenes (total)	0.0426	0.0050	"	0.0385		111	80-140	5	20	
Gasoline Range Organics (C4-C12)	0.387	0.10	"	0.440		88	53-126	2	25	
Surrogate: 1,2-Dichloroethane-d4	*0.00413*		"	*0.00500*		*83*	*60-125*			

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0344
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G15003 - EPA 5030B P/T / EPA 8260B										
Blank (5G15003-BLK1)				Prepared & Analyzed: 07/15/05						
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	"							IC
Ethyl tert-butyl ether	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Methyl tert-butyl ether	ND	0.0050	"							
Toluene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Organics (C4-C12)	ND	0.10	"							
Surrogate: 1,2-Dichloroethane-d4	*0.00439*		"	*0.00500*		*88*	*60-125*			
Laboratory Control Sample (5G15003-BS1)				Prepared & Analyzed: 07/15/05						
tert-Amyl methyl ether	0.0106	0.0050	mg/kg	0.0100		106	80-130			
Benzene	0.0100	0.0050	"	0.0100		100	65-125			
tert-Butyl alcohol	0.0489	0.020	"	0.0500		98	80-165			
Di-isopropyl ether	0.0102	0.0050	"	0.0100		102	85-115			
1,2-Dibromoethane (EDB)	0.0105	0.0050	"	0.0100		105	85-130			
1,2-Dichloroethane	0.0110	0.0050	"	0.0100		110	63-124			
Ethanol	0.353	0.10	"	0.200		176	35-150			IC
Ethyl tert-butyl ether	0.0103	0.0050	"	0.0100		103	80-125			
Ethylbenzene	0.0116	0.0050	"	0.0100		116	80-135			
Methyl tert-butyl ether	0.0101	0.0050	"	0.0100		101	75-115			
Toluene	0.0113	0.0050	"	0.0100		113	85-125			
Xylenes (total)	0.0364	0.0050	"	0.0300		121	80-140			
Surrogate: 1,2-Dichloroethane-d4	*0.00450*		"	*0.00500*		*90*	*60-125*			

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0344
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G15003 - EPA 5030B P/T / EPA 8260B										
Laboratory Control Sample (5G15003-BS2)				Prepared & Analyzed: 07/15/05						
Benzene	0.00514	0.0050	mg/kg	0.00608		85	65-125			
Ethylbenzene	0.00852	0.0050	"	0.00784		109	80-135			
Methyl tert-butyl ether	0.00974	0.0050	"	0.00960		101	75-115			
Toluene	0.0339	0.0050	"	0.0329		103	85-125			
Xylenes (total)	0.0413	0.0050	"	0.0385		107	80-140			
Gasoline Range Organics (C4-C12)	0.395	0.10	"	0.440		90	53-126			
Surrogate: 1,2-Dichloroethane-d4	*0.00520*		"	*0.00500*		*104*	*60-125*			
Laboratory Control Sample Dup (5G15003-BSD1)				Prepared & Analyzed: 07/15/05						
tert-Amyl methyl ether	0.0104	0.0050	mg/kg	0.0100		104	80-130	2	25	
Benzene	0.00995	0.0050	"	0.0100		100	65-125	0.5	20	
tert-Butyl alcohol	0.0488	0.020	"	0.0500		98	80-165	0.2	25	
Di-isopropyl ether	0.0102	0.0050	"	0.0100		102	85-115	0	20	
1,2-Dibromoethane (EDB)	0.0104	0.0050	"	0.0100		104	85-130	1	15	
1,2-Dichloroethane	0.0112	0.0050	"	0.0100		112	63-124	2	25	
Ethanol	0.267	0.10	"	0.200		134	35-150	28	40	IC
Ethyl tert-butyl ether	0.0101	0.0050	"	0.0100		101	80-125	2	25	
Ethylbenzene	0.0113	0.0050	"	0.0100		113	80-135	3	20	
Methyl tert-butyl ether	0.0101	0.0050	"	0.0100		101	75-115	0	35	
Toluene	0.0116	0.0050	"	0.0100		116	85-125	3	15	
Xylenes (total)	0.0344	0.0050	"	0.0300		115	80-140	6	20	
Surrogate: 1,2-Dichloroethane-d4	*0.00464*		"	*0.00500*		*93*	*60-125*			
Matrix Spike (5G15003-MS1)	**Source: MOG0344-08**			Prepared & Analyzed: 07/15/05						
Benzene	0.00499	0.0050	mg/kg	0.00608	ND	82	65-125			
Ethylbenzene	0.00692	0.0050	"	0.00784	ND	88	80-135			
Methyl tert-butyl ether	0.00947	0.0050	"	0.00960	ND	99	75-115			
Toluene	0.0282	0.0050	"	0.0329	0.00022	85	85-125			
Xylenes (total)	0.0329	0.0050	"	0.0385	ND	85	80-140			
Gasoline Range Organics (C4-C12)	0.215	0.10	"	0.440	0.041	40	53-126			LN
Surrogate: 1,2-Dichloroethane-d4	*0.00497*		"	*0.00500*		*99*	*60-125*			

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0344
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G15003 - EPA 5030B P/T / EPA 8260B										
Matrix Spike Dup (5G15003-MSD1)	**Source: MOG0344-08**			Prepared & Analyzed: 07/15/05						
Benzene	0.00505	0.0050	mg/kg	0.00608	ND	83	65-125	1	20	
Ethylbenzene	0.00732	0.0050	"	0.00784	ND	93	80-135	6	20	
Methyl tert-butyl ether	0.00977	0.0050	"	0.00960	ND	102	75-115	3	35	
Toluene	0.0303	0.0050	"	0.0329	0.00022	91	85-125	7	15	
Xylenes (total)	0.0348	0.0050	"	0.0385	ND	90	80-140	6	20	
Gasoline Range Organics (C4-C12)	0.230	0.10	"	0.440	0.041	43	53-126	7	25	LN
Surrogate: 1,2-Dichloroethane-d4	*0.00510*		*"*	*0.00500*		*102*	*60-125*			
Batch 5G25003 - EPA 5030B P/T / EPA 8260B										
Blank (5G25003-BLK1)				Prepared & Analyzed: 07/25/05						
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	"							
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	*0.00525*		*"*	*0.00500*		*105*	*60-125*			
Blank (5G25003-BLK2)				Prepared: 07/25/05 Analyzed: 07/26/05						
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	"							
Ethylbenzene	ND	0.0050	"							
Methyl tert-butyl ether	ND	0.0050	"							

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0344
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G25003 - EPA 5030B P/T / EPA 8260B										
Blank (5G25003-BLK2)				Prepared: 07/25/05 Analyzed: 07/26/05						
Toluene	ND	0.0050	mg/kg							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Organics (C4-C12)	ND	0.10	"							
Surrogate: 1,2-Dichloroethane-d4	*0.00484*		"	*0.00500*		*97*	*60-125*			
Laboratory Control Sample (5G25003-BS1)				Prepared & Analyzed: 07/25/05						
tert-Amyl methyl ether	0.00993	0.0050	mg/kg	0.0100		99	80-130			
Benzene	0.0100	0.0050	"	0.0100		100	65-125			
tert-Butyl alcohol	0.0587	0.020	"	0.0500		117	80-165			
Di-isopropyl ether	0.0106	0.0050	"	0.0100		106	85-115			
1,2-Dibromoethane (EDB)	0.0103	0.0050	"	0.0100		103	85-130			
1,2-Dichloroethane	0.00965	0.0050	"	0.0100		97	63-124			
Ethanol	0.188	0.10	"	0.200		94	35-150			
Ethyl tert-butyl ether	0.00961	0.0050	"	0.0100		96	80-125			
Ethylbenzene	0.0107	0.0050	"	0.0100		107	80-135			
Methyl tert-butyl ether	0.00893	0.0050	"	0.0100		89	75-115			
Toluene	0.0108	0.0050	"	0.0100		108	85-125			
Xylenes (total)	0.0341	0.0050	"	0.0300		114	80-140			
Surrogate: 1,2-Dichloroethane-d4	*0.00426*		"	*0.00500*		*85*	*60-125*			
Laboratory Control Sample (5G25003-BS2)				Prepared & Analyzed: 07/25/05						
Benzene	0.00538	0.0050	mg/kg	0.00608		88	65-125			
Ethylbenzene	0.00771	0.0050	"	0.00784		98	80-135			
Methyl tert-butyl ether	0.00857	0.0050	"	0.00960		89	75-115			
Toluene	0.0342	0.0050	"	0.0329		104	85-125			
Xylenes (total)	0.0382	0.0050	"	0.0385		99	80-140			
Gasoline Range Organics (C4-C12)	0.443	0.10	"	0.440		101	53-126			
Surrogate: 1,2-Dichloroethane-d4	*0.00501*		"	*0.00500*		*100*	*60-125*			

