Atlantic Richfield Company
(a BP affiliated company)

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RECEIVED
By lopprojectop at 11:10 am, Apr 17, 2006

April 14, 2006

Re: Former BP Service Station # 11102
100 MacArthur Boulevard
Oakland, California
Supplemental Soil and Water Investigation
ACEH Case # RO0000465

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

Submitted by:

Paul Supple
Environmental Business Manager

URS

April 14, 2006

Mr. Don Hwang
Copy Submitted Electronically
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

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

Dear Mr. Hwang:

On behalf of the Atlantic Richfield Company, RM-a BP affiliated company, URS Corporation (URS) has prepared this *Supplemental Soil and Water Investigation Report (Supplemental SWI)* for additional soil and water characterization at the above referenced facility (the Site, Figure 1 and 2). 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 advancing five on-site soil borings for source area characterization and three off-site borings for a preferential pathway evaluation. The on-site portion of this investigation was completed on July 13 and 14, 2005 and reported in the URS *Soil and Water Investigation Report* dated August 4, 2005 (URS, 2005b). This *Supplemental SWI Report* discusses the off-site portion of this investigation including: Site background, the scope of investigation and fieldwork performed, and 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,

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when new USTs, pump islands and a new canopy were installed. Existing USTs at the station include four fiberglass tanks: one 12,000-gallon UST, one 10,000-gallon UST and one 6,000-gallon gasoline UST installed in 1990, and one 1,000-gallon waste-oil UST 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 when Mobil Oil Company removed 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.

In October 1989, Alton conducted a subsurface investigation at the Site and installed three on-site monitoring wells, MW-1 through MW-3. 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 analytical tables that the sampling frequency was reduced from quarterly to semi-annually 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 soil and groundwater data is provided in Attachment B.

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 and well search, and prepared an expanded Site Plan (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.

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, thus completing the on-site portion of the SWI for this Site.

2.0 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 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 fourth quarter monitoring event on October 17, 2005 was to the southwest at a gradient of 0.05 ft/ft (Figure 5).

3.0 SCOPE OF WORK

The scope of work for this investigation, as proposed within the *Revised Soil and Groundwater Investigation Work Plan (Revised Work Plan)*, was to include advancing five on-site soil borings and three off-site borings for source area characterization and preferential pathway evaluation (URS, 2005).

The source area characterization scope of work was completed on July 13 and 14, 2005, and included advancing five on-site soil boring pairs (SB-4 through SB-7) to depths 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 (URS, 2005b).

In addition to the on-site characterization, three soil borings (SB-1 through SB-3) were completed downgradient of the Site to assess off-site plume migration. These soil borings were located along the storm drain on MacArthur Boulevard to assess the potential of the storm drain being used as a preferential pathway.

During the off-site portion of this investigation (covered in this report), soil boring SB-4A was drilled adjacent to soil boring SB-4 to confirm lithology and soil concentrations observed during the on-site portion of this Site investigation. A comparison of analytical results from SB-4 and SB-4A is shown on Table 1. The work performed for the on-site confirmation boring SB-4A as well as the off-site soil borings SB-1 through SB-3 is further described below. .

3.1 PREFERENTIAL PATHWAY EVALUATION

The scope of work included advancing three off-site soil-boring pairs (SB-1, SB-2, and SB-3), to help assess the potential pathways for off-site plume migration. This included recording off-site lithology and groundwater depths in relation to the storm drain conduit located in MacArthur Blvd. In addition, URS proposed coordinating with the City of Oakland to access the storm drain line to collect a sample, if water was present. URS was unable to complete the entire proposed preferential pathway evaluation scope of work in MacArthur Boulevard. To date, many attempts have been made to coordinate with the City of Oakland Public Works Department representative, but all attempts have been unsuccessful.

3.1.1 Preliminary Field Activities

Before initiating field activities, URS obtained a soil boring permit from Alameda County Public Works Agency (ACPWA), an obstruction permit from the City of Oakland, and a Caltrans encroachment permit. 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.

3.1.2 Soil Boring Advancement

On October 7, 2005, a URS geologist observed Gregg Drilling and Testing, Inc. (Gregg) of Martinez, California advance three off-site soil borings (SB-1, SB-2, and SB-3) to depths of approximately 12 feet bgs for lithologic description and groundwater sampling. The first five feet of each boring was cleared to at least five feet bgs using an air-knife. The soil borings were completed to 12 feet bgs using a hand auger due to the close proximity of underground utilities. Borings SB-1 through SB-3, were situated in Mac Arthur Boulevard, 1 to 2 feet from the sidewalk curb. This location was selected to avoid underground utilities during boring, and also to avoid drilling in the path followed by car tires as specified by the permit issued by the City of Oakland. The approximate soil boring locations are illustrated on Figure 2. Groundwater was not encountered during boring advancement. No soil samples were submitted for analysis.

3.1.3 Groundwater Sampling

On October 7, 2005, a URS geologist observed Gregg advance depth discrete groundwater or Hydropunch® soil borings in off-site soil borings SB-1 through SB-3. After clearing the depth

discrete groundwater boring locations to five feet bgs using a hand auger, the Hydropunch® sampler was advanced to 12 feet bgs, 15 feet bgs, and 18 feet bgs in all four boring locations, as specified in the *Revised Soil and Groundwater Investigation Work Plan* (URS, 2005). 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 samples were collected from any off-site boring locations because no groundwater was encountered. Following completion of the Hydropunch® boring activities, all borings were sealed to the surface with neat Portland cement grout slurry.

3.2 Plume Delineation

The scope of work performed included advancing one on-site soil boring pair (SB-4A) to confirm lithology and soil concentrations observed during the on-site portion of this Site investigation. A comparison of analytical results from SB-4 and SB-4A is shown on Table 1. The location of the soil borings are shown on Figure 1.

3.2.1 Preliminary Field Activities

Preliminary field activities were conducted in accordance and in conjunction with the plume definition preliminary field activities (Section 3.1.1).

3.2.2 Soil Boring Advancement

On October 7, 2006, one on-site boring (SB-4A) was cleared to 5 feet bgs with an air-knife, and advanced to a depth of 36 feet bgs using direct push technology. Groundwater was encountered at approximately 24.5 feet bgs during boring advancement. Select soil samples from boring SB-4A were submitted for analysis to confirm results observed from soil boring SB-4. 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 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)

analysis by EPA Method 8260B. The sample with the highest GRO concentration was analyzed for total lead by EPA Method 6010B for disposal characterization. After completing sampling activities, the borings were sealed to the surface using neat Portland cement grout slurry.

3.2.3 Groundwater Sampling

On October 7, 2005, a URS geologist observed Gregg advance depth discrete groundwater or Hydropunch® soil borings in on-site soil boring SB-4A. The Hydropunch® boring was located approximately 1 to 2 feet laterally from the initial soil boring location. The Hydropunch® boring location was also cleared to at least five feet bgs using a hand auger.

A groundwater sample was collected from on-site boring location (SB-4A). Analytical results for the soil boring groundwater sample are presented on Table 2. Following completion of the Hydropunch® boring activities, the borings were sealed to the surface with neat Portland cement grout slurry.

On October 17, 2005, Blaine Tech Services, Inc. (Blaine Tech) of San Jose, California, sampled the three on-site monitoring wells (MW-1 through MW-3) as part of the fourth quarter 2005 monitoring event. Blaine Tech measured the total well depth and depth to water in the wells, and subsequently purged and sampled the wells. Periodic measurements of pH, conductivity, and temperature were recorded during purging activities. Blaine Tech transported all purge water generated during sampling 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 by EPA Method 8260B. A copy of the field procedures and field data sheets are provided in Attachment E.

3.2.4 Soil Analytical Results

URS submitted soil samples collected from SB-4A 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. Six soil samples from boring SB-4A were analyzed for GRO, BTEX, MTBE, TAME, ETBE, DIPE, TBA, EDB, 1,2-DCA, and ethanol using EPA Method 8260B. A comparison of analytical results from boring SB-4 (collected on July 13 and 14, 2005) with results from boring SB-4A (collected on October 7, 2005) is presented in Table 1. Copies of laboratory analytical reports and chain-of-custody records are presented in Attachment F. Analytical results for on-site boring SB-4 are presented in the *Soil and Water Investigation (SWI) Report* (URS, 2005b) and summarized below.

Soil sample analytical results from boring SB-4A can be summarized as follows:

- TAME was detected in one of six soil samples, at a concentration of 0.12 milligrams per kilogram (mg/kg) (SB-4A@20').

- MTBE was detected in all six samples collected from borings SB-4A at concentrations ranging from 0.024 mg/kg (SB-4A-30') to 5.0 mg/kg (SB-4A@20').
- No GRO, BTEX, ETBE, DIPE, TBA, EDB, 1,2-DCA, or ethanol was detected at or above the respective laboratory-reporting limits in any of the six soil samples submitted as part of this off-site investigation.

3.2.5 Groundwater Analytical Results

URS submitted one Hydropunch® groundwater sample from soil boring location SB-4A, located adjacent to boring SB-4, to Sequoia Analytical, a State of California DHS Certified Laboratory for analysis. The sample was analyzed for GRO, BTEX, MTBE, TAME, ETBE, DIPE, TBA, EDB, 1,2-DCA, and ethanol using EPA Method 8260B. Soil boring groundwater analytical results are presented in Table 2. Copies of laboratory analytical reports and chain-of-custody records are presented in Attachment F.

Soil boring groundwater analytical results can be summarized as follows:

- GRO was detected at a concentration of 3,000 µg/L;
- TAME was detected at a concentration of 110 µg/L;
- TBA was detected at a concentration of 5,700 µg/L;
- MTBE was detected at a concentration of 4,500 µg/L; and
- No other analytes were detected at or above their respective laboratory reporting limit in the groundwater sample analyzed.

Groundwater samples collected in the fourth quarter 2005 from the three monitoring wells (MW-1, MW-2 and MW-3) were submitted to Sequoia for GRO, BTEX, and fuel additives analysis using EPA Method 8260B. Groundwater analytical results are presented in Table 3 and Table 4. 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 at or above the laboratory reporting limit in one of the three wells sampled this quarter at a concentration of 140 micrograms per liter (µg/L) (MW-1).
- MTBE was detected at or above the laboratory reporting limit in all three wells at concentrations ranging from 20 µg/L (MW-1) to 2,500 µg/L (MW-2).
- TBA was detected at or above the laboratory reporting limit in two wells at concentrations of 450 µg/L (MW-1) and 5,200 µg/L (MW-2).
- TAME was detected at or above the laboratory reporting limit in one well at a concentration of 4.2 µg/L (MW-3).

- No other fuel components were detected at or above their respective laboratory reporting limits in any of the wells sampled this quarter.

4.3 GeoTracker

In accordance with GeoTracker requirements, URS has uploaded well gauging data (Geo_well). Soil and groundwater sample EDF files were uploaded to GeoTracker. A copy of the GeoTracker confirmation and error check reports are provided as Attachment G.

4.4 Investigation Derived Waste Disposal

Investigation derived waste generated during Site investigation activities was stored temporarily on-site in a DOT approved 55-gallon drum pending analytical results and profiling. Following waste characterization, Dillard Environmental (Dillard) will transport the soil to an RM approved disposal facility.

5.0 CONCLUSIONS

Preferential Pathway Evaluation:

The preferential pathway evaluation was conducted to assess the potential of the storm drain on MacArthur Boulevard being used as a preferential pathway for hydrocarbon migration. No water was encountered at the approximate depth of the storm drain line and no water samples were collected. Therefore, it is unlikely that impacted groundwater could migrate via the higher permeability trench material of the storm drain.

Plume Delineation:

The purpose of the investigation was to assess off-site plume migration and confirm analytical results from boring SB-4, completed during the on-site portion of this investigation. The results of the investigation performed by URS can be summarized as follows:

Confirmation soil boring SB-4A:

- TAME was detected in one of six soil samples, at a concentration of 0.12 milligrams per kilogram (mg/kg) (SB-4A@20').
- MTBE was detected in all six samples collected from borings SB-4A at concentrations ranging from 0.024 mg/kg (SB-4A-30') to 5.0 mg/kg (SB-4A@20').

Confirmation soil boring SB-4A groundwater:

- GRO was detected at a concentration of 3,000 µg/L.
- TAME was detected at a concentration of 110 µg/L.
- TBA was detected at a concentration of 5,700 µg/L.

- MTBE was detected at a concentration of 4,500 µg/L.

On-site groundwater analytical results:

- GRO were detected at or above the laboratory reporting limit in one of the three wells sampled this quarter at a concentration of 140 g/L (MW-1).
- MTBE was detected at or above the laboratory reporting limit in all three wells at concentrations ranging from 20 µg/L (MW-1) to 2,500 µg/L (MW-2).
- TBA was detected at or above the laboratory reporting limit in two wells at concentrations of 450 µg/L (MW-1) and 5,200 µg/L (MW-2).
- TAME was detected at or above the laboratory reporting limit in one well at a concentration of 4.2 µg/L (MW-3).

6.0 LIMITATIONS

This report is based on data, site conditions, and other information that are generally applicable as of the date of the report, and the conclusions and recommendations herein are therefore applicable only to that time frame. This report has been prepared solely for the use of 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 *Supplemental 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

REGISTERED GEOLOGIST
BARBARA J JAKUB
No. 7304
STATE OF CALIFORNIA

Barbara J. Jakub, P.G.
Senior Geologist

cc: Mr. Chris Jimmerson, Delta Environmental Consultants, (electronic copy uploaded to ENFOS)
Ms. Shelby Lathrop, ConocoPhillips (electronic file upload to URS ftp site)
Mr. Rob Miller, Broadbent & Associates, Inc., (electronic file uploaded to ENFOS)
Mr. Paul Supple, RM, (electronic file uploaded to ENFOS)

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, Fourth Quarter (October 17, 2005)
Table 1 - Soil Analytical Data
Table 2 - Soil Boring Groundwater Data
Table 3 - Groundwater Elevation and Analytical Data
Table 4 - 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, Caltrans Permit, and City of Oakland Encroachment Permit.
Attachment E - Field Procedures and Field Data Sheets
Attachment F - Laboratory Analytical Reports and Chain-Of-Custody Records
Attachment G - GeoTracker Upload Confirmation

REFERENCES:

URS, 2005b. *Soil and Groundwater Investigation Report for Former* BP Service Station # 11102, 100 MacArthur Boulevard, Oakland, CA. August 4, 2005.

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.

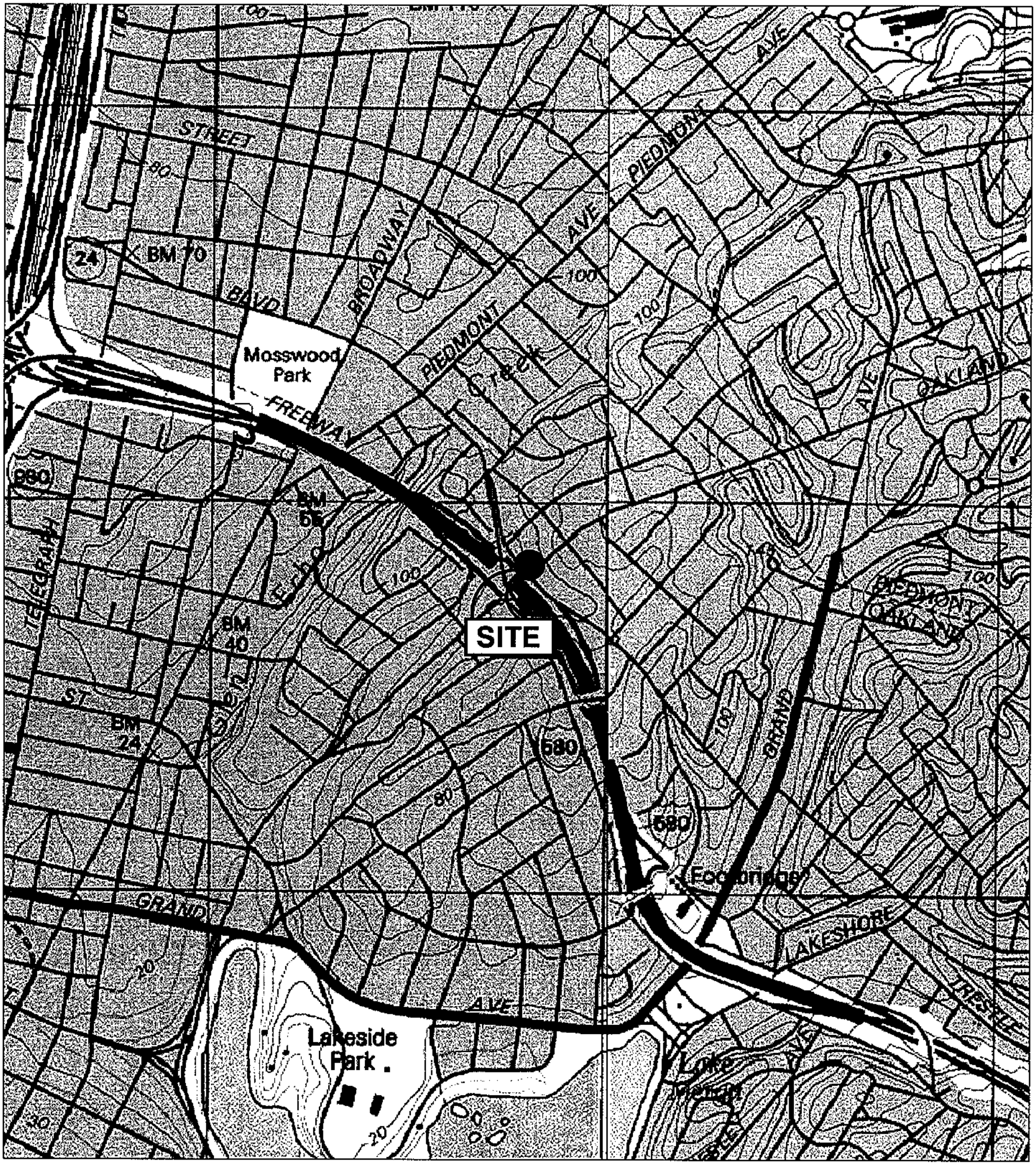
BP, 1989. Underground Storage Tank Registration, BP Oil Company Facilities, County of Alameda. Letter to Rafat Shahid from W.J. Hollis. July 10, 1989.

