



Atlantic Richfield Company  
(a BP affiliated company)

P.O. Box 1257  
San Ramon, California 94583  
Phone: (925) 275-3801  
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**RECEIVED**

2:23 pm, Jun 17, 2008

Alameda County  
Environmental Health

16 June 2008

Re: Work Plan for Onsite Soil Investigation  
Atlantic Richfield Company Station No.2185  
9800 International Blvd.  
Oakland, CA  
ACEH Case No.RO0000392

"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

**Work Plan for On-Site Soil Investigation**  
Atlantic Richfield Company Station No. 2185  
9800 International Boulevard, Oakland, California  
ACEH Case No. RO0000392

Prepared for

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

Prepared by



1324 Mangrove Avenue, Suite 212  
Chico, California 95926  
(530) 566-1400  
*www.broadbentinc.com*

16 June 2008

Project No. 06-08-622

16 June 2008

Job No. 06-08-622

Mr. Paul Supple  
Environmental Business Manager  
Atlantic Richfield Company  
PO Box 1257  
San Ramon, California 94583  
Submitted via ENFOS

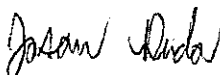
RE: Work Plan for On-Site Soil Investigation, Atlantic Richfield Company (a BP-affiliated company) Service Station No. 2185, 9800 International Boulevard, Oakland, California  
ACEH Case No. RO0000392

Dear Mr. Supple,

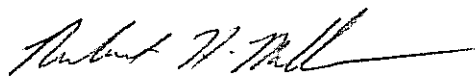
Broadbent & Associates, Inc. is pleased to present the enclosed *Work Plan for On-Site Soil Investigation* for additional soil characterization at the above-referenced facility. This work plan was prepared in response to a letter request from the Alameda County Environmental Health Services (ACEH) dated 25 April 2008. In accordance with that request, this work plan includes discussion of the site background, previous investigations, site geology and hydrogeology, the proposed scope of work, and schedule.

Should you have any questions concerning this work plan, please do not hesitate to contact us at (530) 566-1400.

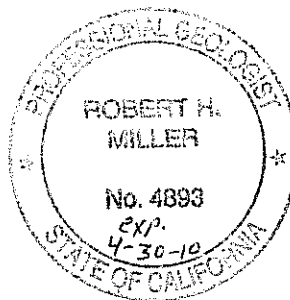
Sincerely,  
BROADBENT & ASSOCIATES, INC.



Jason Duda  
Project Scientist



Robert H. Miller, P.G.  
Principal Hydrogeologist



Enclosure

cc: Mr. Paresh Khatri, ACEH (Submitted via ACEH ftp site)  
Electronic copy uploaded to GeoTracker

**WORK PLAN FOR ON-SITE SOIL INVESTIGATION**  
**Atlantic Richfield Company Station No. 2185**  
**9800 International Blvd., Oakland, California**

## **1.0 INTRODUCTION**

On behalf of the Atlantic Richfield Company, RM – a BP affiliated company, Broadbent & Associates, Inc. (BAI) has prepared this Work Plan for an On-Site Soil Investigation for additional soil characterization at the Atlantic Richfield Company Station No.2185, located at 9800 International Boulevard (formerly E. 14<sup>th</sup> Street), Oakland, California (Site). This work plan was prepared in response to a letter request from Alameda County Environmental Health Services (ACEH) dated 25 April 2008. A copy of this letter is provided in Attachment A. Specifically, ACEH technical comments within the 25 April 2008 letter requested a proposal for an on-site soil investigation to investigate the concentration of petroleum hydrocarbons in soil immediately beneath the northern dispenser island at a depth of approximately 9.5 feet below ground surface (bgs). In accordance with this request, this work plan includes discussions on the site background and previous investigations, regional and local geology and hydrogeology, the proposed scope of work, and completion schedule.

## **2.0 SITE BACKGROUND**

The Site is an active ARCO-brand gasoline retail outlet located on the eastern corner of 98<sup>th</sup> Avenue and International Boulevard in Oakland, California. A site location map is provided as Drawing 1 (Drawings and tables are provided after conclusion of the work plan text). The land use in the immediate vicinity of the Site is mixed commercial and residential. The Site consists of a service station building and four gasoline underground storage tanks (USTs) with associated piping and dispensers. The Site is covered with asphalt or concrete surfacing except for the vegetation along the southwestern and southeastern property boundaries.

In May 1991, ROUX Associates (ROUX) conducted a preliminary tank replacement assessment which included drilling four borings and installing two vadose zone wells (VW-1 and VW-2) in the area of the existing USTs. Locations of wells VW-1 and VW-2 are exhibited in Drawing 2. Soil samples were collected at five and ten feet bgs in each of the borings. Laboratory analyses of the samples showed that soil near the existing USTs contained Total Petroleum Hydrocarbons in the Gasoline Range (TPH-G) and benzene at concentrations up to 350 and 19 milligrams per kilogram (mg/kg), respectively. In June 1991, ROUX conducted a one-day, vapor-extraction test on vadose wells VW-1 and VW-2. Based on the results of that test, ROUX concluded that vapor extraction would not be a suitable remedial alternative at the Site. Results of the assessment are detailed in the *Preliminary Tank Replacement Assessment, ARCO Facility No. 2185, 9800 E. 14<sup>th</sup> Street, Oakland, California* (ROUX, 8 August 1991).