Sequoia Analytical

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0344
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G25003 - EPA 5030B P/T / EPA 8260B										
Laboratory Control Sample Dup (5G25003-BSD1)				Prepared: 07/25/05 Analyzed: 07/26/05						
tert-Amyl methyl ether	0.00952	0.0050	mg/kg	0.0100		95	80-130	4	25	
Benzene	0.00988	0.0050	"	0.0100		99	65-125	1	20	
tert-Butyl alcohol	0.0577	0.020	"	0.0500		115	80-165	2	25	
Di-isopropyl ether	0.0102	0.0050	"	0.0100		102	85-115	4	20	
1,2-Dibromoethane (EDB)	0.0103	0.0050	"	0.0100		103	85-130	0	15	
1,2-Dichloroethane	0.00862	0.0050	"	0.0100		86	63-124	11	25	
Ethanol	0.211	0.10	"	0.200		106	35-150	12	40	
Ethyl tert-butyl ether	0.00926	0.0050	"	0.0100		93	80-125	4	25	
Ethylbenzene	0.0101	0.0050	"	0.0100		101	80-135	6	20	
Methyl tert-butyl ether	0.00836	0.0050	"	0.0100		84	75-115	7	35	
Toluene	0.0102	0.0050	"	0.0100		102	85-125	6	15	
Xylenes (total)	0.0323	0.0050	"	0.0300		108	80-140	5	20	
Surrogate: 1,2-Dichloroethane-d4	*0.00386*		"	*0.00500*		*77*	*60-125*			
Laboratory Control Sample Dup (5G25003-BSD2)				Prepared: 07/25/05 Analyzed: 07/26/05						
Benzene	0.00532	0.0050	mg/kg	0.00608		88	65-125	1	20	
Ethylbenzene	0.00778	0.0050	"	0.00784		99	80-135	0.9	20	
Methyl tert-butyl ether	0.00749	0.0050	"	0.00960		78	75-115	13	35	
Toluene	0.0338	0.0050	"	0.0329		103	85-125	1	15	
Xylenes (total)	0.0391	0.0050	"	0.0385		102	80-140	2	20	
Gasoline Range Organics (C4-C12)	0.421	0.10	"	0.440		96	53-126	5	25	
Surrogate: 1,2-Dichloroethane-d4	*0.00404*		"	*0.00500*		*81*	*60-125*			
Matrix Spike (5G25003-MS1)	**Source: MOG0491-01**			Prepared & Analyzed: 07/25/05						
Benzene	0.00495	0.0050	mg/kg	0.00608	0.0013	60	65-125			LN
Ethylbenzene	0.00520	0.0050	"	0.00784	0.00031	62	80-135			LN
Methyl tert-butyl ether	0.0586	0.0050	"	0.00960	0.069	NR	75-115			LN
Toluene	0.0281	0.0050	"	0.0329	0.0090	58	85-125			LN
Xylenes (total)	0.0251	0.0050	"	0.0385	0.0010	63	80-140			LN
Gasoline Range Organics (C4-C12)	0.282	0.10	"	0.440	0.10	41	53-126			LN
Surrogate: 1,2-Dichloroethane-d4	*0.00521*		"	*0.00500*		*104*	*60-125*			

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0344
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G25003 - EPA 5030B P/T / EPA 8260B										
Matrix Spike Dup (5G25003-MSD1)	**Source: MOG0491-01**			Prepared & Analyzed: 07/25/05						
Benzene	0.00482	0.0050	mg/kg	0.00608	0.0013	58	65-125	3	20	LN
Ethylbenzene	0.00487	0.0050	"	0.00784	0.00031	58	80-135	7	20	LN
Methyl tert-butyl ether	0.0513	0.0050	"	0.00960	0.069	NR	75-115	13	35	LN
Toluene	0.0274	0.0050	"	0.0329	0.0090	56	85-125	3	15	LN
Xylenes (total)	0.0236	0.0050	"	0.0385	0.0010	59	80-140	6	20	LN
Gasoline Range Organics (C4-C12)	0.262	0.10	"	0.440	0.10	37	53-126	7	25	LN
Surrogate: 1,2-Dichloroethane-d4	*0.00513*		"	*0.00500*		*103*	*60-125*			

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0344
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/03/05 12:10

Notes and Definitions

LQ	LCS recovery above method control limits.
LN	MS and/or MSD below acceptance limits. See Blank Spike(LCS).
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

*Please fax copy of received COC to Lynelle Onishi at 510-874-3268

Chain of Custody Record

Project Name: Former BP Site 11102 Soil/Groundwater Investigation
BP BU/AR Region/Enfos Segment: BP/Americas/WestCoast/Retail/WCBU/CA/Cent
State or Lead Regulatory Agency: Alameda County Environmental Health
Requested Due Date (mm/dd/yy): Standard TAT

On-site Time:	8:00am	Temp:	56°F
Off-site Time:	5:00pm	Temp:	84°F
Sky Conditions:	clear		
Meteorological Events:	none		
Wind Speed:	5-10mph	Direction:	west

Lab Name:	Sequoia Analytical	BP/AR Facility No.:	11102	Consultant/Contractor:	URS
Address:	885 Jarvis Drive	BP/AR Facility Address:	100 MacArthur Ave, Oakland, CA	Address:	1333 Broadway, Suite 800
	Morgan Hill, CA 95037	Site Lat/Long:			Oakland, CA 94612
Lab PM:	Lisa Race	California Global ID No.:	-------	Consultant/Contractor Project No.:	38487349
Tele/Fax:	408-782-8156/408-782-6308	Enfos Project No.:	G07T9-0024	Consultant/Contractor PM:	Lynelle Onishi
BP/AR PM Contact:	Kyle Christie	Provision ~~or RCOP~~ (circle one)	~~RCOP~~ Provision	Tele/Fax:	510-874-1758/510-874-3268
Address: 4 Centerpointe Dr.		Phase/WBS:	01- Assessment	Report Type & QC Level:	Level 1 & EDF
La Palma, CA		Sub Phase/Task:	03 - Analytical	E-mail EDD To:	lynelle_onishi@urscorp.com
Tele/Fax: 714-670-5303/714-6705195		Cost Element:	05 - Subcontracted Costs	Invoice to:	BP West Coast Global Alliance

Lab Bottle Order No: MOG0344

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		GRO (8260)	BTEX (8260)	Fuel Add. (8260): MTBE, 1,2-DCA, EDB, TBA, TAME,	DIPE, ETBE	Ethanol (8260)	Total Lead				Sample Point Lat/Long and Comments
1	SB-6 5-5.5'	9:15	7/13/05	X			01	1	X						X	X	X	X	X	X				*see special instructions below
2	SB-6 8.5-9'	9:41	↓	↓			02	1	↓						↓	↓	↓	↓	↓	↓				
3	SB-6 19.5-20'	9:48	↓	↓			03	1	↓						↓	↓	↓	↓	↓	↓				
4	SB-6 27.5-28'	10:31	↓	↓			04	1	↓						↓	↓	↓	↓	↓	↓				
5	SB-6 16.5-17'	10:30	↓	↓			05	1	↓						↓	↓	↓	↓	↓	↓				
6	SB-6 14.5-15'	9:29	↓	↓			06	1	↓						↓	↓	↓	↓	↓	↓				
7	SB-6 9.5-10'	9:24	↓	↓			07	1	↓						↓	↓	↓	↓	↓	↓				
8	SB-8 5-5.5'	12:40	↓	↓			08	1	↓						↓	↓	↓	↓	↓	↓				
9	SB-8 7-7.5'	13:00	↓	↓			09	1	↓						↓	↓	↓	↓	↓	↓				
10	SB-8 11-11.5'	13:30	↓	↓			10	1	↓						↓	↓	↓	↓	↓	↓				

		Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name:	John McCain	[signature] - URS	7/13/05	16:15	[signature] #1010	7/13	4:12
Sampler's Company:	URS	[signature]	7/13	18:3[illegible]	[signature]	7/13	1834
Shipment Date:	7/13/05						
Shipment Method:	Courier						
Shipment Tracking No:							

Special Instructions: Analyze soil sample with highest GRO concentration for Total Lead (Pb).
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 18.2 °F/C Trip Blank Yes ✓ No ✓ [illegible]

Distribution: White Copy - Laboratory / Yellow Copy - BP/Atlantic Richfield Co. / Pink Copy - Consultant/Contractor

BP COC Rev. 4 10/1/04

Please fax copy of received COC to Lynelle Onishi at 510-874-3268

bp

Chain of Custody Record

Project Name: Former BP Site 11102 Soil/Groundwater Investigation
BP BU/AR Region/Enfos Segment: BP/Americas/WestCoast/Retail/WCBU/CA/Cent
State or Lead Regulatory Agency: Alameda County Environmental Health
Requested Due Date (mm/dd/yy): Standard TAT

On-site Time:	8:00am	Temp:	56°F
Off-site Time:	5:00pm	Temp:	84°F
Sky Conditions:	clear		
Meteorological Events:	none		
Wind Speed:	5-10mph	Direction:	west

Lab Name:	Sequoia Analytical	BP/AR Facility No.:	11102	Consultant/Contractor:	URS
Address:	885 Jarvis Drive	BP/AR Facility Address:	100 MacArthur Ave, Oakland, CA	Address:	1333 Broadway, Suite 800
	Morgan Hill, CA 95037	Site Lat/Long:			Oakland, CA 94612
Lab PM:	Lisa Race	California Global ID No.:	------	Consultant/Contractor Project No.:	38487349
Tele/Fax:	408-782-8156/408-782-6308	Enfos Project No.:	G07T9-0024	Consultant/Contractor PM:	Lynelle Onishi
BP/AR PM Contact:	Kyle Christie	Provision or ~~RCOP~~ (circle one)	~~RCOP~~ Provision	Tele/Fax:	510-874-1758/510-874-3268
Address: 4 Centerpointe Dr.		Phase/WBS:	01- Assessment	Report Type & QC Level:	Level 1 & EDF
La Palma, CA		Sub Phase/Task:	03 - Analytical	E-mail EDD To:	lynelle_onishi@urscorp.com
Tele/Fax: 714-670-5303/714-6705195		Cost Element:	05 - Subcontracted Costs	Invoice to: BP West Coast Global Alliance	