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.

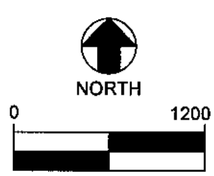
KEI, 1988. *Soil Sampling Report*, Mobile Service Station #10-E6A, 100 MacArthur Blvd., Oakland, CA. October 7, 1988.

FIGURES

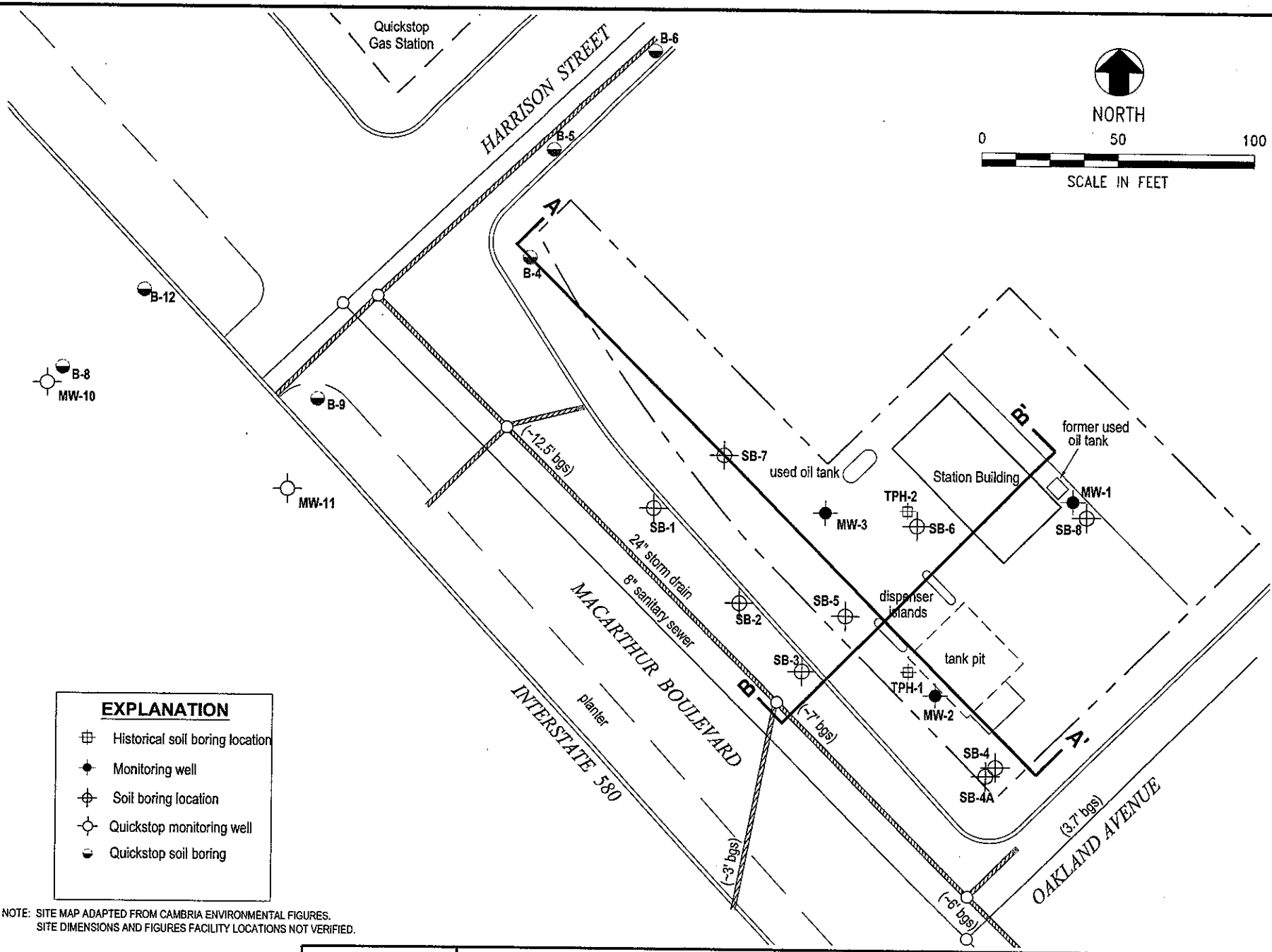


REF: BASE MAP FROM USGS TOPO!
7.5 MINUTE TOPOGRAPHIC
PHOTOREVISED 1998

QUADRANGLE LOCATION

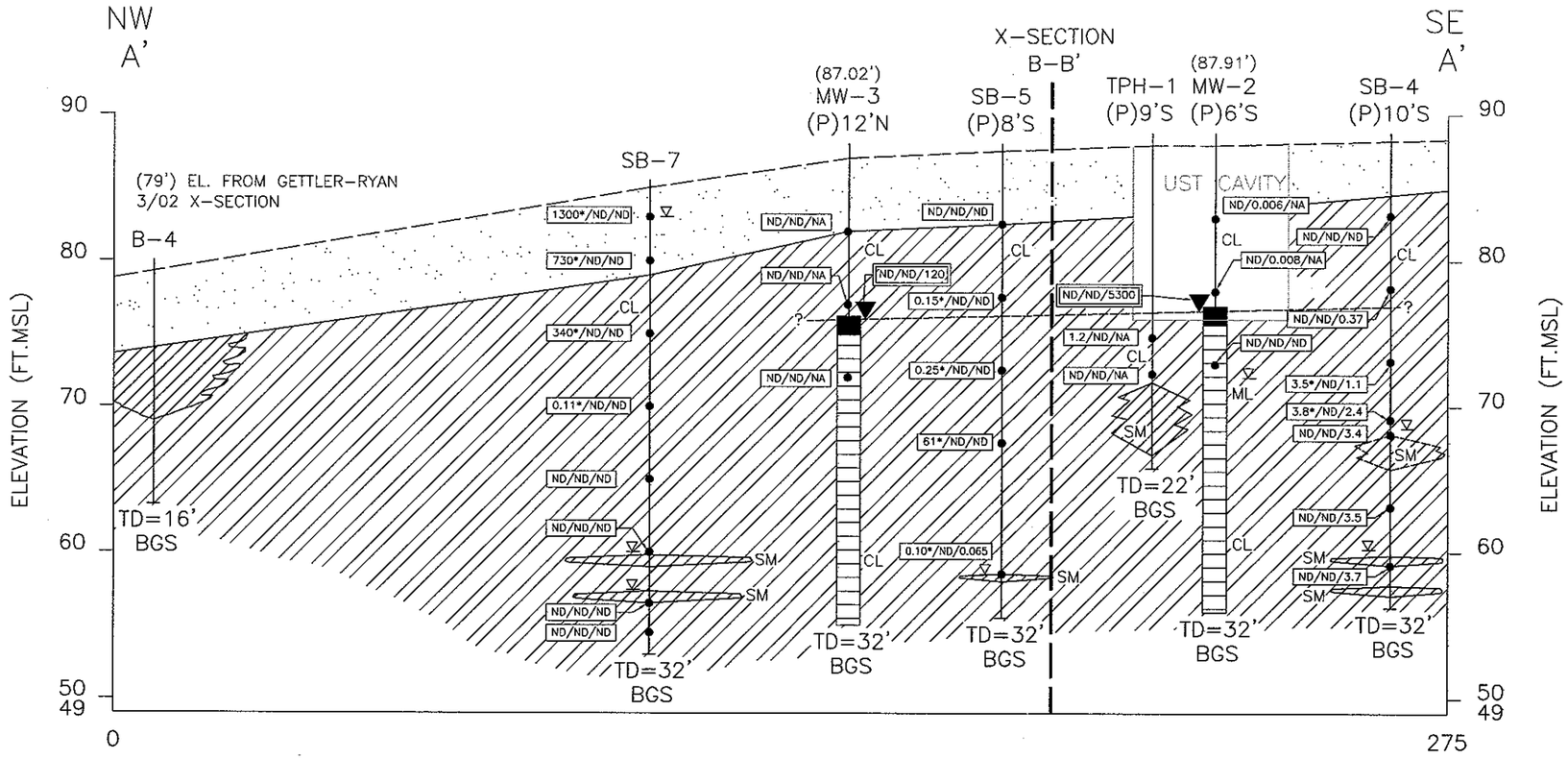


URS	Project No. 38487349 Former BP Service Station #11102 100 MacArthur Boulevard Oakland, California	SITE LOCATION MAP	FIGURE 1



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/1

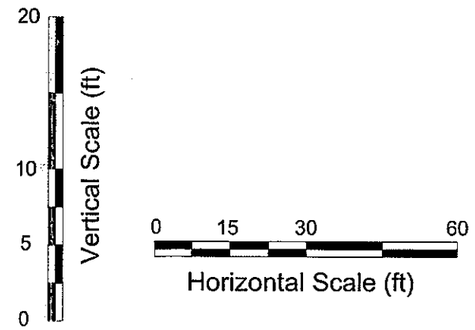
0.11/ND/0.24 — TPH/BENZENE/MTBE SOIL CONCENTRATIONS IN mg/kg

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

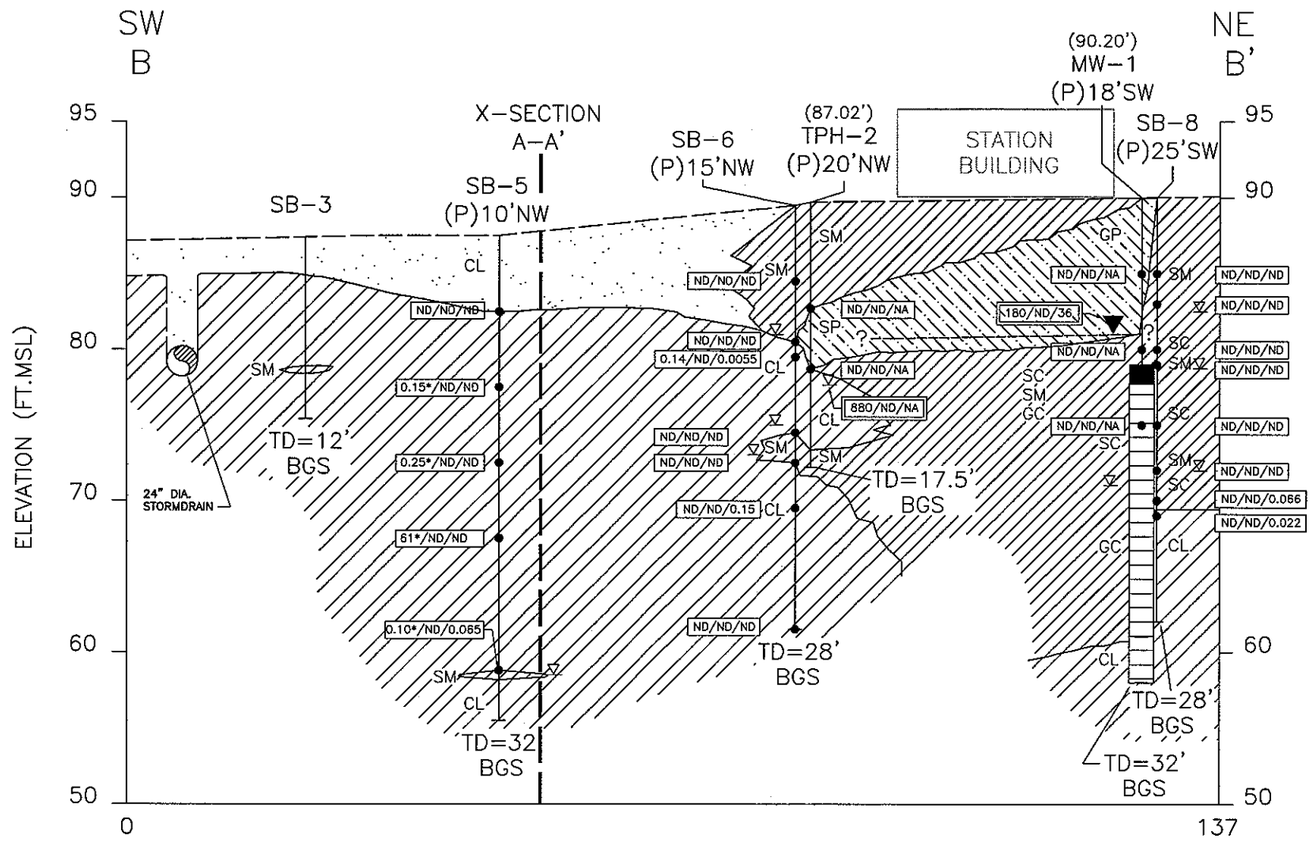
STATIC POTENTIOMETRIC SURFACE MEASURED 7/11/05

- 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



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/36 — GRO/BENZENE/MTBE WATER CONCENTRATIONS µ/1

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.

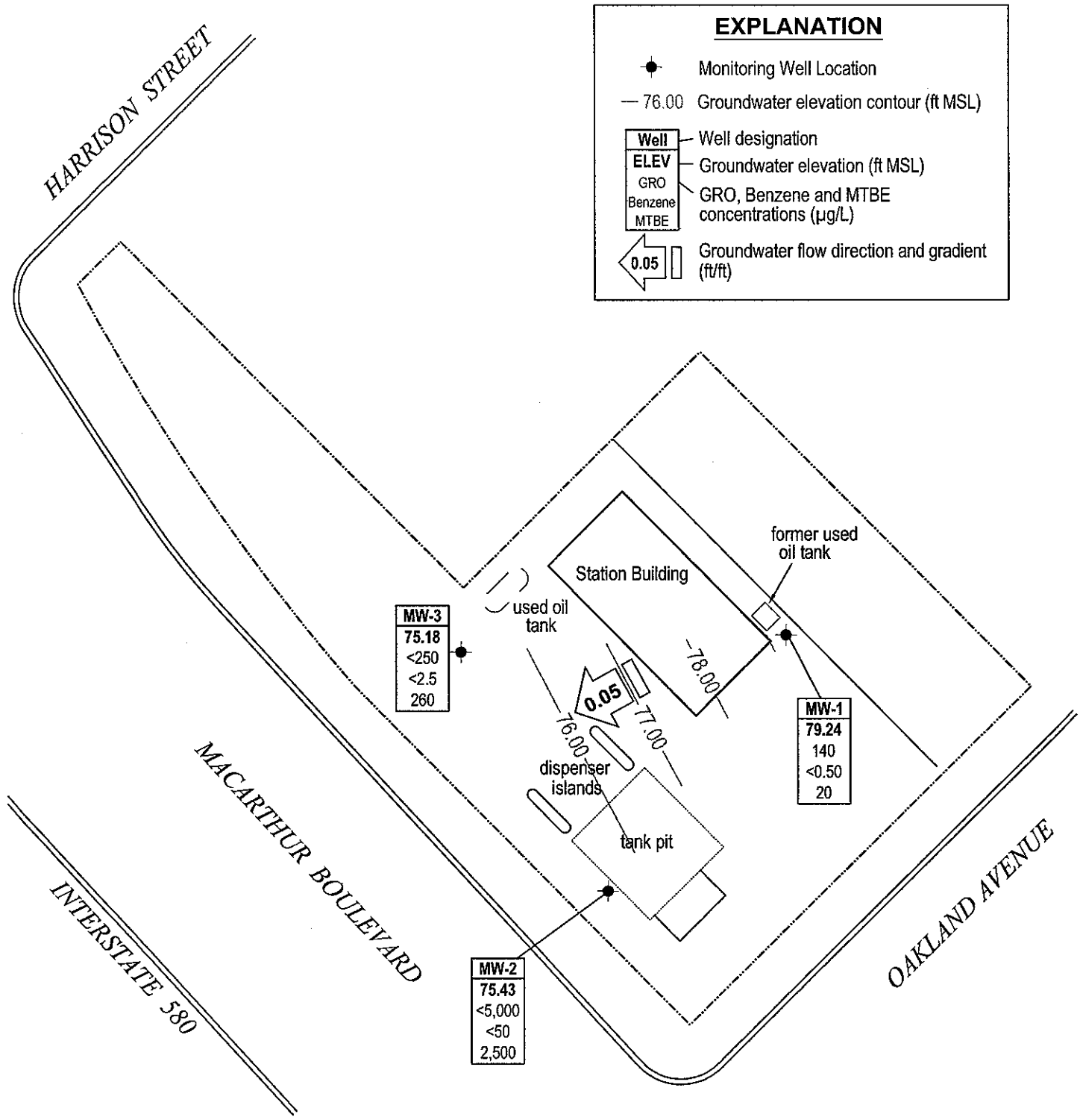
Vertical Scale (ft): 20, 10, 5, 0

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

Dec 22, 2005 - 3:47pm
X:\x_env_waste\BP GEM\Sites\LNiles Sites\11102\Reports\Swi-offsite wells\Figures\Figure 4.dwg



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

URS	Project No. 38487244 Former BP Service Station #11102 100 MacArthur Boulevard Oakland, California	GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL SUMMARY MAP Fourth Quarter 2005 (October 17, 2005)	FIGURE 5

TABLES

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)	TAME (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	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**	ND<0.025	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	**1.10**	ND<0.050	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**	ND<0.050	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**	ND<0.25	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**	ND<0.50	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**	ND<0.50	NA
SB-4A-6	6	U	10/07/05	ND<0.25	ND<0.012	ND<0.012	ND<0.012	ND<0.012	ND<0.050	**0.073**	ND<0.012	NA
SB-4A-10	10	U	10/07/05	ND<2.5	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<5.0	**0.20**	ND<0.025	NA
SB-4A@20'	20	U	10/07/05	ND<5.0	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<10	**5.0**	**0.12**	NA
SB-4A-25'	25	s	10/07/05	ND<2.5	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<5.0	**0.84**	ND<0.025	NA
SB-4A-30'	30	s	10/07/05	ND<0.010	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	**0.024**	ND<0.0050	NA
SB-4A@35'	35	s	10/07/05	ND<0.10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	**0.057**	ND<0.0050	NA

Notes: All Samples analyzed by EPA Method 8260B. 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

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

Hydropunch® 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)	TAME (mg/kg)	Lead (mg/kg)
SB-4A	24	10/07/05	**3000**	ND<25	ND<25	ND<25	ND<25	**5700**	**4500**	**110**	NA

Notes: All Samples analyzed by EPA Method 8260B. 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.

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 3

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	160	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, d	90.20	--	--	--	2,100	30	3.2	2	15	2,000	--	PACE	--	--	---	---
	6/22/1994	--	d	90.20	11.81	--	78.39	2,100	32	3.8	2.2	17	4,000	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 3

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	--	--	--
	10/17/2005	**P**	**--**	**90.20**	**10.96**	**--**	**79.24**	**140**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**20**	**--**	**SEQM**	**8.0**	**--**	**--**	**--**
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, d	87.91	--	--	--	2,100	32	3.8	2.2	17	3,700	--	PACE	--	--	---	---
	12/2/1993	--	d	87.91	14.94	--	72.97	790	3.4	0.5	10	<0.5	3,700	--	PACE	--	--	---	---
	6/22/1994	--	d	87.91	14.25	--	73.66	110	<0.5	<0.5	<0.5	<0.5	120	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 3

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	I	87.91	11.45	--	76.46	5,100	<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	--	--	--
	10/26/2004	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	--	--	--
	10/17/2005	**P**	**--**	**87.91**	**12.48**	**--**	**75.43**	**<5,000**	**<50**	**<50**	**<50**	**<50**	**2,500**	**--**	**SEQM**	**8.2**	**--**	**--**	**--**
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 3

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	8.1	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	I	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 3

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	**10/17/2005**	**P**	**--**	**87.02**	**11.84**	**--**	**75.18**	**<250**	**<2.5**	**<2.5**	**<2.5**	**<2.5**	**260**	**--**	**SEQM**	**8.5**	**--**	**--**	**--**
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 3

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
BTEX = Benzene, toluene, ethylbenzene and xylenes
DO = Dissolved oxygen
DRO = Diesel range organics
DTW = Depth to water in ft bgs
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 ft MSL
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 ft MSL
TOG = Total oil and grease
TPH-d = Total petroleum hydrocarbons as diesel
TPH-g = Total petroleum hydrocarbons as gasoline
µg/L = Micrograms per liter
ANA = Anametrix, Inc.
PACE = Pace, Inc.
ATI = Analytical Technologies, Inc.
SAL = Superior Analytical Laboratory
SPL = Southern Petroleum Laboratories
SEQ/SEQM = Sequoia Analytical/Sequoia Morgan Hill Laboratories

FOOTNOTES:
c = Blind duplicate.
d = A copy of the documentation for this data is included in Appendix C of Allsto 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)
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. TPH-g was changed to GRO. The resulting data may be impacted by the potential of non-TPH-g analytes within the requested fuel range resulting in a higher concentration being reported.
Beginning in the second quarter 2004, the carbon range for GRO was changed from C6-C10 to C4-C12
pH and DO 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 4

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	
	10/17/2005	**<100**	**450**	**20**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	a
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	
	10/17/2005	**<10,000**	**5,200**	**2,500**	**<50**	**<50**	**<50**	**<50**	**<50**	a
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
	10/17/2005	**<500**	**<100**	**260**	**<2.5**	**<2.5**	**4.2**	**<2.5**	**<2.5**	a

Table 4

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
µg/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.

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

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)	HVOCs (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
(e)	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 (b)		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)	HVOCs (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)	HVOC's (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 groundwater monitoring activities for BP

ATTACHMENT C

BORING LOGS

URS

1333 Broadway, Suite 800
Oakland, California 94612

LOG OF BORING

Borehole ID: SB-1

Total Depth: 19 ft bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: Former BP Service Station #11102	**Drilling Company:** Gregg Drilling & Testing
Site Location: 100 MacArthur Boulevard, Oakland, CA	**Driller:** Paul Rogers
Project Manager: Lynelle Onishi	**Type of Drilling Rig:** MARL M10T
PG: Barbara Jakub	**Drilling Method:** Airknife, Hand Auger (HA), and Hydropunch (HP)
Geologist: Jeremy Quick	**Sampling Method:**
Job Number: 38487349.0A022	**Date(s) Drilled:** October 7, 2005

BORING INFORMATION	
Groundwater Depth: Groundwater Not Encountered	**Boring Location:** MacArthur Blvd., approx. 175 ft north of Oakland Ave.
Air Knife or Hand Auger Depth: 12 ft bgs (HA)	**Boring Diameter:** 3.25 " (HA), 2.75 " (HP)
Coordinates: X NA Y NA	**Boring Type:** Exploratory HP Boring

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample ID	Recovery	Comments
0		CONCRETE					Boring grouted with neat Portland Cement. Top 3-6" finished to grade with cement.
		SAND: (FILL) Black (2.5Y 2.5/1), loose, moist, 10% silt, 90% sand.	SP				
		CLAYEY SILT: Black (2.5Y 2.5/1), very soft to soft, damp to moist, 25% clay, 70% silt, 5% sand, medium to high plasticity.	ML				
2							
4		@ 4.5 ft bgs: Color change to grayish brown (2.5Y 5/2). Decreased clay (20%), increased silt (75%).					
6		GRAVELLY SILT: Grayish brown (2.5Y 5/2), loose, soft, damp, 15% clay, 50% silt, 5% sand, 30% gravel.	ML				Top 12 feet of boring logged from hand auger cuttings.
		@ 5.5-6.5 ft bgs: ~5-25 mm subangular chert clasts throughout.					
		@ 6.5-7 ft bgs: ~2 inch subrounded pebble.					
		@ 7-8 ft bgs: Color change to light olive brown (2.5Y 5/3). Increased silt (60%), decreased gravel (20%).					
8		SILT: Light olive brown (2.5Y 5/3) to light yellowish brown (2.5Y 6/3), soft to medium stiff, damp, 10% clay, 80-85% silt (decreasing with depth), 5-10% sand (increasing with depth), low to no plasticity.	ML				
10		@ 11.8-12 ft bgs: Color change to grayish brown (2.5Y 5/2). No sand. Medium stiff to stiff.					

URS

LOG OF BORING

Borehole ID: SB-1

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample I.D.	Recovery	Comments
12		HydroPunch driven and exposed from 12 to 14 ft bgs. After 1 hour, no water was available for sampling.					
14		HydroPunch driven and exposed from 14 to 16 ft bgs. After 1 hour, no water was available for sampling.					
16		HydroPunch driven and exposed from 17 to 19 ft bgs. After 1 hour, no water was available for sampling.					
18							Bottom of Boring = 19 ft bgs

URS

1333 Broadway, Suite 800
Oakland, California 94612

LOG OF BORING

Borehole ID: SB-2

Total Depth: 19 ft bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: Former BP Service Station #11102	**Drilling Company:** Gregg Drilling & Testing
Site Location: 100 MacArthur Boulevard, Oakland, CA	**Driller:** Paul Rogers
Project Manager: Lynelle Onishi	**Type of Drilling Rig:** MARL M10T
PG: Barbara Jakub	**Drilling Method:** Airknife, Hand Auger (HA), and Hydropunch (HP)
Geologist: Barbara Jakub / Jeremy Quick	**Sampling Method:**
Job Number: 38487349.0A022	**Date(s) Drilled:** October 7, 2005

BORING INFORMATION	
Groundwater Depth: Groundwater Not Encountered	**Boring Location:** MacArthur Blvd., approx. 125 ft north of Oakland Ave.
Air Knife or Hand Auger Depth: 8 ft bgs (HA)	**Boring Diameter:** 3.25 " (HA), 2.75 " (HP)
Coordinates: X NA Y NA	**Boring Type:** Exploratory HP Boring

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample ID	Recovery	Comments
0		CONCRETE					Boring grouted with neat Portland Cement. Top 3-6" finished to grade with cement.
2		GRAVELLY SILT: Fill material.	ML				
		CLAYEY SILT: Black (2.5Y 2.5/1), soft, dry to moist.	ML				
		@ 3 ft bgs: 15% clay, 83% silt, 2% sand, and 3% angular gravel.		4.6			
4							
6		@ 6 ft bgs: Color change to dark gray (2.5Y 4/1). Minor subrounded gravel.					Top 8 feet of boring logged from hand auger cuttings.
		@ 6.5 ft bgs: Oxidation staining is apparent.		14.0			
		@ 7-8 ft bgs: Color change to grayish brown (2.5Y 5/2). Increased clay (20%), decreased silt (80%), no sand or gravel. Dry to damp, medium stiff to stiff, medium plasticity.		0			
8							
10							

URS

LOG OF BORING

Borehole ID: SB-2

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample I.D.	Recovery	Comments
12		HydroPunch driven and exposed from 12 to 14 ft bgs. After 1 hour, no water was available for sampling.					
14		HydroPunch driven and exposed from 14 to 16 ft bgs. After 1 hour, no water was available for sampling.					
16		HydroPunch driven and exposed from 17 to 19 ft bgs. After 1 hour, no water was available for sampling.					
18							Bottom of Boring = 19 ft bgs

URS

1333 Broadway, Suite 800
Oakland, California 94612

LOG OF BORING

Borehole ID: SB-3

Total Depth: 19 ft bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: Former BP Service Station #11102	**Drilling Company:** Gregg Drilling & Testing
Site Location: 100 MacArthur Boulevard, Oakland, CA	**Driller:** Paul Rogers
Project Manager: Lynelle Onishi	**Type of Drilling Rig:** MARL M10T
PG: Barbara Jakub	**Drilling Method:** Air Knife, Hand Auger (HA), and Hydropunch (HP)
Geologist: Barbara Jakub / Jeremy Quick	**Sampling Method:**
Job Number: 38487349.0A022	**Date(s) Drilled:** October 7, 2005
BORING INFORMATION	
Groundwater Depth: Groundwater Not Encountered	**Boring Location:** MacArthur Blvd., approx. 100 ft north of Oakland Ave.
Air Knife or Hand Auger Depth: 12 ft bgs (HA)	**Boring Diameter:** 3.25 " (HA), 2.75 " (HP)
Coordinates: X NA Y NA	**Boring Type:** Exploratory HP Boring

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample ID	Recovery	Comments
0		CONCRETE					Boring grouted with neat Portland Cement. Top 3-6" finished to grade with cement.
2		GRAVELLY SILT: Fill material. Very dark grayish brown (10YR 3/2), damp, 2% clay, 48% silt, 25% sand, 25% angular gravel, low to medium plasticity.	GM				
4		CLAYEY SILT: Very dark grayish brown (10YR 3/2), medium stiff, dry to moist, 20% clay, 78% silt, 2% fine sand, medium plasticity. @ 4 ft bgs: Color change to dark yellowish brown (10YR 4/4) with strong brown (7.5YR 5/8) and black (10YR 2/1) mottling.	ML				
6		SANDY SILT: Yellowish brown (10YR 4/3) with grayish brown (10YR 5/2) mottling, medium stiff, moist to wet, 3% clay, 82% silt, 15% sand, non-plastic.	ML				
8		CLAYEY SILT: Dark grayish brown (2.5Y 4/2) with dark yellowish brown (10YR 4/6) mottling, medium stiff, dry, 15% clay, 83% silt, 2% fine sand, low to medium plasticity, minor hydrocarbon odor. @ 6.5-8.5 ft bgs: Strong hydrocarbon odor.	ML				Top 12 feet of boring logged from hand auger cuttings.
10		SILTY SAND: Brown (10YR 4/3) with grayish brown (2.5Y 5/2) and strong brown (7.5YR 5/8) mottling, medium dense, dry, 15% clay, 25% silt, 45% sand, 15% gravel (angular quartz), low plasticity, hydrocarbon odor.	SM				
		CLAYEY SILT: Brown (10YR 4/3) with grayish brown (2.5Y 5/2) mottling, medium dense, dry, 15% clay, 85% silt, low plasticity, hydrocarbon odor.	ML				

URS

LOG OF BORING

Borehole ID : SB-3

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample I.D.	Recovery	Comments
12		SILT: Grayish brown (10YR 5/2) to light yellowish brown (2.5Y 6/3), stiff, dry to moist, 3% clay, 97% silt, minor hydrocarbon odor.	ML				
		HydroPunch driven and exposed from 12 to 14 ft bgs. After 1 hour, no water was available for sampling.					
14		HydroPunch driven and exposed from 14 to 16 ft bgs. After 1 hour, no water was available for sampling.					
16		HydroPunch driven and exposed from 17 to 19 ft bgs. After 1 hour, no water was available for sampling.					
18							Bottom of Boring = 19 ft bgs

URS

1333 Broadway, Suite 800
Oakland, California 94612

LOG OF BORING

Borehole ID: SB-4A

Total Depth: 36 ft bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: Former BP #11102	**Drilling Company:** Gregg Drilling & Testing
Site Location: 100 MacArthur Boulevard, Oakland, CA	**Driller:** Paul Rogers
Project Manager: Lynelle Onishi	**Type of Drilling Rig:** MARL M10T
PG: Barbara Jakub	**Drilling Method:** Airknife and Direct Push Technology (DP)
Geologist: Jeremy Quick	**Sampling Method:** Soil: Acetate by MacroCore; Groundwater: 3 VOAs
Job Number: 38487349.0A022	**Date(s) Drilled:** October 7, 2005

BORING INFORMATION	
Groundwater Depth: 24.5 ft bgs	**Boring Location:** Southwest corner, on-site near former boring SB-4.
Air Knife or Hand Auger Depth: 5.2 ft bgs (HA)	**Boring Diameter:** 2.75 "
Coordinates: X NA Y NA	**Boring Type:** Exploratory

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample ID	Recovery	Comments
0		ASPHALT					
		CLAYEY SILTY SAND: Yellowish brown (10YR 5/4), medium dense to dense, damp, 10% clay, 30% silt, 60% fine sand, medium plasticity. Notable oxidation staining.	SM				Boring grouted with neat Portland Cement. Top 3-6" finished to grade with cement.
2		CLAYEY SANDY SILT: Dark brown (10YR 3/3), soft to medium stiff, damp, 5% clay, 70% silt, 25% sand, medium plasticity.	ML				Airknife could not penetrate, hand auger used instead.
		SANDY CLAYEY SILT: Grayish brown (10YR 5/2), very soft to soft, damp, 15% clay, 80% silt, 5% sand, minor ~2 mm angular white chert gravel, medium to high plasticity.	ML				
4		@ 4-5.2 ft bgs: Notable oxidation staining.					Top 5.2 feet of boring logged from hand auger cuttings.
		@ 5.2-6 ft bgs: Color change to gray (10YR 5/1), medium stiff, medium plasticity. Notable oxidation staining.					
6		@ 6-9 ft bgs: Color change to brown (10YR 5/3), low to medium plasticity. Weathered granite clasts throughout. Notable oxidation staining.		3.1	SB-4A -6' 09:55		
8							
		SAND: Greenish gray (GLEY 1 5/5GY) with dark grayish brown (10YR 4/2) mottling, loose to medium dense, moist, 2% clay, 8% silt, 90% course sand, non-plastic, hydrocarbon odor. Increasing fines with depth.	SM				
10				8.0	SB-4A -10' 10:13		
		SANDY SILT: Brown (10YR 5/3), damp, 3% clay, 47% silt, 30% sand, 20% gravel, low plasticity.	ML				