Lab Bottle Order No:

MOG0344

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Water/Liquid	Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analysis: GRO (8260)	BTEX (8260)	Fuel Add. (8260): MTBE, 1,2-DCA, EDB, TBA, TAME, DIPE, ETBE			Ethanol (8260)	Total Lead				Sample Point Lat/Long and Comments
11	SB-8 9.5-10'	12:50	7/13/05	X			11	1	X					X	X	X	X	X	X	X				*See Special
12	SB-8 14.5-15'	12:55	↓	↓			12	1	↓					↓	↓	↓	↓	↓	↓	↓				Instructions
13	SB-8 17.5-18'	14:00	↓	↓			13	1	↓					↓	↓	↓	↓	↓	↓	↓				below
14	SB-8 19.5-20'	14:05	↓	↓			14	1	↓					↓	↓	↓	↓	↓	↓	↓				
15	SB-8 20.5-21'	13:15	↓	↓			15	1	↓					↓	↓	↓	↓	↓	↓	↓				
16	~~Lab blank~~ Temp blank	16:15	7/13/05		X			1				X												Hold
17	Trip blank	16:15	7/13/05		X		16	2	X															Hold
18																								
19																								
20																								

		Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name:	John McCain	[signature] - URS	7/13/05	16:15	[signature] #2010	7/13	4:2[illegible]
Sampler's Company:	URS	[signature]	7/13	1830	[signature]	7/13/05	18:30
Shipment Date:	7-13-05						
Shipment Method:	courier						
Shipment Tracking No:							

Special Instructions: Analyze soil sample with highest GRO concentration for Total Lead (Pb).
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 18.2 °F/C Trip Blank Yes ✓ No

Distribution: White Copy - Laboratory / Yellow Copy - BP/Atlantic Richfield Co. / Pink Copy - Consultant/Contractor

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: URS
REC. BY (PRINT): Erica
WORKORDER: 405063454

DATE REC'D AT LAB: 7/13/05
TIME REC'D AT LAB: 18:26
DATE LOGGED IN: 7-14-05

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

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

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) Present / Absent; Intact / Broken*	01	1	SB-6 5-5.5'	plastic core	—	—	S	7/13/05	
2. Chain-of-Custody Present / Absent*	02		SB-6 8.5-9'						
3. Traffic Reports or Packing List: Present / Absent	03		SB-6 19.5-20'						
4. Airbill: Airbill / Sticker Present / Absent	04		SB-6 27.5-28'						
5. Airbill #:	05		SB-6 16.5-17'						
6. Sample Labels: Present / Absent	06		SB-6 14.5-15'						
7. Sample IDs: Listed / Not Listed on Chain-of-Custody	07		SB-6 9.5-10'						
8. Sample Condition: Intact / Broken* / Leaking*	08		SB-8 5-5.5'						
	09		SB-8 7-7.5'						
	10		SB-8 11-11.5'						
	11		SB-8 9.5-10'						
	12		SB-8 14.5-15'						
	13		SB-8 17.5-18'						
	14		SB-8 19.5-20'						
	15		SB-8 20.5-21'						
9. Does information on chain-of-custody, traffic reports and sample labels agree? Yes / No*	16	1	temp blank	40ml VOA-1	HCl	↓	L	↓	
10. Sample received within hold time? Yes / No*	17	F,B	trip blank	40ml VOA-2	↓	↓	↓	↓	
11. Adequate sample volume received? Yes / No*									
12. Proper Preservatives used? Yes / No*									
13. Trip Blank / Temp Blank Received? (circle which, if yes) Yes / No*									
14. Temp Rec. at Lab: 20.4°C; Is temp 4 +/-2°C? Yes / No**									

(Acceptance range for samples requiring thermal pres.)
**Exception (if any): METALS / DFF ON ICE or Problem COC

BCF 7/13/05

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

SRL Revision 6
Replaces Rev 5 (06/07/04)
Effective 07/13/04

Sequoia Analytical

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4 August, 2005

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

RE: BP Heritage #11102, Oakland, CA
Work Order: MOG0378

Enclosed are the results of analyses for samples received by the laboratory on 07/14/05 19:07. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jamshid Kekobad
Project Manager

CA ELAP Certificate #1210

Sequoia Analytical

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-4 (5-5.5')	MOG0378-01	Soil	07/14/05 07:40	07/14/05 19:07
SB-4 (9.5-10')	MOG0378-02	Soil	07/14/05 07:50	07/14/05 19:07
SB-4 (14.5-15')	MOG0378-03	Soil	07/14/05 07:52	07/14/05 19:07
SB-4 (19.5-20')	MOG0378-04	Soil	07/14/05 08:05	07/14/05 19:07
SB-4 (20-20.5')	MOG0378-05	Soil	07/14/05 08:15	07/14/05 19:07
SB-4 (25-25.5')	MOG0378-06	Soil	07/14/05 08:25	07/14/05 19:07
SB-4 (29-29.5')	MOG0378-07	Soil	07/14/05 08:45	07/14/05 19:07
Lab Blank	MOG0378-08	Water	07/14/05 14:55	07/14/05 19:07
SB-7 (2-2.5')	MOG0378-09	Soil	07/14/05 12:20	07/14/05 19:07
SB-7 (5-5.5')	MOG0378-10	Soil	07/14/05 12:35	07/14/05 19:07
SB-7 (9.5-10')	MOG0378-11	Soil	07/14/05 12:45	07/14/05 19:07
SB-7 (14.5-15')	MOG0378-12	Soil	07/14/05 12:52	07/14/05 19:07
SB-7 (19.5-20')	MOG0378-13	Soil	07/14/05 12:57	07/14/05 19:07
SB-7 (25.5-26')	MOG0378-14	Soil	07/14/05 13:05	07/14/05 19:07
SB-7 (28.5-29')	MOG0378-15	Soil	07/14/05 13:25	07/14/05 19:07
SB-7 (30.5-31')	MOG0378-16	Soil	07/14/05 13:20	07/14/05 19:07
SB-5 (5-5.5')	MOG0378-17	Soil	07/14/05 10:02	07/14/05 19:07
SB-5 (9.5-10')	MOG0378-18	Soil	07/14/05 10:10	07/14/05 19:07
SB-5 (14.5-15')	MOG0378-19	Soil	07/14/05 10:16	07/14/05 19:07
SB-5 (19.5-20')	MOG0378-20	Soil	07/14/05 10:20	07/14/05 19:07
SB-5 (29-29.5)	MOG0378-21	Soil	07/14/05 10:50	07/14/05 19:07

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

These samples were received with no custody seals.

Sequoia Analytical

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

Total Metals by EPA 6000/7000 Series Methods

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-7 (2-2.5') (MOG0378-09) Soil	**Sampled: 07/14/05 12:20**	**Received: 07/14/05 19:07**							
Lead	**15**	5.0	mg/kg	1	5H01022	08/01/05	08/02/05	EPA 6010B	