URS

LOG OF BORING

Borehole ID: SB-4A

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample I.D.	Recovery	Comments
12							
14		No recovery from 12 to ~15.8 ft bgs. Could not remove acetate liner from Macrocore sampler.					
16		CLAYEY SILT: Pale brown (10YR 6/3), medium stiff to stiff, damp, 5% clay, 95% silt, low plasticity. Logged from sampler shoe.	ML	9.1			
		SAND: Dark yellowish brown (10YR 4/4) with dark grayish brown (10YR 4/2) mottling and very dark gray (10YR 3/1) patches, damp, loose to medium dense, 2% clay, 8% silt, 80% sand, 10% ~2-3 mm gravel, slight hydrocarbon odor. Notable oxidation staining.	SP				
18		@ 16.2-17 ft bgs: Grayish brown (10YR 5/2) with gray (10YR 5/1) patches.	ML	7.6			
		CLAYEY SILT: Gray (10YR 5/1) to dark grayish brown (10YR 4/2), medium stiff, damp, 15% clay, 80% silt, 5% sand, trace gravel (likely scrape material), low to medium plasticity, slight hydrocarbon odor.					
20		@ 20-22 ft bgs: Color change to yellowish brown (10YR 5/4). Soft to medium stiff. Hydrocarbon odor.		21.5	SB-4A -20' 10:23		
22		@ 22-23 ft bgs: Increasing fines, no sand. Hydrocarbon odor.		28.7			
		SILTY GRAVELLY SAND: Light olive brown (2.5Y 5/4), loose to medium dense, damp, 1% (minor) clay, 19% silt, 60% sand, 20% gravel, non-plastic.	SP				
24		CLAYEY SILT: Light olive brown (2.5Y 5/3), soft to medium stiff, damp, 10% clay, 90% silt, low to medium plasticity, slight hydrocarbon odor.	ML		SB-4A 12:05		▽ Boring was initially dry. Groundwater elevation measured after water was allowed to accumulate in the open boring for more than one hour.
26				3.2	SB-4A -25' 10:44		
28		@ 27.5-30 ft bgs: Color change to grayish brown (2.5Y 5/2) with dark gray (2.5Y 4/1) mottling to 28 ft bgs. Stiff to very stiff, low plasticity.		0.9			

URS

LOG OF BORING

Borehole ID: SB-4A

Depth (ft bgs)	Symbol	Lithologic Description	USCS	PID (ppm)	Sample I.D.	Recovery	Comments
30		@ 30-36 ft bgs: Color change to dark grayish brown (10YR 4/2). Stiff to very stiff.		5.2	SB-4A -30' 10:49		
32							
34							
		@ 35-36 ft bgs: Light gray (10YR 7/1) mottling. Very stiff.		0.8	SB-4A -35' 10:58		
36							Bottom of Boring = 36 ft bgs

ATTACHMENT D

ALAMEDA COUNTY PUBLIC WORKS AGENCY SOIL BORING PERMIT, CALTRANS PERMIT, AND CITY OF OAKLAND ENCROACHMENT 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
Site Location: Former BP Service Station #11102
100 MacArthur Blvd.
Oakland, CA

City of Project Site: Oakland

Project Start Date: 07/20/2005

Completion Date: 07/21/2005

Applicant: URS Corporation - Lynelle Onishi
1333 Broadway, Suite 800, Oakland, CA 94612
Phone: 510-874-1758

Property Owner: Conoco Phillips
76 Broadway, Sacramento, CA 95818
Phone: 916-558-7604

Client: Atlantic Richfield Company
4 Centerpointe Drive, Rm. 172, La Palma, CA 90623
Phone: 714-670-5303

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.

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

Job Site 100 MACARTHUR BL Parcel# 010 -0812-008-01 Appl# OB050664

block traffic lane per approved Traffic Control Plan Permit Issued 09/14/05

100 MACARTHUR BL

Nbr of days: 1 Linear feet: 300
Effective: 09/19/05 Expiration: 09/19/05

SHORT TERM NON-METERED

	Applicnt	Phone#	Lic#	License Classes
Owner URS CORP	X	(510)893-3600		
Contractor				
Arch/Engr				
Agent JOHN MCCAIN		(510)874-3026		
Applic Addr				

$267.37 TOTAL FEES PAID AT ISSUANCE

$59.00 Applic	$174.00 Permit
$.00 Process	$22.14 Rec Mgmt
$.00 Gen Plan	$.00 Invstg
$.00 Other	$12.23 Tech Enh

JOB SITE

ADDRESS:

DIST:

CITY OF OAKLAND

Applicant: John McCain 9-14-05

Issued by: [signature] U

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

ENCROACHMENT PERMIT

TR-0120

Permit No.	0405-6TK1403
Dist/Co/Rte/PM	04-Ala-580-44.33
Date	August 16, 2005
Fee Paid	$492.00
Deposit	$
Performance Bond Amount (1)	
Payment Bond Amount (2)	
Bond Company	
Bond Number (1)	
Bond Number (2)	

)ompliance with (*Check one*):

☒ Your application of Jury 19, 2005

☐ Utility Notice No. _____ of _____

☐ Agreement No. _____ of _____

☐ R/W Contract No. _____ of _____

TO: URS Corporation
833 Broadway, Suite 800
Oakland, CA 94612

Attn: Lynelle Onishi
Phone: (510) 893-3600

, **PERMITTEE**

And subject to the following, **PERMISSION IS HEREBY GRANTED** to:

Perform traffic control for soil drilling operation, on State Highway 04-Ala-580, Post Mile 44.33, at off-ramp to Santa Clara Avenue, in the City of Oakland.

One week prior to start of work under this permit, notice shall be given to, and approval of construction details,)rations, public safety, and traffic control shall be obtained from State Representative Norm Freitag, 600 Lewelling Boulevard, San Leandro, CA 94579, 510-614 5951, weekdays, between 7:30 AM and 4:00 PM.

All permitted work requires the Permittee to apply for and obtain a work authorization number prior to start of work. See the attached "Encroachment Permit Project Work Scheduling Procedures" and the attached "Permit Project Work Scheduling Request Form". Additional time beyond the minimum seven-day advanced notice required in the above paragraph may be required for obtaining the traffic control approval.

The following attachments are also included as part of this permit (*Check applicable*):

☒ Yes	☐ No	General Provisions
☐ Yes	☒ No	Utility Maintenance Provisions
☐ Yes	☒ No	Storm Water Special Previsions
☐ Yes	☒ No	A Cal-OSHA permit required prior to beginning work: # _____

In addition to fee, the permittee will be billed actual costs for:

☐ Yes	☒ No	Review
☒ Yes	☐ No	Inspection
☒ Yes	---------	Field Work

(If any Caltrans effort expended)

☐ Yes ☒ No The information in the environmental documentation has been reviewed and considered prior to approval of this permit.

This permit is void unless the work is completed before December 31, 2005

This permit is to be strictly construed and no other work other than specifically mentioned is hereby authorized.
No project work shall be commenced until all other necessary permits and environmental clearances have been obtained.

APB
CC: MMc(2), N.Freitag,
DTM- B.Loo, J.Richardson,
City of Oakland

APPROVED:

BIJAN SARTIPI, District Director

BY:

Acting for **S. S. NOZZARI, District Permit Engineer**

Immediately following completion of the work permitted herein, the permittee shall fill out and mail the Notice of completion attached to this permit.

The site of the work shall be enclosed by suitable barricades, signs and lights, as approved by State's representative, to warn and protect vehicular and pedestrian traffic effectively.

Placement of signal, barricade and all traffic devices shall be in accordance with the Caltrans Handbook of Traffic Control for Construction and Maintenance Work Zone.

All Permittee's personnel shall wear appropriate personal protective equipment, including hard hats and bright colored vests, shirts, or jackets with retro-reflective material while on State highway right of way.

Traffic control is restricted to closure of one lane and/or shoulder, on the off-ramp I-580 to Santa Clara Ave., authorized only between 9:00 P.M. and 5:00 A.M., Monday through Thursday, holidays excluded.

When approved traffic control performed under this permit shall be in accordance with the appropriate State Standard Plans T-10 through T-14. Where required by the plan, the use of flashing arrow-board is MANDATORY. (See attached Standard Plan T-11, and T-10).

Any damage to existing facilities, landscaping or irrigation within the State's Right of Way shall be replaced in kind by the Permittee at Permittee's expense.

In case considerable traffic congestion or other incidents (related to or not related to the permitted activity) occur within, or close to the permitted activity, the Permittee shall immediately stop work and remove traffic controls from the highway unless public health, welfare and safety is endangered by unfinished work. Only traffic control to protect open excavations may remain in place. After free flow traffic is restored, work in accordance with the conditions of the permit may begin.

STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION
ENCROACHMENT PERMIT GENERAL PROVISIONS
TR-0045 (REV. 08/2004)

1. **AUTHORITY:** The Department's authority to issue encroachment permits is provided under, Div. 1, Chpt. 3, Art. 1, Sect. 660 to 734 of the Streets and Highways Code.

2. **REVOCATION:** Encroachment permits are revocable on five days notice unless otherwise stated on the permit and except as provided by law for public corporations, franchise holders, and utilities. These General Provisions and the Encroachment Permit Utility Provisions are subject to modification or abrogation at any time. Permittees' joint use agreements, franchise rights, reserved rights or any other agreements for operating purposes in State highway right of way are exceptions to this revocation.

3. **DENIAL FOR NONPAYMENT OF FEES:** Failure to pay permit fees when due can result in rejection of future applications and denial of permits.

4. **ASSIGNMENT:** No party other than the permittee or permittee's authorized agent is allowed to work under this permit.

5. **ACCEPTANCE OF PROVISIONS:** Permittee understands and agrees to accept these General Provisions and all attachments to this permit, for any work to be performed under this permit.

6. **BEGINNING OF WORK:** When traffic is not impacted (see Number 35), the permittee shall notify the Department's representative, two (2) days before the intent to start permitted work. Permittee shall notify the Department's Representative if the work is to be interrupted for a period of five (5) days or more, unless otherwise agreed upon. All work shall be performed on weekdays during regular work hours, excluding holidays, unless otherwise specified in this permit.

7. **STANDARDS OF CONSTRUCTION:** All work performed within highway right of way shall conform to recognized construction standards and current Department Standard Specifications, Department Standard Plans High and Low Risk Facility Specifications, and Utility Special Provisions. Where reference is made to "Contractor and Engineer," these are amended to be read as "Permittee and Department representative."

8. **PLAN CHANGES:** Changes to plans, specifications, and permit provisions are not allowed without prior approval from the State representative.

9. **INSPECTION AND APPROVAL:** All work is subject to monitoring and inspection. Upon completion of work, permittee shall request a final inspection for acceptance and approval by the Department. The local agency permittee shall not give final construction approval to its contractor until final acceptance and approval by the Department is obtained.

10. **PERMIT AT WORKSITE:** Permittee shall keep the permit package or a copy thereof, at the work site and show it upon request to any Department representative or law enforcement officer. If the permit package is not kept and made available at the work site, the work shall be suspended.

11. **CONFLICTING ENCROACHMENTS:** Permittee shall yield start of work to ongoing, prior authorized, work adjacent to or within the limits of the project site. When existing encroachments conflict with new work, the permittee shall bear all cost for rearrangements, (e.g., relocation, alteration, removal, etc.).

12. **PERMITS FROM OTHER AGENCIES:** This permit is invalidated if the permittee has not obtained all permits necessary and required by law, from the Public Utilities Commission of the State of California (PUC), California Occupational Safety and Health Administration (Cal-OSHA), or any other public agency having jurisdiction.

13. **PEDESTRIAN AND BICYCLIST SAFETY:** A safe minimum passageway of 4' (1.21 meter) shall be maintained through the work area at existing pedestrian or bicycle facilities. At no time shall pedestrians be diverted onto a portion of the street used for vehicular traffic. At locations where safe alternate passageways cannot be provided, appropriate signs and barricades shall be installed at the limits of construction and in advance of the limits of construction at the nearest crosswalk or intersection to detour pedestrians to facilities across the street.

14. **PUBLIC TRAFFIC CONTROL:** As required by law, the permittee shall provide traffic control protection warning signs, lights, safety devices, etc., and take all other measures necessary for traveling public's safety. Day and night time lane closures shall comply with the MUTCD and CA Supplement (Part 6, Temporary Traffic Control), Standard Plans, and Standard Specifications for traffic control systems. These General Provisions are not intended to impose upon the permittee, by third parties, any duty or standard of care, greater than or different from, as required by law.

15. **MINIMUM INTERFERENCE WITH TRAFFIC:** Permittee shall plan and conduct work so as to create the least possible inconvenience to the traveling public; traffic shall not be unreasonably delayed. On conventional highways, permittee shall place properly attired flagger(s) to stop or warn the traveling public in compliance with the MUTCD and CA Supplement (Chapter 6E, Flagger Control).

16. **STORAGE OF EQUIPMENT AND MATERIALS:** The storage of equipment or materials **is not** allowed within State highway right-of-way, **unless specified** within the Special Provisions of this specific encroachment permit. If Encroachment Permit Special Provisions allow for the storage of equipment or materials within the State right of way, the equipment and material storage shall comply with Standard Specifications, Standard Plans, Special Provisions, and the Highway Design Manual. The clear recovery zone widths must be followed and are the minimum desirable for the type of facility indicated below: freeways and expressways-9 m, conventional highways (no curbs)-6 m, conventional highways (with curbs)- 0.5 m. If a fixed object cannot be eliminated, moved outside the clear recovery zone, or modified to be made yielding, it should be shielded by a guardrail or a crash cushion.

17. **CARE OF DRAINAGE:** Permittee shall provide alternate drainage for any work interfering with an existing drainage facility in compliance with the Standard Specifications, Standard Plans and/or as directed by the Department's representative.

18. **RESTORATION AND REPAIRS IN RIGHT OF WAY:** Permittee is responsible for restoration and repair of State highway right of way resulting from permitted work (State Streets and Highways Code, Sections 670 et. seq.).

19. **RIGHT OF WAY CLEAN UP:** Upon completion of work, permittee shall remove and dispose of all scraps, brush, timber, materials, etc. off the right of way. The aesthetics of the highway shall be as it was before work started.

permittee waives any and all rights to any type of expressed or implied indemnity against the State, its officers, employees, and State contractors. It is the intent of the parties that the permittee will indemnify and hold harmless the State, its officers, employees, and State's contractors, from any and all claims, suits or actions as set forth above regardless of the existence or degree of fault or negligence, whether active or passive, primary or secondary, on the part of the State, the permittee, persons employed by the permittee, or acting on behalf of the permittee.

For the purpose of this section, "State's contractors" shall include contractors and their subcontractors under contract to the State of California performing work within the limits of this permit.

29. **NO PRECEDENT ESTABLISHED:** This permit is issued with the understanding that it does not establish a precedent.

30. **FEDERAL CIVIL RIGHTS REQUIREMENTS FOR PUBLIC ACCOMMODATION:**
A. The permittee, for himself, his personal representative, successors in interest, and assigns as part of the consideration hereof, does hereby covenant and agree that:
1. No person on the grounds of race, color, or national origin shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.
2. That in connection with the construction of any improvements on said lands and the furnishings of services thereon, no discrimination shall be practiced in the selection and retention of first-tier subcontractors in the selection of second-tier subcontractors.
3. That such discrimination shall not be practiced against the public in their access to and use of the facilities and services provided for public accommodations (such as eating, sleeping, rest, recreation), and operation on, over, or under the space of the right of way.
4. That the permittee shall use the premises in compliance with all other requirements imposed pursuant to Title 15, Code of Federal Regulations, Commerce and Foreign Trade, Subtitle A. Office of the Secretary of Commerce, Part 8 (15 C.F.R. Part 8) and as said Regulations may be amended.
5.That in the event of breach of any of the above nondiscrimination covenants, the State shall have the right to terminate the permit and to re-enter and repossess said land and the land and the facilities thereon, and hold the same as if said permit had never been made or issued.

31. **MAINTENANCE OF HIGHWAYS:** The permittee agrees, by acceptance of a permit, to properly maintain any encroachment. This assurance requires the permittee to provide inspection and repair any damage, at permittee's expense, to State facilities resulting from the encroachment.

32. **SPECIAL EVENTS:** In accordance with subdivision (a) of Streets and Highways Code Section 682.5, the Department of Transportation shall not be responsible for the conduct or operation of the permitted activity, and the applicant agrees to defend, indemnify, and hold harmless the State and the city or county against any and all claims arising out of any activity for which the permit is issued.

Permittee understands and agrees that it will comply with the obligations of Titles II and III of the Americans with Disabilities Act of 1990 in the conduct of the event, and further agrees to indemnify and save harmless the State of California, all officers and employees thereof, including but not limited to the Director of Transportation, from any claims or liability arising out of or by virtue of said Act.

33. **PRIVATE USE OF RIGHT OF WAY:** Highway right of way shall not be used for private purposes without compensation to the State. The gifting of public property use and therefore public funds is prohibited under the California Constitution, Article 16.

34. **FIELD WORK REIMBURSEMENT:** Permittee shall reimburse State for field work performed on permittee's behalf to correct or remedy hazards or damaged facilities, or clear debris not attended to by the permittee.

35. **NOTIFICATION OF DEPARTMENT AND TMC:** The permittee shall notify the Department's representative and the Transportation Management Center (TMC) at least 7 days before initiating a lane closure or conducting an activity that may cause a traffic impact. A confirmation notification should occur 3 days before closure or other potential traffic impacts. In emergency situations when the corrective work or the emergency itself may affect traffic, TMC and the Department's representative shall be notified as soon as possible.

36. **SUSPENSION OF TRAFFIC CONTROL OPERATION:** The permittee, upon notification by the Department's representative, shall immediately suspend all lane closure operations and any operation that impedes the flow of traffic. All costs associated with this suspension shall be borne by the permittee.

37. **UNDERGROUND SERVICE ALERT (USA) NOTIFICATION:** Any excavation requires compliance with the provisions of Government Code Section 4216 et. seq., including , but not limited to notice to a regional notification center, such as Underground Service Alert (USA). The permittee shall provide notification at least 48 hours before performing any excavation work within the right of way.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

July 1, 2002
PLANS APPROVAL DATE

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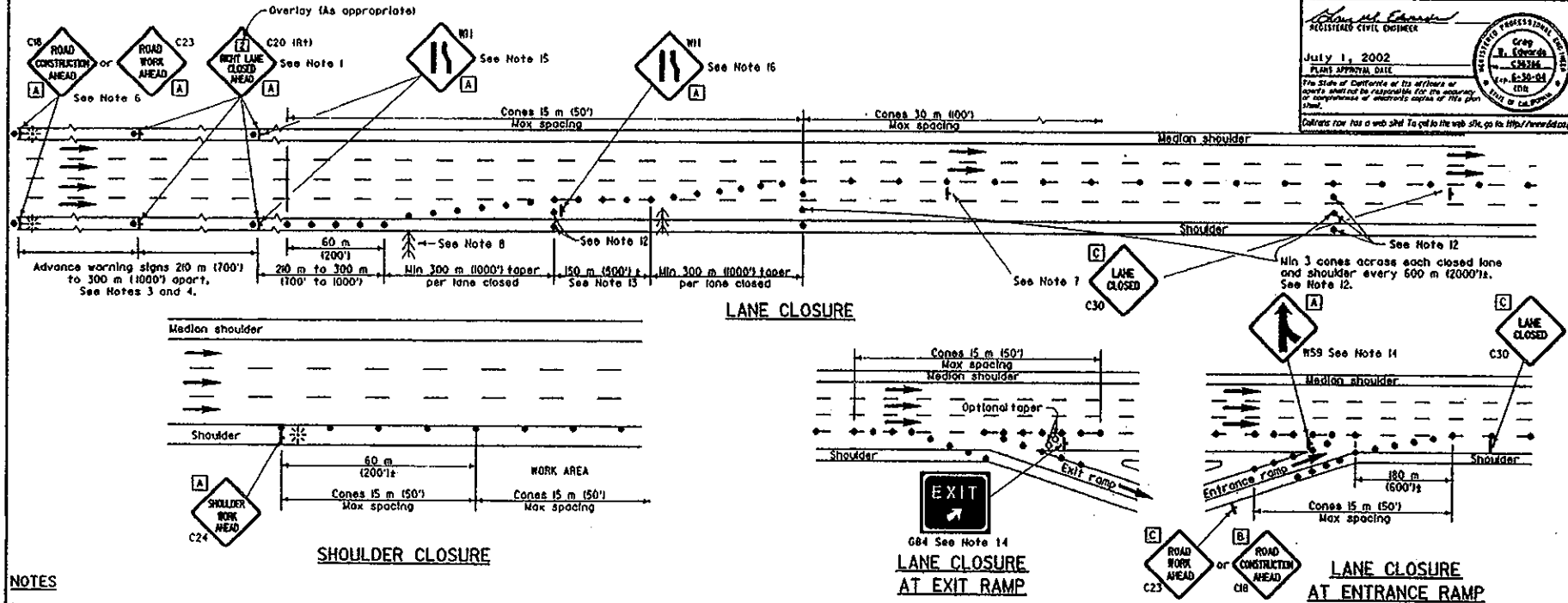

LANE CLOSURE

SHOULDER CLOSURE

LANE CLOSURE AT EXIT RAMP

LANE CLOSURE AT ENTRANCE RAMP

NOTES

1. Median lane closures shall conform to the details for outside lane closures except that C20 (Lt) signs shall be used.
2. Not less than one person shall be assigned to full time maintenance of traffic control devices on all night lane closures or day-time closures exceeding 1.6 km (1 mile) in length, including taper.
3. Duplicate sign installations are not required:
   a) On opposite shoulder if at least one-half of the available lanes remain open to traffic.
   b) In the median, if the width of the median shoulder is less than 2.4 m (8') and the outside lanes are to be closed.
4. All advance warning sign installations shall be equipped with flags for daytime closures. Flashing beacons shall be placed at the locations indicated during night lane closure.
5. A C13 "END CONSTRUCTION" or C14 "END ROAD WORK" signs, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.
6. If the C18 (or C23) sign would follow within 600 m (2000') of a stationary C18, C23 or C11 "STATE HIGHWAY CONSTRUCTION NEXT ___ MILES", use a C20 sign for the first advance warning sign.
7. Place a C30 sign every 600 m (2000') throughout length of lane closure.
8. One flashing arrow sign for each lane closed. The first flashing arrow sign shall be Type I. All others may be either Type I or Type II.
9. A minimum 450 m (1500') of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
10. All cones used for night lane closures shall be fitted with reflective sleeves as specified in the specifications.
11. Portable delineators, place at one-half the spacing indicated for traffic cones may be used in lieu of cones for daytime closures only.
12. Unless otherwise specified in the Special Provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 600 m (2000') as shown on the "LANE CLOSURE" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
13. Unless otherwise specified in the Special Provisions, the 150 m (500') section of the lane closure shown along lanelines shall be used between the 300 m (1000') lane closure tapers when two or more adjacent traffic lanes are to be closed
14. Unless otherwise specified in the Special Provisions, the G84 and W59 signs shall be used as shown.
15. Where specified in the Special Provisions, a W1 "LANE REDUCTION SYMBOL" sign is to be used in place of the C20 "RIGHT LANE CLOSED AHEAD" sign.
16. The W1 "LANE REDUCTION SYMBOL" sign shown at this location is to be used where the W1 sign is used as advance warning as described in Note 15.

SIGN PANEL SIZE (Min)

- A 1219 mm x 1219 mm (48" x 48")
- B 914 mm x 914 mm (36" x 36")
- C 762 mm x 762 mm (30" x 30")

LEGEND

- Traffic Cone
- Traffic Cone (optional taper)
- Portable Sign
- Flashing Arrow Sign
- Direction of Travel
- Portable Flashing Beacon

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS

These "Standard Plans for Construction of Local Streets and Roads" contain units in two systems of measurement: International System of Units (SI or "metric") and United States Standard Measures shown in the parentheses ( ). The measurements expressed in the two systems are not necessarily equal or interchangeable. See the "Foreword" at the beginning of this publication.

NO SCALE

T10

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

July 1, 2002

PLANS APPROVAL DATE

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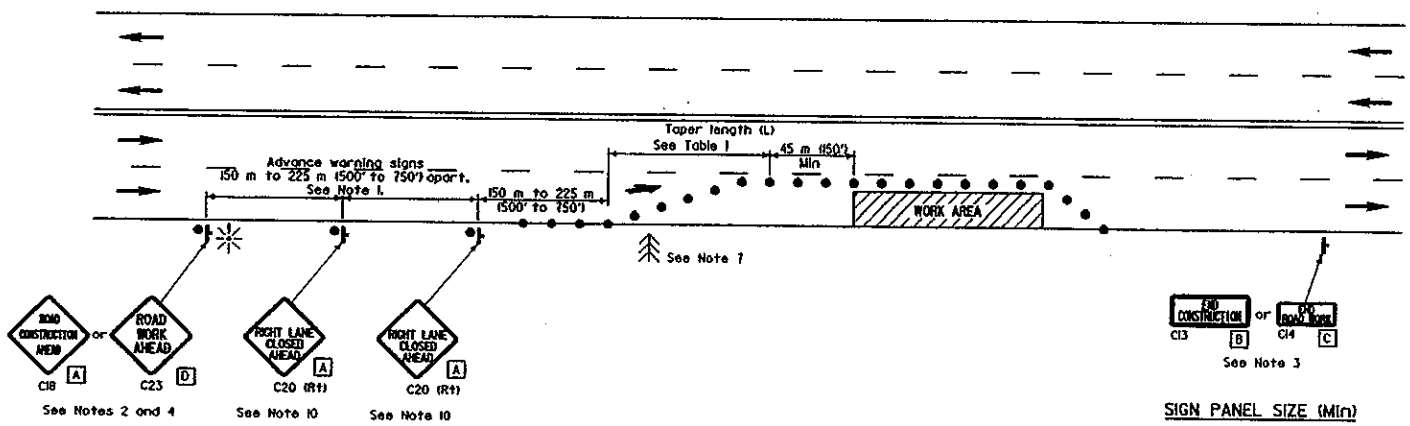
REGISTERED PROFESSIONAL ENGINEER — Greg W. Edwards — No. C36384 — Exp. 6-30-04 — CIVIL — STATE OF CALIFORNIA

TYPICAL LANE CLOSURE



SIGN PANEL SIZE (Min)

- A 914 mm x 914 mm (36" x 36")
- B 1219 mm x 457 mm (48" x 18")
- C 914 mm x 457 mm (36" x 18")
- D 762 mm x 762 mm (30" x 30")

LEGEND

- Traffic Cone
- Portable Sign
- Direction of Travel
- Flashing Arrow Sign
- Portable Flashing Beacon

NOTES:

1. Where approach speeds are low, signs may be placed at 90 m (300') spacing, and in urban areas, closer.
2. All advance warning sign installations shall be equipped with flags for daytime closures. Flashing Beacons shall be placed at the locations indicated for nighttime closures.
3. A C13 "END CONSTRUCTION" or C14 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a longer project's limits.
4. If the C18 (or C23) sign would follow within 600 m (2000') of a stationary C18, C23, or C11 "STATE HIGHWAY CONSTRUCTION NEXT _____ MILES", use a C20 sign for the first advance warning sign.
5. All cones used for night lane closures shall be fitted with reflective sleeves as specified in the specifications.
6. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used in lieu of cones for daytime closures only.
7. Flashing arrow sign shallbe either Type I or Type II.
8. The maximum spacing between cones in a taper shall be approximately as shown in Table I and 15 m (50') maximum spacing on tangent.
9. For approach speeds over 80 km/h (50 mph), use the "Traffic Control System for Lane Closure On Freeways and Expressways" plan for lane closure details and requirements.
10. Where specified in the special provisions, a W11 "LANE REDUCTION SYMBOL" sign is to be used in place of the C20 "RIGHT LANE CLOSED AHEAD" sign.

TABLE I

Approach Speed	* Taper Length (L)	* Number of Cones for Taper	Spacing of Cones Along Taper
0-40 Km/h (0-25 mph)	38m (125')	6	7.5 m (25') t
40-65 Km/h (25-40 mph)	98 m (320')	9	12 m (40')t
65-80km/h (40-50 mph)	183 m (600')	13	15 m (50')t
Over 80 Km/h (50 mph)	See Note 9		

* Based on 3.6 (12') wide lane. This column is also appropriate for lane widths Less than 3.6 m (12')

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS

These "Standard Plans for Construction of Local Streets and Roads" contain units in two systems of measurement: International System of Units (SI or "metric") and United States Standard Measures shown in the parentheses ( ). The measurements expressed in the two systems are not necessarily equal or interchangeable. See the "foreword" at the beginning of this publication.

NO SCALE

T11

1. NPDES REQUIREMENTS: Permittee shall be responsible for full compliance with the Caltrans Storm Water Program and the Caltrans NPDES permit requirements. For additional information, visit the Caltrans Stormwater Website at http://www.dot.ca.gov/hq/construc/stormwater/stormwater1.htm

2. RESPONSIBILITY FOR DEBRIS: Permittee shall be responsible for preventing all dirt, trash, debris and other construction waste from entering storm drains, local creeks, or other bodies of water.

3. VEHICLES AT THE WORK SITE: Permittee shall prevent all vehicles, equipment, etc. from leakage or mud tracking onto roadways.

4. VEHICLE FUEL AT THE WORKSITE: Permittee equipment fueling and maintenance activities shall not result in any pollution at the job site.

5. CLEANING VEHICLES AT WORKSITE: Permittee shall clean all equipment with clean water only in a bermed area or over a drip pan large enough to prevent run-off. No soaps, solvents, degreasers, etc shall be used in State right of way. Any water from this operation shall be collected and disposed of at an appropriate site.

6. WEATHER CONDITIONS AT WORKSITE: All paving painting, grinding, and saw-cutting operations shall be performed during dry weather.

7. FRESH AC: Fresh AC shall not be washed.

8. PROTECTION OF DRAINAGE: Permittee shall protect/cover gutters, ditches, drainage courses, and inlets with sand/gravel bags, fiber rolls, etc., to the satisfaction of the State representative during paving operations, saw-cutting, etc.

9. SAW CUTTING: No dry saw-cutting shall be allowed.

10. SPOILS & RESIDUE: Permittee shall vacuum or sweep any saw-cut spoils, debris, residue, etc. No spoils, debris, residue, etc. shall be washed into a drainage system.

11. PAINT: Rinsing of paintbrushes or materials is not permitted in state right-of-way. Oil based paint sludge and unusable thinner shall be disposed of at an approved hazardous waste site.

12. GROUT & MORTAR: All construction materials including concrete, grout, cement containing premixes and mortar shall be stored under cover and separated away from drainage areas. Stored materials shall not reach a storm drain.

13. CONCRETE EQUIPMENT/VEHICLES: Concrete equipment/trucks shall be washed out off of State right of way or in a designated washing area as required by Caltrans Standards.

14. SOIL DISTURBANCE: Soil disturbing activities shall be avoided during the rainy season. If grading activities during wet weather are allowed in your permit, all control measures necessary to prevent erosion shall be implemented.

15. EXISTING VEGETATION: Mature vegetation is the best form of erosion control. Disturbance to existing vegetation shall be minimized whenever possible.

16. SLOPES: In cases where slopes are disturbed during construction, soil shall be secured with erosion control and soil stabilization measures. Fiber rolls shall be placed downslope until the soil is secure.

17. CATCH BASINS: Sand, dirt, and similar materials shall be stored at least 3-meters (10-feet) from catch basins and covered with a tarp during wet weather or when rain is forecast.

18. SWEEPING: Roadways and other paved areas shall be swept daily. Roadways or work areas shall not be washed down with water.

19. CONTAMINATED WATER: The State representative shall be notified in case any unusual discoloration, odor, texture in ground water, in excavated material or abandoned underground tanks, pipes, or buried debris are encountered.

20. DIESEL FUELS: Use of diesel as a form-oil shall not be Permitted.

21. DEWATERING: Any effluent discharged into any storm water system requires a waste discharge permit from the Regional Water Quality Control Board. The permittee shall provide the State Representative with the Waste Discharge Identification Number.