Sequoia Analytical

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-4 (5-5.5') (MOG0378-01) Soil Sampled: 07/14/05 07:40 Received: 07/14/05 19:07									
tert-Amyl methyl ether	ND	5.0	ug/kg	1	5G23006	07/23/05	07/23/05	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	100	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*113 %*	*60-125*		"	"	"	"	
SB-4 (9.5-10') (MOG0378-02) Soil Sampled: 07/14/05 07:50 Received: 07/14/05 19:07									
tert-Amyl methyl ether	ND	25	ug/kg	5	5G23006	07/23/05	07/24/05	EPA 8260B	
Benzene	ND	25	"	"	"	"	"	"	
tert-Butyl alcohol	ND	100	"	"	"	"	"	"	
Di-isopropyl ether	ND	25	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	25	"	"	"	"	"	"	
1,2-Dichloroethane	ND	25	"	"	"	"	"	"	
Ethanol	ND	500	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	25	"	"	"	"	"	"	
Ethylbenzene	ND	25	"	"	"	"	"	"	
Methyl tert-butyl ether	**370**	25	"	"	"	"	"	"	
Toluene	ND	25	"	"	"	"	"	"	
Xylenes (total)	ND	25	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	500	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*60-125*		"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-4 (14.5-15') (MOG0378-03) Soil	**Sampled: 07/14/05 07:52 Received: 07/14/05 19:07**								
tert-Amyl methyl ether	ND	0.025	mg/kg	1	5G23010	07/23/05	07/24/05	EPA 8260B	
Benzene	ND	0.050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.025	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.025	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.025	"	"	"	"	"	"	
Ethanol	ND	10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	"	
Methyl tert-butyl ether	**1.1**	0.025	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Xylenes (total)	ND	0.050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	**3.5**	2.5	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*92 %*	*60-125*		"	"	"	"	
SB-4 (19.5-20') (MOG0378-04) Soil	**Sampled: 07/14/05 08:05 Received: 07/14/05 19:07**								
tert-Amyl methyl ether	ND	0.025	mg/kg	1	5G23010	07/23/05	07/24/05	EPA 8260B	
Benzene	ND	0.050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.025	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.025	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.025	"	"	"	"	"	"	
Ethanol	ND	10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	"	
Methyl tert-butyl ether	**2.4**	0.025	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Xylenes (total)	ND	0.050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	**3.8**	2.5	"	"	"	"	"	"	PV
Surrogate: 1,2-Dichloroethane-d4		*93 %*	*60-125*		"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-4 (20-20.5') (MOG0378-05) Soil	**Sampled: 07/14/05 08:15**		**Received: 07/14/05 19:07**						
tert-Amyl methyl ether	ND	0.12	mg/kg	5	5G23010	07/23/05	07/24/05	EPA 8260B	
Benzene	ND	0.25	"	"	"	"	"	"	
tert-Butyl alcohol	ND	25	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.12	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.12	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.12	"	"	"	"	"	"	
Ethanol	ND	50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.12	"	"	"	"	"	"	
Ethylbenzene	ND	0.25	"	"	"	"	"	"	
Methyl tert-butyl ether	**3.4**	0.12	"	"	"	"	"	"	
Toluene	ND	0.25	"	"	"	"	"	"	
Xylenes (total)	ND	0.25	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	12	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*95 %*	*60-125*		"	"	"	"	
SB-4 (25-25.5') (MOG0378-06) Soil	**Sampled: 07/14/05 08:25**		**Received: 07/14/05 19:07**						
tert-Amyl methyl ether	ND	0.25	mg/kg	10	5G23010	07/23/05	07/24/05	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.25	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.25	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.25	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.25	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**3.5**	0.25	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	25	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*97 %*	*60-125*		"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-4 (29-29.5') (MOG0378-07) Soil Sampled: 07/14/05 08:45 Received: 07/14/05 19:07									
tert-Amyl methyl ether	ND	0.25	mg/kg	10	5G23010	07/23/05	07/24/05	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.25	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.25	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.25	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.25	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**3.7**	0.25	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	25	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*92 %*	*60-125*		"	"	"	"	
SB-7 (2-2.5') (MOG0378-09) Soil Sampled: 07/14/05 12:20 Received: 07/14/05 19:07									
tert-Amyl methyl ether	ND	0.50	mg/kg	20	5G27015	07/27/05	07/28/05	EPA 8260B	
Benzene	ND	1.0	"	"	"	"	"	"	
tert-Butyl alcohol	ND	100	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	200	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	**3.0**	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	**3.0**	1.0	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	**1300**	50	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*60-125*		"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-7 (5-5.5') (MOG0378-10) Soil	**Sampled: 07/14/05 12:35**		**Received: 07/14/05 19:07**						
tert-Amyl methyl ether	ND	0.50	mg/kg	20	5G27015	07/27/05	07/28/05	EPA 8260B	
Benzene	ND	1.0	"	"	"	"	"	"	
tert-Butyl alcohol	ND	100	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	200	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	**2.4**	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	**3.9**	1.0	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	**730**	50	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*95 %*	*60-125*		"	"	"	"	
SB-7 (9.5-10') (MOG0378-11) Soil	**Sampled: 07/14/05 12:45**		**Received: 07/14/05 19:07**						
tert-Amyl methyl ether	ND	1.2	mg/kg	50	5G27015	07/27/05	07/28/05	EPA 8260B	
Benzene	ND	2.5	"	"	"	"	"	"	
tert-Butyl alcohol	ND	250	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.2	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.2	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.2	"	"	"	"	"	"	
Ethanol	ND	500	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.2	"	"	"	"	"	"	
Ethylbenzene	ND	2.5	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.2	"	"	"	"	"	"	
Toluene	ND	2.5	"	"	"	"	"	"	
Xylenes (total)	ND	2.5	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	**340**	120	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*96 %*	*60-125*		"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-7 (14.5-15') (MOG0378-12) Soil	**Sampled: 07/14/05 12:52 Received: 07/14/05 19:07**								
tert-Amyl methyl ether	ND	5.0	ug/kg	0.99	5G23006	07/23/05	07/24/05	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethanol	ND	99	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	**110**	99	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*105 %*	*60-125*		"	"	"	"	
SB-7 (19.5-20') (MOG0378-13) Soil	**Sampled: 07/14/05 12:57 Received: 07/14/05 19:07**								
tert-Amyl methyl ether	ND	5.0	ug/kg	0.99	5G23006	07/23/05	07/24/05	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethanol	ND	99	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	99	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*60-125*		"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-7 (25.5-26') (MOG0378-14) Soil	**Sampled: 07/14/05 13:05**	**Received: 07/14/05 19:07**							
tert-Amyl methyl ether	ND	5.0	ug/kg	0.99	5G23006	07/23/05	07/24/05	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethanol	ND	99	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	99	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*60-125*		"	"	"	"	
SB-7 (28.5-29') (MOG0378-15) Soil	**Sampled: 07/14/05 13:25**	**Received: 07/14/05 19:07**							
tert-Amyl methyl ether	ND	5.0	ug/kg	1.01	5G23006	07/23/05	07/24/05	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	100	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*118 %*	*60-125*		"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-7 (30.5-31') (MOG0378-16) Soil	**Sampled: 07/14/05 13:20**	**Received: 07/14/05 19:07**							
tert-Amyl methyl ether	ND	5.0	ug/kg	1.01	5G25003	07/25/05	07/25/05	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	100	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*85 %*	*60-125*		"	"	"	"	
SB-5 (5-5.5') (MOG0378-17) Soil	**Sampled: 07/14/05 10:02**	**Received: 07/14/05 19:07**							
tert-Amyl methyl ether	ND	5.0	ug/kg	0.99	5G25003	07/25/05	07/25/05	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethanol	ND	99	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	99	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*85 %*	*60-125*		"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-5 (9.5-10') (MOG0378-18) Soil Sampled: 07/14/05 10:10 Received: 07/14/05 19:07									
tert-Amyl methyl ether	ND	5.0	ug/kg	1	5G25003	07/25/05	07/25/05	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	**150**	100	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*82 %*	*60-125*		"	"	"	"	
SB-5 (14.5-15') (MOG0378-19) Soil Sampled: 07/14/05 10:16 Received: 07/14/05 19:07									
tert-Amyl methyl ether	ND	5.0	ug/kg	1	5G25003	07/25/05	07/25/05	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	**250**	100	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*97 %*	*60-125*		"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-5 (19.5-20') (MOG0378-20) Soil	**Sampled: 07/14/05 10:20**		**Received: 07/14/05 19:07**						
tert-Amyl methyl ether	ND	0.025	mg/kg	1	5G27015	07/27/05	07/28/05	EPA 8260B	
Benzene	ND	0.050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.025	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.025	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.025	"	"	"	"	"	"	
Ethanol	ND	10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
Ethylbenzene	**0.14**	0.050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Xylenes (total)	ND	0.050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	**61**	2.5	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*98 %*	*60-125*		"	"	"	"	
SB-5 (29-29.5) (MOG0378-21) Soil	**Sampled: 07/14/05 10:50**		**Received: 07/14/05 19:07**						
tert-Amyl methyl ether	ND	5.0	ug/kg	1	5G25003	07/25/05	07/25/05	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
tert-Butyl alcohol	**53**	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**65**	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	**100**	100	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*93 %*	*60-125*		"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

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
Batch 5H01022 - EPA 3050B / EPA 6010B										
Blank (5H01022-BLK1)				Prepared: 08/01/05 Analyzed: 08/02/05						
Lead	ND	5.0	mg/kg							
Laboratory Control Sample (5H01022-BS1)				Prepared: 08/01/05 Analyzed: 08/02/05						
Lead	49.3	5.0	mg/kg	50.0		99	75-120			
Matrix Spike (5H01022-MS1)	**Source: MOG1012-01**			Prepared: 08/01/05 Analyzed: 08/02/05						
Lead	59.7	5.0	mg/kg	50.0	14	91	75-120			
Matrix Spike Dup (5H01022-MSD1)	**Source: MOG1012-01**			Prepared: 08/01/05 Analyzed: 08/02/05						
Lead	58.6	5.0	mg/kg	50.0	14	89	75-120	2	20	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G23006 - EPA 5030B P/T / EPA 8260B										
Blank (5G23006-BLK1)				Prepared & Analyzed: 07/23/05						
tert-Amyl methyl ether	ND	5.0	ug/kg							
Benzene	ND	5.0	"							
tert-Butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	5.0	"							
1,2-Dibromoethane (EDB)	ND	5.0	"							
1,2-Dichloroethane	ND	5.0	"							
Ethanol	ND	100	"							
Ethyl tert-butyl ether	ND	5.0	"							
Ethylbenzene	ND	5.0	"							
Methyl tert-butyl ether	ND	5.0	"							
Toluene	ND	5.0	"							
Xylenes (total)	ND	5.0	"							
Gasoline Range Organics (C4-C12)	ND	100	"							
Surrogate: 1,2-Dichloroethane-d4	*5.50*		"	*5.00*		*110*	*60-125*			
Blank (5G23006-BLK2)				Prepared & Analyzed: 07/23/05						
tert-Amyl methyl ether	ND	5.0	ug/kg							
Benzene	ND	5.0	"							
tert-Butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	5.0	"							
1,2-Dibromoethane (EDB)	ND	5.0	"							
1,2-Dichloroethane	ND	5.0	"							
Ethanol	ND	100	"							
Ethyl tert-butyl ether	ND	5.0	"							
Ethylbenzene	ND	5.0	"							
Methyl tert-butyl ether	ND	5.0	"							
Toluene	ND	5.0	"							
Xylenes (total)	ND	5.0	"							
Gasoline Range Organics (C4-C12)	ND	100	"							
Surrogate: 1,2-Dichloroethane-d4	*5.65*		"	*5.00*		*113*	*60-125*			

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1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G23006 - EPA 5030B P/T / EPA 8260B										
Laboratory Control Sample (5G23006-BS1)				Prepared & Analyzed: 07/23/05						
tert-Amyl methyl ether	10.2	5.0	ug/kg	10.0		102	80-130			
Benzene	10.1	5.0	"	10.0		101	65-125			
tert-Butyl alcohol	53.4	20	"	50.0		107	80-165			
Di-isopropyl ether	10.7	5.0	"	10.0		107	85-115			
1,2-Dibromoethane (EDB)	10.7	5.0	"	10.0		107	85-130			
1,2-Dichloroethane	11.9	5.0	"	10.0		119	63-124			
Ethanol	187	100	"	200		94	35-150			
Ethyl tert-butyl ether	9.90	5.0	"	10.0		99	80-125			
Ethylbenzene	10.7	5.0	"	10.0		107	80-135			
Methyl tert-butyl ether	10.2	5.0	"	10.0		102	75-115			
Toluene	10.8	5.0	"	10.0		108	85-125			
Xylenes (total)	33.3	5.0	"	30.0		111	80-140			
Surrogate: 1,2-Dichloroethane-d4	*5.23*		"	*5.00*		*105*	*60-125*			
Laboratory Control Sample (5G23006-BS2)				Prepared & Analyzed: 07/23/05						
Benzene	5.58	5.0	ug/kg	6.08		92	65-125			
Ethylbenzene	7.88	5.0	"	7.84		101	80-135			
Methyl tert-butyl ether	9.78	5.0	"	9.60		102	75-115			
Toluene	33.2	5.0	"	32.9		101	85-125			
Xylenes (total)	39.1	5.0	"	38.5		102	80-140			
Gasoline Range Organics (C4-C12)	415	100	"	440		94	53-126			
Surrogate: 1,2-Dichloroethane-d4	*5.74*		"	*5.00*		*115*	*60-125*			
Laboratory Control Sample Dup (5G23006-BSD1)				Prepared & Analyzed: 07/23/05						
tert-Amyl methyl ether	9.86	5.0	ug/kg	10.0		99	80-130	3	25	
Benzene	10.1	5.0	"	10.0		101	65-125	0	20	
tert-Butyl alcohol	53.1	20	"	50.0		106	80-165	0.6	25	
Di-isopropyl ether	10.8	5.0	"	10.0		108	85-115	0.9	20	
1,2-Dibromoethane (EDB)	11.0	5.0	"	10.0		110	85-130	3	15	
1,2-Dichloroethane	12.0	5.0	"	10.0		120	63-124	0.8	25	
Ethanol	203	100	"	200		102	35-150	8	40	
Ethyl tert-butyl ether	9.94	5.0	"	10.0		99	80-125	0.4	25	
Ethylbenzene	10.2	5.0	"	10.0		102	80-135	5	20	
Methyl tert-butyl ether	10.1	5.0	"	10.0		101	75-115	1	35	
Toluene	9.54	5.0	"	10.0		95	85-125	12	15	
Xylenes (total)	32.6	5.0	"	30.0		109	80-140	2	20	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G23006 - EPA 5030B P/T / EPA 8260B										
Laboratory Control Sample Dup (5G23006-BSD1)				Prepared & Analyzed: 07/23/05						
Surrogate: 1,2-Dichloroethane-d4	*5.23*		*ug/kg*	*5.00*		*105*	*60-125*			
Matrix Spike (5G23006-MS1)	**Source: MOG0378-01**			Prepared: 07/23/05 Analyzed: 07/24/05						
Benzene	5.44	5.0	ug/kg	6.08	ND	89	65-125			
Ethylbenzene	7.10	5.0	"	7.84	ND	91	80-135			
Methyl tert-butyl ether	12.7	5.0	"	9.60	3.1	100	75-115			
Toluene	32.1	5.0	"	32.9	0.41	96	85-125			
Xylenes (total)	35.8	5.0	"	38.5	ND	93	80-140			
Gasoline Range Organics (C4-C12)	392	100	"	440	ND	89	53-126			
Surrogate: 1,2-Dichloroethane-d4	*5.74*		"	*5.00*		*115*	*60-125*			
Matrix Spike Dup (5G23006-MSD1)	**Source: MOG0378-01**			Prepared: 07/23/05 Analyzed: 07/24/05						
Benzene	5.07	5.0	ug/kg	6.08	ND	83	65-125	7	20	
Ethylbenzene	6.74	5.0	"	7.84	ND	86	80-135	5	20	
Methyl tert-butyl ether	11.3	5.0	"	9.60	3.1	85	75-115	12	35	
Toluene	30.0	5.0	"	32.9	0.41	90	85-125	7	15	
Xylenes (total)	33.7	5.0	"	38.5	ND	88	80-140	6	20	
Gasoline Range Organics (C4-C12)	353	100	"	440	ND	80	53-126	10	25	
Surrogate: 1,2-Dichloroethane-d4	*5.71*		"	*5.00*		*114*	*60-125*			
Batch 5G23010 - EPA 5030B/5035A MeOH / EPA 8260B										
Blank (5G23010-BLK1)				Prepared: 07/23/05 Analyzed: 07/24/05						
tert-Amyl methyl ether	ND	0.025	mg/kg							
Benzene	ND	0.050	"							
tert-Butyl alcohol	ND	5.0	"							
Di-isopropyl ether	ND	0.025	"							
1,2-Dibromoethane (EDB)	ND	0.025	"							
1,2-Dichloroethane	ND	0.025	"							
Ethanol	ND	10	"							
Ethyl tert-butyl ether	ND	0.025	"							
Ethylbenzene	ND	0.050	"							
Methyl tert-butyl ether	ND	0.025	"							
Toluene	ND	0.050	"							
Xylenes (total)	ND	0.050	"							
Gasoline Range Organics (C4-C12)	ND	2.5	"							
Surrogate: 1,2-Dichloroethane-d4	*0.00468*		"	*0.00500*		*94*	*60-125*			

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1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G23010 - EPA 5030B/5035A MeOH / EPA 8260B										
Laboratory Control Sample (5G23010-BS1)				Prepared: 07/23/05 Analyzed: 07/24/05						
tert-Amyl methyl ether	0.462	0.025	mg/kg	0.500		92	80-130			
Benzene	0.485	0.050	"	0.500		97	65-125			
tert-Butyl alcohol	2.65	5.0	"	2.50		106	80-165			
Di-isopropyl ether	0.499	0.025	"	0.500		100	85-115			
1,2-Dibromoethane (EDB)	0.456	0.025	"	0.500		91	85-130			
1,2-Dichloroethane	0.482	0.025	"	0.500		96	63-124			
Ethanol	12.3	10	"	10.0		123	35-150			
Ethyl tert-butyl ether	0.453	0.025	"	0.500		91	80-125			
Ethylbenzene	0.546	0.050	"	0.500		109	80-135			
Methyl tert-butyl ether	0.449	0.025	"	0.500		90	75-115			
Toluene	0.520	0.050	"	0.500		104	85-125			
Xylenes (total)	1.69	0.050	"	1.50		113	80-140			
Surrogate: 1,2-Dichloroethane-d4	*0.00494*		"	*0.00500*		*99*	*60-125*			
Laboratory Control Sample (5G23010-BS2)				Prepared: 07/23/05 Analyzed: 07/24/05						
Benzene	0.198	0.050	mg/kg	0.228		87	65-125			
Ethylbenzene	0.311	0.050	"	0.294		106	80-135			
Methyl tert-butyl ether	0.294	0.025	"	0.360		82	75-115			
Toluene	1.25	0.050	"	1.23		102	85-125			
Xylenes (total)	1.57	0.050	"	1.44		109	80-140			
Gasoline Range Organics (C4-C12)	16.9	2.5	"	16.5		102	60-140			
Surrogate: 1,2-Dichloroethane-d4	*0.00485*		"	*0.00500*		*97*	*60-125*			
Laboratory Control Sample Dup (5G23010-BSD1)				Prepared: 07/23/05 Analyzed: 07/24/05						
tert-Amyl methyl ether	0.467	0.025	mg/kg	0.500		93	80-130	1	25	
Benzene	0.480	0.050	"	0.500		96	65-125	1	20	
tert-Butyl alcohol	2.85	5.0	"	2.50		114	80-165	7	25	
Di-isopropyl ether	0.490	0.025	"	0.500		98	85-115	2	20	
1,2-Dibromoethane (EDB)	0.457	0.025	"	0.500		91	85-130	0.2	15	
1,2-Dichloroethane	0.470	0.025	"	0.500		94	63-124	3	25	
Ethanol	11.7	10	"	10.0		117	35-150	5	40	
Ethyl tert-butyl ether	0.450	0.025	"	0.500		90	80-125	0.7	25	
Ethylbenzene	0.546	0.050	"	0.500		109	80-135	0	20	
Methyl tert-butyl ether	0.446	0.025	"	0.500		89	75-115	0.7	35	
Toluene	0.510	0.050	"	0.500		102	85-125	2	15	
Xylenes (total)	1.73	0.050	"	1.50		115	80-140	2	20	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G23010 - EPA 5030B/5035A MeOH / EPA 8260B										
Laboratory Control Sample Dup (5G23010-BSD1)				Prepared: 07/23/05 Analyzed: 07/24/05						
Surrogate: 1,2-Dichloroethane-d4	*0.00470*		*mg/kg*	*0.00500*		*94*	*60-125*			
Laboratory Control Sample Dup (5G23010-BSD2)				Prepared: 07/23/05 Analyzed: 07/24/05						
Benzene	0.207	0.050	mg/kg	0.228		91	65-125	4	20	
Ethylbenzene	0.320	0.050	"	0.294		109	80-135	3	20	
Methyl tert-butyl ether	0.305	0.025	"	0.360		85	75-115	4	35	
Toluene	1.32	0.050	"	1.23		107	85-125	5	15	
Xylenes (total)	1.61	0.050	"	1.44		112	80-140	3	20	
Gasoline Range Organics (C4-C12)	17.8	2.5	"	16.5		108	60-140	5	25	
Surrogate: 1,2-Dichloroethane-d4	*0.00498*		*"*	*0.00500*		*100*	*60-125*			
Batch 5G25003 - EPA 5030B P/T / EPA 8260B										
Blank (5G25003-BLK1)				Prepared & Analyzed: 07/25/05						
tert-Amyl methyl ether	ND	5.0	ug/kg							
Benzene	ND	5.0	"							
tert-Butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	5.0	"							
1,2-Dibromoethane (EDB)	ND	5.0	"							
1,2-Dichloroethane	ND	5.0	"							
Ethanol	ND	100	"							
Ethyl tert-butyl ether	ND	5.0	"							
Ethylbenzene	ND	5.0	"							
Methyl tert-butyl ether	ND	5.0	"							
Toluene	ND	5.0	"							
Xylenes (total)	ND	5.0	"							
Gasoline Range Organics (C4-C12)	ND	100	"							
Surrogate: 1,2-Dichloroethane-d4	*5.25*		*"*	*5.00*		*105*	*60-125*			