ATTACHMENT E

FIELD PROCEDURES AND FIELD DATA SHEETS

WELL GAUGING DATA

Project # 051017-PC2 Date 10/17/05 Client SP 11102

Site 1000 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					10.96	32.06	TOC	
MW-2	4					12.48	32.40	↓	
MW-3	4					11.84	32.46	↓	
					9				
					↓				

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 050117-PC2	Station # BP 11102
Sampler: PC	Date: 10/17/05
Well I.D.: MW-1	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth: 32.06	Depth to Water: 10.96
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
- (Electric Submersible)
- Extraction Pump
- Other: ____

Sampling Method:
- Bailer
- (Disposable Bailer)
- Extraction Port
- Other: ____

Top of Screen: ____

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

13.7 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 41.1 Gals. (Calculated Volume)

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1250	69.6	7.4	650	14	
1254	69.3	7.7	775	28	
1257	69.0	8.0	779	41.5	

Did well dewater? Yes (No)		Gallons actually evacuated: 41.5	
Sampling Time: 1302		Sampling Date: 10/17/05	
Sample I.D.: MW-1		Laboratory: Pace Sequoia Other ____	
Analyzed for: (GRO) (BTEX) MTBE DRO (Oxy's) 1,2-DCA EDB (Ethanol)		Other:	
D.O. (if req'd): Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd): Pre-purge:	mV	Post-purge:	mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 051017-PC1	Station # BP11102
Sampler: PC	Date: 10/17/05
Well I.D.: MW-2	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth: 32.40	Depth to Water: 12.48
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 / (Electric Submersible) / Extraction Pump / Other: ____

Sampling Method: Bailer / (Disposable Bailer) / Extraction Port / Other: ____

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

12.9 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 38.7 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1345	69.6	8.6	760	13	clear
1348	69.8	8.5	878	26	
	well dewatered				
1358	20.8	8.2	2477		Site depart DTW: 29.50'

Did well dewater? (Yes) No Gallons actually evacuated: 29

Sampling Time: 1358 Sampling Date: 10/17/05

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

Analyzed for: (GRO) (BTEX) MTBE DRO (Oxy's) (1,2-DCA) (EDB) (Ethanol) Other:

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

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 051017-PC2	Station # BP 11102
Sampler: PC	Date: 10/17/05
Well I.D.: MW-3	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 32.40	Depth to Water: 11.84
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 / (Electric Submersible) / Extraction Pump / Other: ___

Sampling Method: Bailer / (Disposable Bailer) / Extraction Port / Other: ___

Top of Screen: ___

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

13.4 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 30.2 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1320	69.9	7.9	616	13.5	
1323	71.2	8.9	609	27	
1326	70.4	8.5	656	30.5	

Did well dewater? Yes (No)

Gallons actually evacuated: 30.5

Sampling Time: 1332

Sampling Date: 10/17/05

Sample I.D.: MW-3

Laboratory: Pace (Sequoia) Other ___

Analyzed for: (GRO) (BTEX) MTBE DRO (Oxys) (1,2-DCA) (EDB) (Naphth) Other:

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

Chain of Custody Record

Project Name: Analytical for QMR sampling
BP BU/AR Region/Enfos Segment: BP > Americas > West Coast > Retail > WCBU > CA > Central > 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: 1200	Temp: 75°F
Off-site Time: 1410	Temp: 80°F
Sky Conditions: clear	
Meteorological Events: none	
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 / Jamshid Kekobad	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	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	1302	10/17/05		x			3				x		x	x	x	x							
2	MW-2	1358	|		x			3				x		x	x	x	x							
3	MW3	1332	|		x			3				x		x	x	x	x							
4	TB-11102101720005	—	|		x			2				x		x	x	x	x							on hold
5																								
6																								
7																								
8																								
9																								
10																								

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: B.R. Cornish	[signature]	10/17/05	1600	[signature] Sample Custodian	10/17/05	1600
Sampler's Company: BTS	[signature] Sample Custodian	10/18/05	1700	[signature]	10/18/05	1700
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

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

BP COC Rev. 4 10/1/04

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 PLAINE 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:

BP 11102

Station #

100 MacArthur Blvd., Oakland

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

10Z

added equip. rinse water 10

any other adjustments

TOTAL GALS. RECOVERED 12

loaded onto BTS vehicle # 58

BTS event # 051017RK1

time 1300

date 10/17/05

signature

* *

REC'D AT BTS

time

date 10/17/05

unloaded by signature

WELLHEAD INSPECTION CHECKLIST
BP / GEM

Date 10/7/05

Site Address 100 Macarthur Blvd, Oakland

Job Number 051017-PC2 Technician P. Lamish

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
MW-1	✓							
MW-2	✓							
MW-3	~~✓~~						1	

NOTES: MW-3 2/2 tabs stripped

ATTACHMENT F

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY RECORDS

Sequoia
Analytical

885 Jarvis Drive
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(408) 776-9600
FAX (408) 782-6308
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25 October, 2005

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

RE: BP Heritage #11102, Oakland, CA
Work Order: MOJ0420

Enclosed are the results of analyses for samples received by the laboratory on 10/07/05 19:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kekobad

Jamshid Kekobad
Project Manager

CA ELAP Certificate #1210

The results in this laboratory report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the BPGCLN Technical Specifications, applicable Federal, State, local regulations and certification requirements as well as the methodologies as described in laboratory SOPs reviewed by the BPGCLN. This entire report was reviewed and approved for release.

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOJ0420
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/25/05 10:33

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-4A-6	MOJ0420-01	Soil	10/07/05 09:55	10/07/05 19:00
SB-4A-10	MOJ0420-02	Soil	10/07/05 10:13	10/07/05 19:00
SB-4A@20'	MOJ0420-03	Soil	10/07/05 10:23	10/07/05 19:00
SB-4A-25'	MOJ0420-04	Soil	10/07/05 10:44	10/07/05 19:00
SB-4A-30'	MOJ0420-05	Soil	10/07/05 10:49	10/07/05 19:00
SB-4A@35'	MOJ0420-06	Soil	10/07/05 10:58	10/07/05 19:00
SB-4A	MOJ0420-07	Water	10/07/05 12:05	10/07/05 19:00
Trip Blank	MOJ0420-08	Water	10/07/05 00:00	10/07/05 19:00

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

These samples were received with no custody seals.

Sequoia Analytical

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOJ0420
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/25/05 10:33

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-4A-6 (MOJ0420-01) Soil Sampled: 10/07/05 09:55 Received: 10/07/05 19:00									
tert-Amyl methyl ether	ND	0.012	mg/kg	2.5	5J12028	10/12/05	10/13/05	EPA 8260B	
Benzene	ND	0.012	"	"	"	"	"	"	
tert-Butyl alcohol	ND	0.050	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.012	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.012	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.012	"	"	"	"	"	"	
Ethanol	ND	0.25	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.012	"	"	"	"	"	"	
Ethylbenzene	ND	0.012	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.073**	0.012	"	"	"	"	"	"	
Toluene	ND	0.012	"	"	"	"	"	"	
Xylenes (total)	ND	0.012	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.25	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*78 %*	*60-125*		"	"	"	"	
SB-4A-10 (MOJ0420-02) Soil Sampled: 10/07/05 10:13 Received: 10/07/05 19:00									
tert-Amyl methyl ether	ND	0.025	mg/kg	1	5J14036	10/14/05	10/15/05	EPA 8260B	
Benzene	ND	0.050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	5.0	"	"	"	"	"	"	PF
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	**0.20**	0.025	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Xylenes (total)	ND	0.050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	2.5	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*60-125*		"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOJ0420
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/25/05 10:33

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-4A@20' (MOJ0420-03) Soil Sampled: 10/07/05 10:23 Received: 10/07/05 19:00									
tert-Amyl methyl ether	**0.12**	0.050	mg/kg	2	5J14036	10/14/05	10/19/05	EPA 8260B	
Benzene	ND	0.10	"	"	"	"	"	"	
tert-Butyl alcohol	ND	10	"	"	"	"	"	"	PF
Di-isopropyl ether	ND	0.050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.050	"	"	"	"	"	"	
Ethanol	ND	20	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	
Ethylbenzene	ND	0.10	"	"	"	"	"	"	
Methyl tert-butyl ether	**5.0**	0.050	"	"	"	"	"	"	
Toluene	ND	0.10	"	"	"	"	"	"	
Xylenes (total)	ND	0.10	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	5.0	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*60-125*		"	"	"	"	
SB-4A-25' (MOJ0420-04) Soil Sampled: 10/07/05 10:44 Received: 10/07/05 19:00									
tert-Amyl methyl ether	ND	0.025	mg/kg	1	5J14036	10/14/05	10/19/05	EPA 8260B	
Benzene	ND	0.050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	5.0	"	"	"	"	"	"	PF
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	**0.84**	0.025	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Xylenes (total)	ND	0.050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	2.5	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*60-125*		"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOJ0420
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/25/05 10:33

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-4A-30' (MOJ0420-05) Soil	**Sampled: 10/07/05 10:49**	**Received: 10/07/05 19:00**							
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	5J10005	10/10/05	10/10/05	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	**0.024**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.10	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*91 %*	*60-125*		"	"	"	"	
SB-4A@35' (MOJ0420-06) Soil	**Sampled: 10/07/05 10:58**	**Received: 10/07/05 19:00**							
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	5J10005	10/10/05	10/10/05	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	**0.057**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	0.10	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*98 %*	*60-125*		"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOJ0420
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/25/05 10:33

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SB-4A (MOJ0420-07) Water	**Sampled: 10/07/05 12:05**	**Received: 10/07/05 19:00**							**BZ,BU**
tert-Amyl methyl ether	**110**	25	ug/l	50	5J16002	10/16/05	10/17/05	EPA 8260B	
Benzene	ND	25	"	"	"	"	"	"	
tert-Butyl alcohol	**5700**	1000	"	"	"	"	"	"	
Di-isopropyl ether	ND	25	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	25	"	"	"	"	"	"	
1,2-Dichloroethane	ND	25	"	"	"	"	"	"	
Ethanol	ND	5000	"	"	"	"	"	"	IC
Ethyl tert-butyl ether	ND	25	"	"	"	"	"	"	
Ethylbenzene	ND	25	"	"	"	"	"	"	
Methyl tert-butyl ether	**4500**	25	"	"	"	"	"	"	
Toluene	ND	25	"	"	"	"	"	"	
Xylenes (total)	ND	25	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	**3000**	2500	"	"	"	"	"	"	PV
Surrogate: 1,2-Dichloroethane-d4		*90 %*	*60-135*		"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOJ0420
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/25/05 10:33

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 5J10005 - EPA 5030B P/T / EPA 8260B										
Blank (5J10005-BLK1)				Prepared & Analyzed: 10/10/05						
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	*0.00485*		"	*0.00500*		*97*	*60-125*			
Laboratory Control Sample (5J10005-BS1)				Prepared & Analyzed: 10/10/05						
tert-Amyl methyl ether	0.0171	0.0050	mg/kg	0.0150		114	80-130			
Benzene	0.00474	0.0050	"	0.00516		92	65-125			
tert-Butyl alcohol	0.147	0.020	"	0.143		103	80-165			
Di-isopropyl ether	0.0164	0.0050	"	0.0151		109	85-115			
1,2-Dibromoethane (EDB)	0.0153	0.0050	"	0.0149		103	85-130			
1,2-Dichloroethane	0.0144	0.0050	"	0.0147		98	63-124			
Ethanol	0.145	0.10	"	0.142		102	35-150			
Ethyl tert-butyl ether	0.0165	0.0050	"	0.0150		110	80-125			
Ethylbenzene	0.00700	0.0050	"	0.00754		93	80-135			
Methyl tert-butyl ether	0.00720	0.0050	"	0.00702		103	75-115			
Toluene	0.0381	0.0050	"	0.0372		102	85-125			
Xylenes (total)	0.0420	0.0050	"	0.0412		102	80-140			
Gasoline Range Organics (C4-C12)	0.487	0.10	"	0.440		111	53-126			
Surrogate: 1,2-Dichloroethane-d4	*0.00448*		"	*0.00500*		*90*	*60-125*			

Sequoia Analytical

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOJ0420
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/25/05 10:33

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 5J10005 - EPA 5030B P/T / EPA 8260B										
Matrix Spike (5J10005-MS1)	**Source: MOJ0436-03**			Prepared & Analyzed: 10/10/05						
tert-Amyl methyl ether	0.0168	0.0050	mg/kg	0.0150	0.00016	111	80-130			
Benzene	0.00479	0.0050	"	0.00516	ND	93	65-125			
tert-Butyl alcohol	0.124	0.020	"	0.143	ND	87	80-135			
Di-isopropyl ether	0.0165	0.0050	"	0.0151	ND	109	85-115			
1,2-Dibromoethane (EDB)	0.0152	0.0050	"	0.0149	ND	102	85-130			
1,2-Dichloroethane	0.0141	0.0050	"	0.0147	ND	96	63-124			
Ethanol	0.146	0.10	"	0.142	ND	103	35-150			
Ethyl tert-butyl ether	0.0167	0.0050	"	0.0150	ND	111	80-125			
Ethylbenzene	0.00714	0.0050	"	0.00754	ND	95	80-135			
Methyl tert-butyl ether	0.00689	0.0050	"	0.00702	ND	98	75-115			
Toluene	0.0380	0.0050	"	0.0372	ND	102	85-125			
Xylenes (total)	0.0415	0.0050	"	0.0412	ND	101	80-140			
Gasoline Range Organics (C4-C12)	0.492	0.10	"	0.440	ND	112	53-126			
Surrogate: 1,2-Dichloroethane-d4	*0.00413*		"	*0.00500*		*83*	*60-125*			
Matrix Spike Dup (5J10005-MSD1)	**Source: MOJ0436-03**			Prepared & Analyzed: 10/10/05						
tert-Amyl methyl ether	0.0173	0.0050	mg/kg	0.0150	0.00016	114	80-130	3	25	
Benzene	0.00475	0.0050	"	0.00516	ND	92	65-125	0.8	20	
tert-Butyl alcohol	0.140	0.020	"	0.143	ND	98	80-135	12	20	
Di-isopropyl ether	0.0164	0.0050	"	0.0151	ND	109	85-115	0.6	20	
1,2-Dibromoethane (EDB)	0.0152	0.0050	"	0.0149	ND	102	85-130	0	15	
1,2-Dichloroethane	0.0143	0.0050	"	0.0147	ND	97	63-124	1	25	
Ethanol	0.163	0.10	"	0.142	ND	115	35-150	11	40	
Ethyl tert-butyl ether	0.0166	0.0050	"	0.0150	ND	111	80-125	0.6	25	
Ethylbenzene	0.00733	0.0050	"	0.00754	ND	97	80-135	3	20	
Methyl tert-butyl ether	0.00692	0.0050	"	0.00702	ND	99	75-115	0.4	35	
Toluene	0.0393	0.0050	"	0.0372	ND	106	85-125	3	15	
Xylenes (total)	0.0432	0.0050	"	0.0412	ND	105	80-140	4	20	
Gasoline Range Organics (C4-C12)	0.497	0.10	"	0.440	ND	113	53-126	1	25	
Surrogate: 1,2-Dichloroethane-d4	*0.00420*		"	*0.00500*		*84*	*60-125*			

Sequoia Analytical

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOJ0420
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/25/05 10:33

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 5J12028 - EPA 5030B P/T / EPA 8260B										
Blank (5J12028-BLK1)				Prepared & Analyzed: 10/12/05						
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	*0.00498*		"	*0.00500*		*100*	*60-125*			
Laboratory Control Sample (5J12028-BS1)				Prepared & Analyzed: 10/12/05						
tert-Amyl methyl ether	0.0181	0.0050	mg/kg	0.0150		121	80-130			
Benzene	0.00478	0.0050	"	0.00516		93	65-125			
tert-Butyl alcohol	0.140	0.020	"	0.143		98	80-165			
Di-isopropyl ether	0.0169	0.0050	"	0.0151		112	85-115			
1,2-Dibromoethane (EDB)	0.0159	0.0050	"	0.0149		107	85-130			
1,2-Dichloroethane	0.0168	0.0050	"	0.0147		114	63-124			
Ethanol	0.128	0.10	"	0.142		90	35-150			
Ethyl tert-butyl ether	0.0176	0.0050	"	0.0150		117	80-125			
Ethylbenzene	0.00691	0.0050	"	0.00754		92	80-135			
Methyl tert-butyl ether	0.00821	0.0050	"	0.00702		117	75-115			HL
Toluene	0.0351	0.0050	"	0.0372		94	85-125			
Xylenes (total)	0.0403	0.0050	"	0.0412		98	80-140			
Gasoline Range Organics (C4-C12)	0.491	0.10	"	0.440		112	53-126			
Surrogate: 1,2-Dichloroethane-d4	*0.00493*		"	*0.00500*		*99*	*60-125*			

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOJ0420
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/25/05 10:33

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 5J12028 - EPA 5030B P/T / EPA 8260B										
Matrix Spike (5J12028-MS1)	**Source: MOJ0174-04**			Prepared & Analyzed: 10/12/05						
tert-Amyl methyl ether	0.0122	0.0050	mg/kg	0.0150	0.00015	80	80-130			
Benzene	0.00330	0.0050	"	0.00516	ND	64	65-125			LN
tert-Butyl alcohol	0.0935	0.020	"	0.143	ND	65	80-135			LN
Di-isopropyl ether	0.0113	0.0050	"	0.0151	ND	75	85-115			LN
1,2-Dibromoethane (EDB)	0.0109	0.0050	"	0.0149	ND	73	85-130			LN
1,2-Dichloroethane	0.0108	0.0050	"	0.0147	ND	73	63-124			
Ethanol	0.0652	0.10	"	0.142	ND	46	35-150			
Ethyl tert-butyl ether	0.0117	0.0050	"	0.0150	ND	78	80-125			LN
Ethylbenzene	0.00483	0.0050	"	0.00754	ND	64	80-135			LN
Methyl tert-butyl ether	0.00537	0.0050	"	0.00702	ND	76	75-115			
Toluene	0.0247	0.0050	"	0.0372	ND	66	85-125			LN
Xylenes (total)	0.0275	0.0050	"	0.0412	ND	67	80-140			LN
Gasoline Range Organics (C4-C12)	0.345	0.10	"	0.440	ND	78	53-126			
Surrogate: 1,2-Dichloroethane-d4	*0.00478*		"	*0.00500*		*96*	*60-125*			
Matrix Spike Dup (5J12028-MSD1)	**Source: MOJ0174-04**			Prepared & Analyzed: 10/12/05						
tert-Amyl methyl ether	0.0180	0.0050	mg/kg	0.0150	0.00015	119	80-130	38	25	BA
Benzene	0.00467	0.0050	"	0.00516	ND	91	65-125	34	20	BA
tert-Butyl alcohol	0.130	0.020	"	0.143	ND	91	80-135	33	20	BA
Di-isopropyl ether	0.0165	0.0050	"	0.0151	ND	109	85-115	37	20	BA
1,2-Dibromoethane (EDB)	0.0152	0.0050	"	0.0149	ND	102	85-130	33	15	BA
1,2-Dichloroethane	0.0166	0.0050	"	0.0147	ND	113	63-124	42	25	RB
Ethanol	0.147	0.10	"	0.142	ND	104	35-150	77	40	RB
Ethyl tert-butyl ether	0.0173	0.0050	"	0.0150	ND	115	80-125	39	25	BA
Ethylbenzene	0.00685	0.0050	"	0.00754	ND	91	80-135	35	20	BA
Methyl tert-butyl ether	0.00830	0.0050	"	0.00702	ND	118	75-115	43	35	BA, HL
Toluene	0.0342	0.0050	"	0.0372	ND	92	85-125	32	15	BA
Xylenes (total)	0.0388	0.0050	"	0.0412	ND	94	80-140	34	20	BA
Gasoline Range Organics (C4-C12)	0.504	0.10	"	0.440	ND	115	53-126	37	25	BA
Surrogate: 1,2-Dichloroethane-d4	*0.00531*		"	*0.00500*		*106*	*60-125*			

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOJ0420
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/25/05 10:33

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 5J14036 - EPA 5030B/5035A MeOH / EPA 8260B										
Blank (5J14036-BLK1)				Prepared: 10/14/05 Analyzed: 10/15/05						
tert-Amyl methyl ether	ND	0.025	mg/kg							
Benzene	ND	0.050	"							
tert-Butyl alcohol	ND	5.0	"							PF
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	*0.00527*		"	*0.00500*		*105*	*60-125*			
Laboratory Control Sample (5J14036-BS1)				Prepared: 10/14/05 Analyzed: 10/15/05						
tert-Amyl methyl ether	0.542	0.025	mg/kg	0.500		108	80-130			
Benzene	0.476	0.050	"	0.500		95	65-125			
tert-Butyl alcohol	2.53	5.0	"	2.50		101	80-165			PF
Di-isopropyl ether	0.497	0.025	"	0.500		99	85-115			
1,2-Dibromoethane (EDB)	0.600	0.025	"	0.500		120	85-130			
1,2-Dichloroethane	0.519	0.025	"	0.500		104	63-124			
Ethanol	11.2	10	"	10.0		112	35-150			
Ethyl tert-butyl ether	0.499	0.025	"	0.500		100	80-125			
Ethylbenzene	0.556	0.050	"	0.500		111	80-135			
Methyl tert-butyl ether	0.427	0.025	"	0.500		85	75-115			
Toluene	0.568	0.050	"	0.500		114	85-125			
Xylenes (total)	1.71	0.050	"	1.50		114	80-140			
Surrogate: 1,2-Dichloroethane-d4	*0.00512*		"	*0.00500*		*102*	*60-125*			

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOJ0420
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/25/05 10:33

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 5J14036 - EPA 5030B/5035A MeOH / EPA 8260B										
Laboratory Control Sample (5J14036-BS2)				Prepared: 10/14/05 Analyzed: 10/15/05						
Gasoline Range Organics (C4-C12)	14.5	2.5	mg/kg	16.5		88	60-140			
Surrogate: 1,2-Dichloroethane-d4	*0.00463*		"	*0.00500*		*93*	*60-125*			
Laboratory Control Sample Dup (5J14036-BSD1)				Prepared: 10/14/05 Analyzed: 10/15/05						
tert-Amyl methyl ether	0.586	0.025	mg/kg	0.500		117	80-130	8	25	
Benzene	0.556	0.050	"	0.500		111	65-125	16	20	
tert-Butyl alcohol	2.38	5.0	"	2.50		95	80-165	6	25	PF
Di-isopropyl ether	0.567	0.025	"	0.500		113	85-115	13	20	
1,2-Dibromoethane (EDB)	0.587	0.025	"	0.500		117	85-130	2	15	
1,2-Dichloroethane	0.565	0.025	"	0.500		113	63-124	8	25	
Ethanol	12.0	10	"	10.0		120	35-150	7	40	
Ethyl tert-butyl ether	0.562	0.025	"	0.500		112	80-125	12	25	
Ethylbenzene	0.534	0.050	"	0.500		107	80-135	4	20	
Methyl tert-butyl ether	0.517	0.025	"	0.500		103	75-115	19	35	
Toluene	0.586	0.050	"	0.500		117	85-125	3	15	
Xylenes (total)	1.65	0.050	"	1.50		110	80-140	4	20	
Surrogate: 1,2-Dichloroethane-d4	*0.00494*		"	*0.00500*		*99*	*60-125*			
Matrix Spike (5J14036-MS1)	**Source: MOJ0420-02**			Prepared: 10/14/05 Analyzed: 10/15/05						
Gasoline Range Organics (C4-C12)	117	2.5	mg/kg	16.5	1.7	699	60-140			LM
Surrogate: 1,2-Dichloroethane-d4	*0.00512*		"	*0.00500*		*102*	*60-125*			
Matrix Spike Dup (5J14036-MSD1)	**Source: MOJ0420-02**			Prepared: 10/14/05 Analyzed: 10/15/05						
Gasoline Range Organics (C4-C12)	15.5	2.5	mg/kg	16.5	1.7	84	60-140	153	25	BA
Surrogate: 1,2-Dichloroethane-d4	*0.00521*		"	*0.00500*		*104*	*60-125*			
Batch 5J16002 - EPA 5030B P/T / EPA 8260B										
Blank (5J16002-BLK1)				Prepared & Analyzed: 10/16/05						
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	"							

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOJ0420
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/25/05 10:33

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 5J16002 - EPA 5030B P/T / EPA 8260B										
Blank (5J16002-BLK1)				Prepared & Analyzed: 10/16/05						
Methyl tert-butyl ether	ND	0.50	ug/l							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C4-C12)	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	*2.31*		"	*2.50*		*92*	*60-135*			
Laboratory Control Sample (5J16002-BS1)				Prepared & Analyzed: 10/16/05						
tert-Amyl methyl ether	16.6	0.50	ug/l	15.0		111	80-115			
Benzene	5.16	0.50	"	5.16		100	65-115			
tert-Butyl alcohol	153	20	"	143		107	75-150			
Di-isopropyl ether	16.8	0.50	"	15.1		111	75-125			
1,2-Dibromoethane (EDB)	16.4	0.50	"	14.9		110	85-120			
1,2-Dichloroethane	16.9	0.50	"	14.7		115	85-130			
Ethanol	124	100	"	142		87	70-135			IC
Ethyl tert-butyl ether	17.6	0.50	"	15.0		117	75-130			
Ethylbenzene	7.90	0.50	"	7.54		105	75-135			
Methyl tert-butyl ether	7.78	0.50	"	7.02		111	65-125			
Toluene	36.0	0.50	"	37.2		97	85-120			
Xylenes (total)	42.1	0.50	"	41.2		102	85-125			
Gasoline Range Organics (C4-C12)	518	50	"	440		118	60-140			
Surrogate: 1,2-Dichloroethane-d4	*2.42*		"	*2.50*		*97*	*60-135*			
Matrix Spike (5J16002-MS1)	**Source: MOJ0553-07**			Prepared & Analyzed: 10/16/05						
tert-Amyl methyl ether	178	5.0	ug/l	150	12	111	80-115			
Benzene	216	5.0	"	51.6	170	89	65-115			
tert-Butyl alcohol	2670	200	"	1430	990	117	75-120			
Di-isopropyl ether	170	5.0	"	151	ND	113	75-125			
1,2-Dibromoethane (EDB)	161	5.0	"	149	ND	108	85-120			
1,2-Dichloroethane	169	5.0	"	147	ND	115	85-130			
Ethanol	1680	1000	"	1420	ND	118	70-135			IC
Ethyl tert-butyl ether	175	5.0	"	150	ND	117	75-130			
Ethylbenzene	93.3	5.0	"	75.4	16	103	75-135			
Methyl tert-butyl ether	1120	5.0	"	70.2	960	228	65-125			BB,LM
Toluene	363	5.0	"	372	3.2	97	85-120			
Xylenes (total)	427	5.0	"	412	7.6	102	85-125			
Gasoline Range Organics (C4-C12)	7470	500	"	4400	2100	122	60-140			

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Oakland CA, 94612	Project Manager:Lynelle Onishi	10/25/05 10:33

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 5J16002 - EPA 5030B P/T / EPA 8260B										
Matrix Spike (5J16002-MS1)	**Source: MOJ0553-07**			Prepared & Analyzed: 10/16/05						
Surrogate: 1,2-Dichloroethane-d4	*2.24*		*ug/l*	*2.50*		*90*	*60-135*			
Matrix Spike Dup (5J16002-MSD1)	**Source: MOJ0553-07**			Prepared & Analyzed: 10/16/05						
tert-Amyl methyl ether	179	5.0	ug/l	150	12	111	80-115	0.6	15	
Benzene	220	5.0	"	51.6	170	97	65-115	2	20	
tert-Butyl alcohol	2640	200	"	1430	990	115	75-120	1	25	
Di-isopropyl ether	168	5.0	"	151	ND	111	75-125	1	15	
1,2-Dibromoethane (EDB)	163	5.0	"	149	ND	109	85-120	1	15	
1,2-Dichloroethane	172	5.0	"	147	ND	117	85-130	2	20	
Ethanol	1520	1000	"	1420	ND	107	70-135	10	35	IC
Ethyl tert-butyl ether	173	5.0	"	150	ND	115	75-130	1	25	
Ethylbenzene	95.9	5.0	"	75.4	16	106	75-135	3	15	
Methyl tert-butyl ether	1120	5.0	"	70.2	960	228	65-125	0	20	BB,LM
Toluene	366	5.0	"	372	3.2	98	85-120	0.8	20	
Xylenes (total)	438	5.0	"	412	7.6	104	85-125	3	20	
Gasoline Range Organics (C4-C12)	7500	500	"	4400	2100	123	60-140	0.4	25	
Surrogate: 1,2-Dichloroethane-d4	*2.33*		*"*	*2.50*		*93*	*60-135*			

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOJ0420
1333 Broadway, Suite 800	Project Number:G07T9-0024	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/25/05 10:33

Notes and Definitions

RB	RPD exceeded method control limit; % recoveries within limits.
PV	Hydrocarbon result partly due to individ. peak(s) in quant. range
PF	Possible low bias due to CCV falling outside acceptance criteria
LN	MS and/or MSD below acceptance limits. See Blank Spike(LCS).
LM	MS and/or MSD above acceptance limits. See Blank Spike(LCS).
IC	Calib. verif. is within method limits but outside contract limits
HL	Analyte recovery above established limit
BZ,BU	Sample preserved improperly. Sample analyzed after holding time expired.
BB,LM	Sample > 4x spike concentration. MS and/or MSD above acceptance limits. See Blank Spike(LCS).
BA	Relative percent difference out of control
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 send copy of COC to lynelle_onishi@urscorp.com

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
Address:	885 Jarvis Drive
	Morgan Hill, CA 95037
Lab PM:	Lisa Race
Tele/Fax:	408-782-8156/408-782-6308
BP/AR PM Contact:	Kyle Christie
Address:	4 Centerpointe Dr.
	La Palma, CA
Tele/Fax:	714-670-5303/714-6705195

BP/AR Facility No.:	11102
BP/AR Facility Address:	100 MacArthur Ave, Oakland, CA
Site Lat/Long:	
California Global ID No.:	T0600100908
Enfos Project No.:	G07T9-0024
Provision or RCOP (circle one)	Provision
Phase/WBS:	01 - Assessment
Sub Phase/Task:	03 - Analytical
Cost Element:	05 - Subcontracted Costs

Consultant/Contractor:	URS
Address:	1333 Broadway, Suite 800
	Oakland, CA 94612
Consultant/Contractor Project No.:	38487349
Consultant/Contractor PM:	Lynelle Onishi
Tele/Fax:	510-874-1758/510-874-3268
Report Type & QC Level:	Level 1 & EDF
E-mail EDD To:	lynelle_onishi@urscorp.com
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
							MW0420												
1	SB-4A@6	955	10/7/05	X			01	1	X			~~X~~ LD 10/7		X	X	X			
2	SB-4A@10	1013	|	X			02	1	X					X	X	X			
3	SB-4A@20'	1023	|	X			03	1	X					X	X	X			
4	SB-4A-25'	1044	|	X			04	1	X					X	X	X			
5	SB-4A-30'	1049	|	X			05	1	X					X	X	X			
6	SB-4A@35'	1056	|	X			06	1	X					X	X	X			
7	SB-4A	1205	↓		X		07	3				X		X	X	X			
8	temp				X		~~08~~ 10/8/05	1											
9	trip blank		↓		X		08	3				X							HOLD
10																			

Sampler's Name:	LynelleOnishi
Sampler's Company:	URS
Shipment Date:	10/7/05
Shipment Method:	Courier
Shipment Tracking No:	

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Lynelle Onishi / URS	10/7/05	2:45P	Jeremy / URS	10-7-05	2:45 PM
Jeremy / URS	10-7-05	3:45	John Boyd / World Courier	10-7-05	16:07
				10-7-05	19:00

Special Instructions:

Custody Seals In Place Yes No ✓ Temp Blank Yes ✓ No Cooler Temperature on Receipt 7.0 °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: BP
REC. BY (PRINT): Phuc
WORKORDER: M0H0420

DATE REC'D AT LAB: 10/7/05
TIME REC'D AT LAB: 1900
DATE LOGGED IN: 10/8/05

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

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)	01	A	SB-4A-6	metal	—	—	S	10/7/05	
	Intact / Broken*	02		SB-4A-10						
2. Chain-of-Custody	(Present) / Absent*	03		SB-4A-20						
3. Traffic Reports or Packing List:	Present / (Absent)	04		SB-4A-25						
		05		SB-4A-30'						
4. Airbill:	Airbill / Sticker	06		SB-4A-35'						
	Present / (Absent)	07	A/C	SB-4A	VOA 3	HCl		L		
5. Airbill #:		08	—	Temp	VOA 1	—				
6. Sample Labels:	(Present) / Absent	09	A-C	Trip blank	VOA 3	HCl	↓	↓	↓	
7. Sample IDs:	(Listed) / Not Listed on Chain-of-Custody									
8. Sample Condition:	Intact / Broken* / Leaking*									
9. Does information on chain-of-custody, traffic reports and sample labels agree?	Yes / (No)*									
10. Sample received within hold time?	(Yes) / No*									
11. Adequate sample volume received?	(Yes) / No*									
12. Proper preservatives used?	(Yes) / No*									
13. Trip Blank / Temp Blank Received? (circle which, if yes)	(Yes) / No*									
14. Read Temp:	7.3°C									
Corrected Temp:	↓									
Is corrected 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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27 October, 2005

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

RE: BP Heritage #11102, Oakland, CA
Work Order: MOJ0988

Enclosed are the results of analyses for samples received by the laboratory on 10/18/05 18:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kekobad

Jamshid Kekobad
Project Manager

CA ELAP Certificate #1210

The results in this laboratory report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the BPGCLN Technical Specifications, applicable Federal, State, local regulations and certification requirements as well as the methodologies as described in laboratory SOPs reviewed by the BPGCLN. This entire report was reviewed and approved for release.