Sequoia Analytical

1885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
www.sequoialabs.com

URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G25003 - EPA 5030B P/T / EPA 8260B										
Blank (5G25003-BLK2)				Prepared: 07/25/05 Analyzed: 07/26/05						
tert-Amyl methyl ether	ND	5.0	ug/kg							
Benzene	ND	5.0	"							
tert-Butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	5.0	"							
1,2-Dibromoethane (EDB)	ND	5.0	"							
1,2-Dichloroethane	ND	5.0	"							
Ethanol	ND	100	"							
Ethyl tert-butyl ether	ND	5.0	"							
Ethylbenzene	ND	5.0	"							
Methyl tert-butyl ether	ND	5.0	"							
Toluene	ND	5.0	"							
Xylenes (total)	ND	5.0	"							
Gasoline Range Organics (C4-C12)	ND	100	"							
Surrogate: 1,2-Dichloroethane-d4	*4.84*		"	*5.00*		*97*	*60-125*			
Laboratory Control Sample (5G25003-BS1)				Prepared & Analyzed: 07/25/05						
tert-Amyl methyl ether	9.93	5.0	ug/kg	10.0		99	80-130			
Benzene	10.0	5.0	"	10.0		100	65-125			
tert-Butyl alcohol	58.7	20	"	50.0		117	80-165			
Di-isopropyl ether	10.6	5.0	"	10.0		106	85-115			
1,2-Dibromoethane (EDB)	10.3	5.0	"	10.0		103	85-130			
1,2-Dichloroethane	9.65	5.0	"	10.0		96	63-124			
Ethanol	188	100	"	200		94	35-150			
Ethyl tert-butyl ether	9.61	5.0	"	10.0		96	80-125			
Ethylbenzene	10.7	5.0	"	10.0		107	80-135			
Methyl tert-butyl ether	8.93	5.0	"	10.0		89	75-115			
Toluene	10.8	5.0	"	10.0		108	85-125			
Xylenes (total)	34.1	5.0	"	30.0		114	80-140			
Surrogate: 1,2-Dichloroethane-d4	*4.26*		"	*5.00*		*85*	*60-125*			

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G25003 - EPA 5030B P/T / EPA 8260B										
Laboratory Control Sample (5G25003-BS2)				Prepared & Analyzed: 07/25/05						
Benzene	5.38	5.0	ug/kg	6.08		88	65-125			
Ethylbenzene	7.71	5.0	"	7.84		98	80-135			
Methyl tert-butyl ether	8.57	5.0	"	9.60		89	75-115			
Toluene	34.2	5.0	"	32.9		104	85-125			
Xylenes (total)	38.2	5.0	"	38.5		99	80-140			
Gasoline Range Organics (C4-C12)	443	100	"	440		101	53-126			
Surrogate: 1,2-Dichloroethane-d4	*5.01*		"	*5.00*		*100*	*60-125*			
Laboratory Control Sample Dup (5G25003-BSD1)				Prepared: 07/25/05 Analyzed: 07/26/05						
tert-Amyl methyl ether	9.52	5.0	ug/kg	10.0		95	80-130	4	25	
Benzene	9.88	5.0	"	10.0		99	65-125	1	20	
tert-Butyl alcohol	57.7	20	"	50.0		115	80-165	2	25	
Di-isopropyl ether	10.2	5.0	"	10.0		102	85-115	4	20	
1,2-Dibromoethane (EDB)	10.3	5.0	"	10.0		103	85-130	0	15	
1,2-Dichloroethane	8.62	5.0	"	10.0		86	63-124	11	25	
Ethanol	211	100	"	200		106	35-150	12	40	
Ethyl tert-butyl ether	9.26	5.0	"	10.0		93	80-125	4	25	
Ethylbenzene	10.1	5.0	"	10.0		101	80-135	6	20	
Methyl tert-butyl ether	8.36	5.0	"	10.0		84	75-115	7	35	
Toluene	10.2	5.0	"	10.0		102	85-125	6	15	
Xylenes (total)	32.3	5.0	"	30.0		108	80-140	5	20	
Surrogate: 1,2-Dichloroethane-d4	*3.86*		"	*5.00*		*77*	*60-125*			
Laboratory Control Sample Dup (5G25003-BSD2)				Prepared: 07/25/05 Analyzed: 07/26/05						
Benzene	5.32	5.0	ug/kg	6.08		88	65-125	1	20	
Ethylbenzene	7.78	5.0	"	7.84		99	80-135	0.9	20	
Methyl tert-butyl ether	7.49	5.0	"	9.60		78	75-115	13	35	
Toluene	33.8	5.0	"	32.9		103	85-125	1	15	
Xylenes (total)	39.1	5.0	"	38.5		102	80-140	2	20	
Gasoline Range Organics (C4-C12)	421	100	"	440		96	53-126	5	25	
Surrogate: 1,2-Dichloroethane-d4	*4.04*		"	*5.00*		*81*	*60-125*			

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G25003 - EPA 5030B P/T / EPA 8260B										
Matrix Spike (5G25003-MS1)	**Source: MOG0491-01**			Prepared & Analyzed: 07/25/05						
Benzene	4.95	5.0	ug/kg	6.08	1.3	60	65-125			LN
Ethylbenzene	5.20	5.0	"	7.84	0.31	62	80-135			LN
Methyl tert-butyl ether	58.6	5.0	"	9.60	69	NR	75-115			LN
Toluene	28.1	5.0	"	32.9	9.0	58	85-125			LN
Xylenes (total)	25.1	5.0	"	38.5	1.0	63	80-140			LN
Gasoline Range Organics (C4-C12)	282	100	"	440	100	41	53-126			LN
Surrogate: 1,2-Dichloroethane-d4	*5.21*		"	*5.00*		*104*	*60-125*			
Matrix Spike Dup (5G25003-MSD1)	**Source: MOG0491-01**			Prepared & Analyzed: 07/25/05						
Benzene	4.82	5.0	ug/kg	6.08	1.3	58	65-125	3	20	LN
Ethylbenzene	4.87	5.0	"	7.84	0.31	58	80-135	7	20	LN
Methyl tert-butyl ether	51.3	5.0	"	9.60	69	NR	75-115	13	35	LN
Toluene	27.4	5.0	"	32.9	9.0	56	85-125	3	15	LN
Xylenes (total)	23.6	5.0	"	38.5	1.0	59	80-140	6	20	LN
Gasoline Range Organics (C4-C12)	262	100	"	440	100	37	53-126	7	25	LN
Surrogate: 1,2-Dichloroethane-d4	*5.13*		"	*5.00*		*103*	*60-125*			
Batch 5G27015 - EPA 5030B/5035A MeOH / EPA 8260B										
Blank (5G27015-BLK1)				Prepared: 07/27/05 Analyzed: 07/28/05						
tert-Amyl methyl ether	ND	0.025	mg/kg							
Benzene	ND	0.050	"							
tert-Butyl alcohol	ND	5.0	"							
Di-isopropyl ether	ND	0.025	"							
1,2-Dibromoethane (EDB)	ND	0.025	"							
1,2-Dichloroethane	ND	0.025	"							
Ethanol	ND	10	"							
Ethyl tert-butyl ether	ND	0.025	"							
Ethylbenzene	ND	0.050	"							
Methyl tert-butyl ether	ND	0.025	"							
Toluene	ND	0.050	"							
Xylenes (total)	ND	0.050	"							
Gasoline Range Organics (C4-C12)	ND	2.5	"							
Surrogate: 1,2-Dichloroethane-d4	*0.00477*		"	*0.00500*		*95*	*60-125*			

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G27015 - EPA 5030B/5035A MeOH / EPA 8260B										
Laboratory Control Sample (5G27015-BS1)				Prepared: 07/27/05 Analyzed: 07/28/05						
tert-Amyl methyl ether	0.440	0.025	mg/kg	0.500		88	80-130			
Benzene	0.472	0.050	"	0.500		94	65-125			
tert-Butyl alcohol	2.40	2.0	"	2.50		96	80-165			
Di-isopropyl ether	0.482	0.025	"	0.500		96	85-115			
1,2-Dibromoethane (EDB)	0.445	0.025	"	0.500		89	85-130			
1,2-Dichloroethane	0.487	0.025	"	0.500		97	63-124			
Ethanol	14.7	10	"	10.0		147	35-150			
Ethyl tert-butyl ether	0.444	0.025	"	0.500		89	80-125			
Ethylbenzene	0.535	0.050	"	0.500		107	80-135			
Methyl tert-butyl ether	0.423	0.025	"	0.500		85	75-115			
Toluene	0.509	0.050	"	0.500		102	85-125			
Xylenes (total)	1.68	0.050	"	1.50		112	80-140			
Surrogate: 1,2-Dichloroethane-d4	*0.00475*		"	*0.00500*		*95*	*60-125*			
Laboratory Control Sample (5G27015-BS2)				Prepared: 07/27/05 Analyzed: 07/28/05						
Gasoline Range Organics (C4-C12)	22.7	2.5	mg/kg	16.5		138	60-140			
Surrogate: 1,2-Dichloroethane-d4	*0.00486*		"	*0.00500*		*97*	*60-125*			
Laboratory Control Sample Dup (5G27015-BSD1)				Prepared: 07/27/05 Analyzed: 07/28/05						
tert-Amyl methyl ether	0.455	0.025	mg/kg	0.500		91	80-130	3	25	
Benzene	0.479	0.050	"	0.500		96	65-125	1	20	
tert-Butyl alcohol	2.29	2.0	"	2.50		92	80-165	5	25	
Di-isopropyl ether	0.486	0.025	"	0.500		97	85-115	0.8	20	
1,2-Dibromoethane (EDB)	0.462	0.025	"	0.500		92	85-130	4	15	
1,2-Dichloroethane	0.477	0.025	"	0.500		95	63-124	2	25	
Ethanol	14.9	10	"	10.0		149	35-150	1	40	
Ethyl tert-butyl ether	0.443	0.025	"	0.500		89	80-125	0.2	25	
Ethylbenzene	0.544	0.050	"	0.500		109	80-135	2	20	
Methyl tert-butyl ether	0.435	0.025	"	0.500		87	75-115	3	35	
Toluene	0.526	0.050	"	0.500		105	85-125	3	15	
Xylenes (total)	1.72	0.050	"	1.50		115	80-140	2	20	
Surrogate: 1,2-Dichloroethane-d4	*0.00463*		"	*0.00500*		*93*	*60-125*			

Sequoia Analytical

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5G27015 - EPA 5030B/5035A MeOH / EPA 8260B										
Laboratory Control Sample Dup (5G27015-BSD2)				Prepared: 07/27/05 Analyzed: 07/28/05						
Gasoline Range Organics (C4-C12)	16.8	2.5	mg/kg	16.5		102	60-140	30	25	RB
Surrogate: 1,2-Dichloroethane-d4	*0.00490*		"	*0.00500*		*98*	*60-125*			

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOG0378
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	08/04/05 15:43

Notes and Definitions

RB	RPD exceeded method control limit; % recoveries within limits.
PV	Hydrocarbon result partly due to individ. peak(s) in quant. range
LN	MS and/or MSD below acceptance limits. See Blank Spike(LCS).
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

PROBLEM CHAIN-OF-CUSTODY

DATE/TIME 7/14/05 1907
CLIENT Arcadis 11162
CLIENT SERVICES REP LISA

DATE RECEIVED 7/14/05
TURN AROUND TIME STD
ANALYST JAY

PROBLEM

WATER IN SAMPLES SB-4 (25-25.5) AND SB-4 (29-29.5)

MOG 0378

RESOLUTION

Client Instruction* e-mail sent 7/14 for clarification & to check on sample see attached.

Analyze above two soil samples.

Analyze sample with highest GRO for total Pb.

Telephone Number of Client:

Client Contact for Instruction: Lynelle Onishi

Date and Time of Instruction:

Date & Time Form Given to Sample Control:

CLIENT SERVICES REP. SIGNATURE:

DATE/TIME: 7/15/05

*If client does not return call within 24 hours, please route this form to the Laboratory Director.

White Copy - Client Services

Pink Copy - Sample Control

* Fax copy of received COC to Lynelle Onishi @ 510-874-3268

Chain of Custody Record

Project Name: Former BP Site 11102 Soil/Groundwater Investigation
BP BU/AR Region/Enfos Segment: BP/Americas/WestCoast/Retail/WCBU/CA/Cent
State or Lead Regulatory Agency: Alameda County Environmental Health
Requested Due Date (mm/dd/yy): Standard TAT

On-site Time:	7:00 am	Temp:	60°F
Off-site Time:	4:00 pm	Temp:	89°F
Sky Conditions:	clear		
Meteorological Events:	none		
Wind Speed:	5-10 mph	Direction:	W-NW

Lab Name:	Sequoia Analytical	BP/AR Facility No.:	11102	Consultant/Contractor:	URS
Address:	885 Jarvis Drive	BP/AR Facility Address:	100 MacArthur Ave, Oakland, CA	Address:	1333 Broadway, Suite 800
	Morgan Hill, CA 95037	Site Lat/Long:			Oakland, CA 94612
Lab PM:	Lisa Race	California Global ID No.:	------	Consultant/Contractor Project No.:	38487349
Tele/Fax:	408-782-8156/408-782-6308	Enfos Project No.:	G07T9-0024	Consultant/Contractor PM:	Lynelle Onishi
BP/AR PM Contact:	Kyle Christie	Provision or RCOP (circle one)	Provision	Tele/Fax:	510-874-1758/510-874-3268
Address:	4 Centerpointe Dr.	Phase/WBS:	01 - Assessment	Report Type & QC Level:	Level 1 & EDF
	La Palma, CA	Sub Phase/Task:	03 - Analytical	E-mail EDD To:	lynelle_onishi@urscorp.com
Tele/Fax:	714-670-5303/714-6705195	Cost Element:	05 - Subcontracted Costs	Invoice to:	BP West Coast Global Alliance

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: GRO (8260)	Requested Analysis: BTEX (8260)	Requested Analysis: Fuel Add. (8260): MTBE, 1,2-DCA, EDB, TBA, TAME, DIPE, ETBE	Requested Analysis: Ethanol (8260)	Requested Analysis: Total Lead	Sample Point Lat/Long and Comments
1	SB-4 (5-5.5')	7:40	7-14-05	X			01	1	X					X	X	X	X	X	MOG 0378
2	SB-4 (9.5-10')	7:50					02												* See Special
3	SB-4 (14.5-15')	7:52					03												Instructions
4	SB-4 (19.5-20')	8:05					04												Below
5	SB-4 (20-20.5')	8:15					05												
6	SB-4 (25-25.5')	8:25					06												
7	SB-4 (29-29.5')	8:45					07												
8	Lab Blank	14:55					08					X							HOLD
9	Temp Blank	14:55			X				X										HOLD
10																			

		Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name:	John McCain	John McCain	7-14-05	15:55		7/14	1555
Sampler's Company:	URS		7/14/05	1607		7/14/05	1607
Shipment Date:	7-14-05						
Shipment Method:	courier						
Shipment Tracking No:							

Special Instructions: Analyze soil sample with highest GRO concentration for Total Lead (Pb).
If running total Pb analysis and result are >50ppm, run STLC, if STLC results are >5ppm, run TCLP

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

Distribution: White Copy - Laboratory / Yellow Copy - BP/Atlantic Richfield Co. / Pink Copy - Consultant/Contractor

* Fax copy of recieved COC to Lynelle Onishi @ 510-874-3268

Chain of Custody Record

Project Name: Former BP Site 11102 Soil/Groundwater Investigation
BP BU/AR Region/Enfos Segment: BP/Americas/WestCoast/Retail/WCBU/CA/Cent
State or Lead Regulatory Agency: Alameda County Environmental Health
Requested Due Date (mm/dd/yy): Standard TAT