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOJ0988
1333 Broadway, Suite 800	Project Number:G07T9-0020	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/27/05 09:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MOJ0988-01	Water	10/17/05 13:02	10/18/05 18:20
MW-2	MOJ0988-02	Water	10/17/05 13:58	10/18/05 18:20
MW-3	MOJ0988-03	Water	10/17/05 13:32	10/18/05 18:20
TB-1110210172005	MOJ0988-04	Water	10/17/05 00:00	10/18/05 18:20

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	MOJ0988
1333 Broadway, Suite 800	Project Number:G07T9-0020	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/27/05 09:16

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MOJ0988-01) Water Sampled: 10/17/05 13:02 Received: 10/18/05 18:20									
tert-Amyl methyl ether	ND	0.50	ug/l	1	5J25010	10/25/05	10/25/05	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	**450**	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	**20**	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	**140**	50	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*60-135*		"	"	"	"	
MW-2 (MOJ0988-02) Water Sampled: 10/17/05 13:58 Received: 10/18/05 18:20									
tert-Amyl methyl ether	ND	50	ug/l	100	5J25010	10/25/05	10/25/05	EPA 8260B	
Benzene	ND	50	"	"	"	"	"	"	
tert-Butyl alcohol	**5200**	2000	"	"	"	"	"	"	
Di-isopropyl ether	ND	50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	50	"	"	"	"	"	"	
Ethanol	ND	10000	"	"	"	"	"	"	IC
Ethyl tert-butyl ether	ND	50	"	"	"	"	"	"	
Ethylbenzene	ND	50	"	"	"	"	"	"	
Methyl tert-butyl ether	**2500**	50	"	"	"	"	"	"	
Toluene	ND	50	"	"	"	"	"	"	
Xylenes (total)	ND	50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	5000	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*60-135*		"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOJ0988
1333 Broadway, Suite 800	Project Number:G07T9-0020	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/27/05 09:16

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (MOJ0988-03) Water	**Sampled: 10/17/05 13:32**	**Received: 10/18/05 18:20**							
tert-Amyl methyl ether	**4.2**	2.5	ug/l	5	5J25010	10/25/05	10/25/05	EPA 8260B	
Benzene	ND	2.5	"	"	"	"	"	"	
tert-Butyl alcohol	ND	100	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.5	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.5	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.5	"	"	"	"	"	"	
Ethanol	ND	500	"	"	"	"	"	"	IC
Ethyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Ethylbenzene	ND	2.5	"	"	"	"	"	"	
Methyl tert-butyl ether	**260**	2.5	"	"	"	"	"	"	
Toluene	ND	2.5	"	"	"	"	"	"	
Xylenes (total)	ND	2.5	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	250	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*99 %*	*60-135*		"	"	"	"	

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOJ0988
1333 Broadway, Suite 800	Project Number:G07T9-0020	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/27/05 09:16

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 5J25010 - EPA 5030B P/T / EPA 8260B										
Blank (5J25010-BLK1)				Prepared & Analyzed: 10/25/05						
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	"							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	*2.29*		"	*2.50*		*92*	*60-135*			
Laboratory Control Sample (5J25010-BS1)				Prepared & Analyzed: 10/25/05						
tert-Amyl methyl ether	15.7	0.50	ug/l	15.0		105	80-115			
Benzene	5.70	0.50	"	5.16		110	65-115			
tert-Butyl alcohol	147	5.0	"	143		103	75-150			
Di-isopropyl ether	16.9	0.50	"	15.1		112	75-125			
1,2-Dibromoethane (EDB)	17.6	0.50	"	14.9		118	85-120			
1,2-Dichloroethane	17.5	0.50	"	14.7		119	85-130			
Ethanol	161	100	"	142		113	70-135			IC
Ethyl tert-butyl ether	16.5	0.50	"	15.0		110	75-130			
Ethylbenzene	6.53	0.50	"	7.54		87	75-135			
Methyl tert-butyl ether	8.07	0.50	"	7.02		115	65-125			
Toluene	40.1	0.50	"	37.2		108	85-120			
Xylenes (total)	38.3	0.50	"	41.2		93	85-125			
Gasoline Range Organics (C4-C12)	515	50	"	440		117	60-140			
Surrogate: 1,2-Dichloroethane-d4	*2.56*		"	*2.50*		*102*	*60-135*			

Sequoia Analytical

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOJ0988
1333 Broadway, Suite 800	Project Number:G07T9-0020	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/27/05 09:16

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 5J25010 - EPA 5030B P/T / EPA 8260B										
Matrix Spike (5J25010-MS1)	**Source: MOJ0988-02**			Prepared & Analyzed: 10/25/05						
tert-Amyl methyl ether	1530	50	ug/l	1500	43	99	80-115			
Benzene	576	50	"	516	ND	112	65-115			
tert-Butyl alcohol	17800	500	"	14300	5200	88	75-120			
Di-isopropyl ether	1710	50	"	1510	ND	113	75-125			
1,2-Dibromoethane (EDB)	1720	50	"	1490	ND	115	85-120			
1,2-Dichloroethane	1650	50	"	1470	ND	112	85-130			
Ethanol	30200	10000	"	14200	ND	213	70-135			LM, IC
Ethyl tert-butyl ether	1570	50	"	1500	ND	105	75-130			
Ethylbenzene	630	50	"	754	ND	84	75-135			
Methyl tert-butyl ether	2780	50	"	702	2500	40	65-125			LN
Toluene	4060	50	"	3720	ND	109	85-120			
Xylenes (total)	3700	50	"	4120	ND	90	85-125			
Gasoline Range Organics (C4-C12)	50400	5000	"	44000	1700	111	60-140			
Surrogate: 1,2-Dichloroethane-d4	*2.29*		*"*	*2.50*		*92*	*60-135*			
Matrix Spike Dup (5J25010-MSD1)	**Source: MOJ0988-02**			Prepared & Analyzed: 10/25/05						
tert-Amyl methyl ether	1470	50	ug/l	1500	43	95	80-115	4	15	
Benzene	595	50	"	516	ND	115	65-115	3	20	
tert-Butyl alcohol	16300	500	"	14300	5200	78	75-120	9	25	
Di-isopropyl ether	1680	50	"	1510	ND	111	75-125	2	15	
1,2-Dibromoethane (EDB)	1610	50	"	1490	ND	108	85-120	7	15	
1,2-Dichloroethane	1620	50	"	1470	ND	110	85-130	2	20	
Ethanol	26300	10000	"	14200	ND	185	70-135	14	35	LM, IC
Ethyl tert-butyl ether	1490	50	"	1500	ND	99	75-130	5	25	
Ethylbenzene	642	50	"	754	ND	85	75-135	2	15	
Methyl tert-butyl ether	2680	50	"	702	2500	26	65-125	4	20	LN
Toluene	4050	50	"	3720	ND	109	85-120	0.2	20	
Xylenes (total)	3830	50	"	4120	ND	93	85-125	3	20	
Gasoline Range Organics (C4-C12)	50600	5000	"	44000	1700	111	60-140	0.4	25	
Surrogate: 1,2-Dichloroethane-d4	*2.27*		*"*	*2.50*		*91*	*60-135*			

Sequoia Analytical

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URS Corporation [Arco]	Project:BP Heritage #11102, Oakland, CA	MOJ0988
1333 Broadway, Suite 800	Project Number:G07T9-0020	**Reported:**
Oakland CA, 94612	Project Manager:Lynelle Onishi	10/27/05 09:16

Notes and Definitions

LN	MS and/or MSD below acceptance limits. See Blank Spike(LCS).
LM	MS and/or MSD above 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

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 Fra

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

On-site Time:	1200	Temp:	75°F
Off-site Time:	1410	Temp:	80°F
Sky Conditions:	clear		
Meteorological Events:	none		
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 / Jamshid Kekobad	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. MOJ0988	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	1302	10/17/05		X		01	3				X		X	X	X	X	
2	MW-2	1358	"		X		02	3				X		X	X	X	X	
3	MW3	1332	"		X		03	3				X		X	X	X	X	
4	TB-111021017200S	—	"		X		04	2				X		X	X	X	X	on hold
5																		
6																		
7																		
8																		
9																		
10																		

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: BFR Cornish	BFR	10/17/05	1600	SAMPLE CUSTODIAN	10/17/05	1600
Sampler's Company: BTS	SAMPLE CUSTODIAN	10/18/05	1700		10/18/05	1700
Shipment Date:		10/18/05	1820	Jennyhan	10/18/05	1820
Shipment Method:						
Shipment Tracking No:						

Special Instructions:

Custody Seals In Place Yes X No Temp Blank Yes X No Cooler Temperature on Receipt 5.7 °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): JT
WORKORDER: MOJ0988

DATE REC'D AT LAB: 10/18/05
TIME REC'D AT LAB: 18:20
DATE LOGGED IN: 10/19/05

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

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*									
2. Chain-of-Custody (Present) / Absent*									
3. Traffic Reports or Packing List: Present / (Absent)									
4. Airbill: Airbill / Sticker (Present) / Absent									
5. Airbill #:									
6. Sample Labels: (Present) / Absent									
7. Sample IDs: (Listed) / Not Listed on Chain-of-Custody									
8. Sample Condition: (Intact) / Broken* / Leaking*									
9. Does information on chain-of-custody, traffic reports and sample labels agree? (Yes) / No*									
10. Sample received within hold time? (Yes) / No*									
11. Adequate sample volume received? (Yes) / No*									
12. Proper preservatives used? (Yes) / No*									
13. Trip Blank / Temp Blank Received? (circle which, if yes) (Yes) / No*									
14. Read Temp: 5.7°C									
Corrected Temp: 5.7°C									
Is corrected temp 4 +/-2°C? (Yes) No**									
(Acceptance range for samples requiring thermal pres.)									
**Exception (if any): METALS / DFF ON ICE or Problem COC									

JT 10/18/05

see COC

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

ATTACHMENT G

GEOTRACKER UPLOAD CONFIRMATION

Electronic Submittal Information

Main Menu | View/Add Facilities | Upload EDD | Check EDD

SUCCESSFUL GEO_WELL CHECK - NO ERRORS

ORGANIZATION NAME:	URS Corporation-Oakland Office
USER NAME:	URSCORP-OAKLAND
DATE CHECKED:	11/30/2005 3:50:13 PM

Processing is complete. No errors were found!
You may now proceed to the upload page.

Back to Main Menu

Logged in as URSCORP-OAKLAND (CONTRACTOR) CONTACT SITE ADMINISTRATOR.

Electronic Submittal Information

Main Menu | View/Add Facilities | Upload EDD | Check EDD

UPLOADING A GEO_WELL FILE

Processing is complete. No errors were found!
Your file has been successfully submitted!

Submittal Title:	**4Q 2005 BP/ARCO 11102 GEOWELL**
Submittal Date/Time:	**11/30/2005 3:51:06 PM**
Confirmation Number:	**8501295328**

Back to Main Menu

Logged in as URSCORP-OAKLAND (CONTRACTOR)

CONTACT SITE ADMINISTRATOR.

Electronic Submittal Information

Main Menu | View/Add Facilities | Upload EDD | Check EDD

SUCCESSFUL EDF CHECK - NO ERRORS

ORGANIZATION NAME:	URS Corporation-Oakland Office
USER NAME:	URSCORP-OAKLAND
DATE CHECKED:	11/30/2005 3:52:45 PM
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BP
100 MACARTHUR BLVD
OAKLAND, CA 94610

Regional Board - Case #: 01-0985
SAN FRANCISCO BAY RWQCB (REGION 2) - (BG)
Local Agency (lead agency) - Case #: 1108
ALAMEDA COUNTY LOP - (RWS)

SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	3
# FIELD POINTS WITH DETECTIONS	3
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	3
SAMPLE MATRIX TYPES	WATER

METHOD QA/QC REPORT

METHODS USED	8260FA
TESTED FOR REQUIRED ANALYTES?	N
MISSING PARAMETERS NOT TESTED:	
- 8260FA REQUIRES DBFM TO BE TESTED	
- 8260FA REQUIRES BR4FBZ TO BE TESTED	
- 8260FA REQUIRES BZMED8 TO BE TESTED	
LAB NOTE DATA QUALIFIERS	Y

QA/QC FOR 8021/8260 SERIES SAMPLES

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

WATER SAMPLES FOR 8021/8260 SERIES

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

135%	
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	Y
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	Y

SOIL SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	n/a
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%	n/a
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	n/a

FIELD QC SAMPLES

SAMPLE	COLLECTED	DETECTIONS > REPDL
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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Facility Global ID: T0600100908
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Submittal Type: GW Monitoring Report

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BP
100 MACARTHUR BLVD
OAKLAND, CA 94610

Regional Board - Case #: 01-0985
SAN FRANCISCO BAY RWQCB (REGION 2) - (BG)
Local Agency (lead agency) - Case #: 1108
ALAMEDA COUNTY LOP - (RWS)

CONF #	TITLE	QUARTER
1893289864	4Q 2005 BP/ARCO 11102 EDF	Q4 2005

SUBMITTED BY	SUBMIT DATE	STATUS
Srijesh Thapa	11/30/2005	PENDING REVIEW

SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	3
# FIELD POINTS WITH DETECTIONS	3
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	3
SAMPLE MATRIX TYPES	WATER

METHOD QA/QC REPORT

METHODS USED	8260FA
TESTED FOR REQUIRED ANALYTES?	N
MISSING PARAMETERS NOT TESTED:	
- 8260FA REQUIRES DBFM TO BE TESTED	
- 8260FA REQUIRES BR4FBZ TO BE TESTED	
- 8260FA REQUIRES BZMED8 TO BE TESTED	
LAB NOTE DATA QUALIFIERS	Y

QA/QC FOR 8021/8260 SERIES SAMPLES

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

WATER SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	N
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	Y
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	Y

SOIL SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	n/a
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%	n/a
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	n/a

FIELD QC SAMPLES

SAMPLE	COLLECTED	DETECTIONS > REPDL
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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BP
100 MACARTHUR BLVD
OAKLAND, CA 94610

Regional Board - Case #: 01-0985
SAN FRANCISCO BAY RWQCB (REGION 2)
Local Agency (lead agency) - Case #: 1108
ALAMEDA COUNTY LOP - **(RWS)**

SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	7
# FIELD POINTS WITH DETECTIONS	7
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	1
SAMPLE MATRIX TYPES	SOIL,WATER

METHOD QA/QC REPORT

METHODS USED	8260FA
TESTED FOR REQUIRED ANALYTES?	N
MISSING PARAMETERS NOT TESTED:	
- 8260FA REQUIRES DBFM TO BE TESTED	
- 8260FA REQUIRES BR4FBZ TO BE TESTED	
- 8260FA REQUIRES BZMED8 TO BE TESTED	
LAB NOTE DATA QUALIFIERS	Y

QA/QC FOR 8021/8260 SERIES SAMPLES

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

- SURROGATE SPIKE	Y

WATER SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	Y
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	Y
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	Y

SOIL SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	N
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%	Y
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	n/a

FIELD QC SAMPLES

SAMPLE	COLLECTED	DETECTIONS > REPDL
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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BP
100 MACARTHUR BLVD
OAKLAND, CA 94610

Regional Board - Case #: 01-0985
SAN FRANCISCO BAY RWQCB (REGION 2)
Local Agency (lead agency) - Case #: 1108
ALAMEDA COUNTY LOP - **(RWS)**

SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	3
# FIELD POINTS WITH DETECTIONS	3
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	3
SAMPLE MATRIX TYPES	WATER

METHOD QA/QC REPORT

METHODS USED	8260FA
TESTED FOR REQUIRED ANALYTES?	N
MISSING PARAMETERS NOT TESTED:	
- 8260FA REQUIRES DBFM TO BE TESTED	
- 8260FA REQUIRES BR4FBZ TO BE TESTED	
- 8260FA REQUIRES BZMED8 TO BE TESTED	
LAB NOTE DATA QUALIFIERS	Y

QA/QC FOR 8021/8260 SERIES SAMPLES

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

- SURROGATE SPIKE	Y

WATER SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	N
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	Y
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	Y

SOIL SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	n/a
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%	n/a
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	n/a

FIELD QC SAMPLES

SAMPLE	COLLECTED	DETECTIONS > REPDL
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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Facility Global ID: T0600100908
Facility Name: BP
Submittal Title: 4Q 2005 BP/ARCO 11102 EDF
Submittal Type: Soil & Water Investigation Report

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BP 100 MACARTHUR BLVD OAKLAND, CA 94610	**Regional Board - Case #: 01-0985** SAN FRANCISCO BAY RWQCB (REGION 2) **Local Agency (lead agency) - Case #: 1108** ALAMEDA COUNTY LOP - **(RWS)**

CONF #	TITLE	QUARTER
2867836177	4Q 2005 BP/ARCO 11102 EDF	Q4 2005

SUBMITTED BY	SUBMIT DATE	STATUS
Srijesh Thapa	4/7/2006	PENDING REVIEW

SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	7
# FIELD POINTS WITH DETECTIONS	7
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	1
SAMPLE MATRIX TYPES	SOIL,WATER

METHOD QA/QC REPORT

METHODS USED	8260FA
TESTED FOR REQUIRED ANALYTES?	N
MISSING PARAMETERS NOT TESTED:	
- 8260FA REQUIRES DBFM TO BE TESTED	
- 8260FA REQUIRES BR4FBZ TO BE TESTED	
- 8260FA REQUIRES BZMED8 TO BE TESTED	
LAB NOTE DATA QUALIFIERS	Y

QA/QC FOR 8021/8260 SERIES SAMPLES

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

WATER SAMPLES FOR 8021/8260 SERIES

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

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	Y
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	Y

SOIL SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	N
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%	Y
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	n/a

FIELD QC SAMPLES

SAMPLE	COLLECTED	DETECTIONS > REPDL
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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Facility Global ID: T0600100908
Facility Name: BP
Submittal Title: 4Q 2005 BP/ARCO 11102 EDF
Submittal Type: Soil & Water Investigation Report

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BP 100 MACARTHUR BLVD OAKLAND, CA 94610	**Regional Board - Case #: 01-0985** SAN FRANCISCO BAY RWQCB (REGION 2) **Local Agency (lead agency) - Case #: 1108** ALAMEDA COUNTY LOP - **(RWS)**

CONF #	TITLE	QUARTER
3485628843	4Q 2005 BP/ARCO 11102 EDF	Q4 2005

SUBMITTED BY	SUBMIT DATE	STATUS
Srijesh Thapa	4/7/2006	PENDING REVIEW

SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	3
# FIELD POINTS WITH DETECTIONS	3
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	3
SAMPLE MATRIX TYPES	WATER

METHOD QA/QC REPORT

METHODS USED	8260FA
TESTED FOR REQUIRED ANALYTES?	N
MISSING PARAMETERS NOT TESTED:	
- 8260FA REQUIRES DBFM TO BE TESTED	
- 8260FA REQUIRES BR4FBZ TO BE TESTED	
- 8260FA REQUIRES BZMED8 TO BE TESTED	
LAB NOTE DATA QUALIFIERS	Y

QA/QC FOR 8021/8260 SERIES SAMPLES

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

WATER SAMPLES FOR 8021/8260 SERIES

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

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	Y
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	Y

SOIL SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	n/a
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%	n/a
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	n/a

FIELD QC SAMPLES

SAMPLE	COLLECTED	DETECTIONS > REPDL
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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