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

Lab Name:	Sequoia Analytical	BP/AR Facility No.:	11102	Consultant/Contractor:	URS
Address:	885 Jarvis Drive	BP/AR Facility Address:	100 MacArthur Ave, Oakland, CA	Address:	1333 Broadway, Suite 800
	Morgan Hill, CA 95037	Site Lat/Long:			Oakland, CA 94612
Lab PM:	Lisa Race	California Global ID No.:	-------	Consultant/Contractor Project No.:	38487349
Tele/Fax:	408-782-8156/408-782-6308	Enfos Project No.:	G07T9-0024	Consultant/Contractor PM:	Lynelle Onishi
BP/AR PM Contact:	Kyle Christie	Provision ~~or RCOP~~ (circle one)	Provision	Tele/Fax:	510-874-1758/510-874-3268
Address:	4 Centerpointe Dr.	Phase/WBS:	01- Assessment	Report Type & QC Level:	Level 1 & EDF
	La Palma, CA	Sub Phase/Task:	03 - Analytical	E-mail EDD To:	lynelle_onishi@urscorp.com
Tele/Fax:	714-670-5303/714-6705195	Cost Element:	05 - Subcontracted Costs	Invoice to:	BP West Coast Global Alljance

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: GRO (8260)	Requested Analysis: BTEX (8260)	Requested Analysis: Fuel Add. (8260): MTBE, 1,2-DCA, EDB, TBA, TAME, DIPE, ETBE	Requested Analysis: Ethanol (8260)	Requested Analysis: Total Lead	Sample Point Lat/Long and Comments
1	SB-7 2-2.5'	12:20	7/14/05	X			09	1	X					X	X	X	X	X	MOG 0378
2	SB-7 5-5.5'	12:35					10	1											* See Special
3	SB-7 9.5-10'	12:45					11	1											instructions below
4	SB-7 14.5-15'	12:52					12	1											
5	SB-7 19.5-20'	12:57					13	1											
6	SB-7 25.5-26'	13:05					14	1											
7	SB-7 28.5-29'	13:25					15	1											
8	SB-7 30.5-31'	13:20					16	1											
9	SB-5 5-5.5'	10:02					17	1											
10	SB-5 9.5-10'	10:10					18	1											

Sampler's Name:	John McCain	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	URS		7/14/05	16:55		7/14	16:55
Shipment Date:	7-14-05		7/14	19:07		7/14	19:7
Shipment Method:	courier						
Shipment Tracking No:							

Special Instructions: Analyze soil sample with highest GRO concentration for Total Lead (Pb).
If running total Pb analysis and result are >50ppm, run STLC, if STLC results are >5ppm, run TCLP

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

Distribution: White Copy - Laboratory / Yellow Copy - BP/Atlantic Richfield Co. / Pink Copy - Consultant/Contractor

A Fax Copy of received COC to Lynelle Onishi @ 510-874-3268

bp

Chain of Custody Record

Project Name: Former BP Site 11102 Soil/Groundwater Investigation
BP BU/AR Region/Enfos Segment: BP/Americas/WestCoast/Retail/WCBU/CA/Cent
State or Lead Regulatory Agency: Alameda County Environmental Health
Requested Due Date (mm/dd/yy): Standard TAT

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

Lab Name:	Sequoia Analytical	BP/AR Facility No.:	11102	Consultant/Contractor:	URS
Address:	885 Jarvis Drive	BP/AR Facility Address:	100 MacArthur Ave, Oakland, CA	Address:	1333 Broadway, Suite 800
	Morgan Hill, CA 95037	Site Lat/Long:			Oakland, CA 94612
Lab PM:	Lisa Race	California Global ID No.:	-------	Consultant/Contractor Project No.:	38487349
Tele/Fax:	408-782-8156/408-782-6308	Enfos Project No.:	G07T9-0024	Consultant/Contractor PM:	Lynelle Onishi
BP/AR PM Contact:	Kyle Christie	Provision or RCOP (circle one)	Provision	Tele/Fax:	510-874-1758/510-874-3268
Address:	4 Centerpointe Dr.	Phase/WBS:	01- Assessment	Report Type & QC Level:	Level 1 & EDF
	La Palma, CA	Sub Phase/Task:	03 - Analytical	E-mail EDD To:	lynelle_onishi@urscorp.com
Tele/Fax:	714-670-5303/714-6705195	Cost Element:	05 - Subcontracted Costs	Invoice to:	BP West Coast Global Alliance

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: GRO (8260)	Requested Analysis: BTEX (8260)	Requested Analysis: Fuel Add. (8260): MTBE, 1,2-DCA, EDB, TBA, TAME, DIPE, ETBE	Requested Analysis: Ethanol (8260)	Requested Analysis: Total Lead	Sample Point Lat/Long and Comments
																			MOG 037P
1	SB-5 14-5-15'	10:16	7/14/05	X			19	1	X					X	X	X	X	X	X	See Special Instructions below
2	SB-5 19.5-20'	10:20	↓	↓			20	1	↓					↓	↓	↓	↓	↓	↓	
3	SB-5 29-29.5'	10:50	↓	↓			21	1	↓					↓	↓	↓	↓	↓	↓	
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Sampler's Name:	John McCain	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	URS		7/15/05	15:55		7/14	1555
Shipment Date:	7-14-05		7/14	1907		7/14	1907
Shipment Method:	courier						
Shipment Tracking No:							

Special Instructions: Analyze soil sample with highest GRO concentration for Total Lead (Pb).
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 X No Cooler Temperature on Receipt 6.0 °F/C Trip Blank Yes X No

Distribution: White Copy - Laboratory / Yellow Copy - BP/Atlantic Richfield Co. / Pink Copy - Consultant/Contractor

BP COC Rev. 4 10/1/04

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: Anco 11107 | DATE REC'D AT LAB: 7/14/05 | For Regulatory Purposes?
REC. BY (PRINT): JAY | TIME REC'D AT LAB: 1907 | DRINKING WATER YES / NO
WORKORDER: M0G0378 | DATE LOGGED IN: 7-15-05 | WASTE WATER YES / NO

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

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) Present / Absent; Intact / Broken*			SB-4 (5-5.5')	Plastic Cnr	—	—	S	7/14/05	
2. Chain-of-Custody Present / Absent*			(9.5-10')						
3. Traffic Reports or Packing List: Present / Absent			(14.5-15')						
4. Airbill: Airbill / Sticker Present / Absent			(19.5-20')						
			(20-20.5')						
			(25-25.5')						
			(29-29.5')	↓	↓	↓	↓	↓	
5. Airbill #:			LAB BLANK	(2) VOA	HCl				
6. Sample Labels: Present / Absent			TRIP BLANK	VOA	—				
7. Sample IDs: Listed / Not Listed on Chain-of-Custody			SB-7 (2-2.5')	Plastic Cnr					
			(5-5.5')						
8. Sample Condition: Intact / Broken* / Leaking*			(9.5-10')						
			(14.5-15')						
9. Does information on chain-of-custody, traffic reports and sample labels agree? Yes / No*			(19.5-20')						
			(25.5-26')						
			(28.5-29')						
10. Sample received within hold time? Yes / No*			(30.5-31')	↓	↓	↓	↓	↓	
			SB-5 (5-5.5')						
11. Adequate sample volume received? Yes / No*			(9.5-10')						
			(14.5'-15')						
12. Proper Preservatives used? Yes / No*			(19.5-20')						
			(29-29.5')	↓	↓	↓	↓	↓	
13. Trip Blank / Temp Blank Received? (circle which, if yes) Yes / No*									
14. Temp Rec. at Lab: 6.0°C; Is temp 4 +/-2°C? Yes / No**									
(Acceptance range for samples requiring thermal pres.)									
**Exception (if any): METALS / DFF ON ICE or Problem COC									

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

Jamshid Kekobad

From: Lynelle_Onishi@URSCorp.com [Lynelle_Onishi@URSCorp.com] **Sent:** Fri 7/15/2005 8:48 AM
To: Jamshid Kekobad
Cc: Donna_Cosper@URSCorp.com; "Richard_W_Murray@URSCorp.com, "LisaRace" <lrace@sequoialabs.com/@urscorp.com
Subject: Re: Notification of problems and some questions on BP#11102 sampled 7/14/05
Attachments: Problem COC.pdf(367KB)

Jamshid,
Yes, please analyze the soil samples SB-4 (25-25.5) and SB-4 (29-29.5).
The soil samples were saturated, reason for water.
Yes, please analyze sample with highest GRO concentration for total lead.
Any other questions, please let me know.
Thank you.
Lynelle

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

"Lisa Race" <lrace@sequoialabs.com> 07/14/2005 09:08 PM

To: <Donna_Cosper@URSCorp.com>, <Richard_W_Murray@URSCorp.com>, <Richard_W_Murray@URSCorp.com>, <Lynelle_Onishi@URSCorp.com>
cc: "Jamshid Kekobad" <jkekobad@sequoialabs.com>
Subject: Notification of problems and some questions on BP#11102 sampled 7/14/05

Please see the attahced COC. Samples SB-4 (25-25.5) and SB-4 (29-29.5) were received with water in with the soil samples. Please let us know if you would still like these two samples analyzed. Also, please clarify if

you want lead analyzed on all of the samples or just on the sample with the highest GRO. Please send your reply to jkekobad@sequoialabs.com and copy me. If you have any questions, please contact Jamshid Kekobad at 408-782-8170.

Thank you for your help.

Lisa Race
Senior Project Manager
Tel.: 408-776-9600
Direct.: 408-782-8156
Fax: 408-782-6308
e-mail: lrace@sequoialabs.com(See attached file: Problem COC.pdf)