In September 1991, ROUX performed a limited subsurface investigation at the Site which included drilling four additional soil borings in the proposed location of the new UST complex, northeast of the original UST complex. Laboratory analysis of the soil samples indicated that samples collected from the borings on the eastern edge of the proposed UST complex had not been impacted by petroleum hydrocarbons. Hydrocarbons were detected in the samples collected from the borings along the western edge of the proposed UST complex. Results of the investigation were documented in *Limited Subsurface Soil Investigation, ARCO Facility No. 2185, 9800 E. 14<sup>th</sup> Street, Oakland, California* (ROUX, 22 November, 1991).

Between October and November 1991, ROUX observed the excavation and removal of three gasoline USTs and associated product piping from the site. Twelve sidewall soil samples were collected from the former UST cavity and 14 soil samples were collected beneath the product line piping. Former UST cavity soil sample SW-7, collected at 14 feet bgs contained 1,100 mg/kg TPH-G and 5.9 mg/kg Benzene. Product line sample Line-9 collected at 9.5 feet bgs contained 5,400 mg/kg TPH-G and 22 mg/kg Benzene. Approximately 1,050 cubic yards of soil were excavated and disposed of during tank and product line removal. Approximately 5,000 gallons of water were pumped out of the former UST excavation and disposed of during tank removal activities. Details of the tank removal and sampling are documented in *Underground Storage Tank Removal and Soil Sampling, ARCO Facility No. 2185, 9800 E. 14<sup>th</sup> Street, Oakland, California* (ROUX, 17 June 1992). Tabulated analytical results are summarized within Attachment B.

In July 1992, RESNA conducted a subsurface investigation at the site which included drilling and installing four ground-water monitoring wells (MW-1 through MW-4). Initial ground-water flow direction was determined to be towards the southwest. Laboratory analysis of soil and ground-water samples from the wells indicated that soil and ground-water immediately downgradient from the former UST complex and dispenser islands were impacted by petroleum hydrocarbons. Results of the investigation were summarized in *Initial Subsurface Investigation at ARCO Station 2185, 9800 E. 14<sup>th</sup> Street, Oakland, California* (RESNA, 28 September 1992).

Between January and May 1993, RESNA conducted an initial off-site and additional on-site subsurface investigation which included the drilling and installation of two additional on-site wells (MW-5 and MW-6) and one off-site well (MW-7). Soil samples collected from well MW-7 and well MW-5 (located west of the northern pump island) did not exhibit detectable concentrations of petroleum hydrocarbons. Soil samples from well MW-6, located west of the former UST complex and southwest of the pump islands, exhibited contamination by petroleum hydrocarbons. In addition, petroleum hydrocarbons were detected above laboratory reporting limits in the ground-water sample collected from offsite well MW-7. However, subsequent monitoring at the Site has shown that several chlorinated solvents in the ground-water at MW-7 appear to be responsible for the chromatogram pattern originally quantified as TPH-G. In addition to the characterization, a limited off-site record search and on-site aquifer pumping test were conducted. A review of historical aerial photographs identified two properties on the northwest and southwest corners of the intersection of 98<sup>th</sup> Avenue and East 14<sup>th</sup> Street (International Blvd.) as former gasoline service stations. Off-site well MW-7 was installed within 15 feet of a former pump island at the historic service station southwest across East 14<sup>th</sup> Street from the Site. Results of the investigation were documented in *Initial Off-site and Additional On-site Subsurface Investigation and Pumping Test at ARCO Station 2185, 9800 East 14<sup>th</sup> Street, Oakland, California* (RESNA, 12 October 1993).

In April 1994, RESNA installed one ground-water monitoring well at the site (MW-8) at the request of the ACEH. This well was installed so that the Site could be considered for Alternative Points of Compliance, under the Tentative Resolution of the California Regional Water Quality Control Board's (RWQCB) Basin and Amendment Plan (RWQCB, 20 November 1992). Well MW-8 was originally referred to as MW-10 by RESNA, but its identification was changed by EMCON to MW-8, to maintain chronological consistency with other wells at the site. Details of the well installation were summarized in the letter report *Installation of Compliance Well*

*MW-10, ARCO Service Station 2185, 9800 East 14<sup>th</sup> Street, Oakland, California (RESNA, 6 June 1994).*

Periodic ground-water monitoring and sampling at the Site was initiated in July 1992. Off-site monitoring wells MW-9 and MW-10 were installed in August 1995 by EMCON (refer to Drawing 2). Monitoring and sampling activities continued through October 1998. No environmental work has occurred on-site since October 1998.

Historic water-level elevations have yielded potentiometric ground-water flow directions usually between the west and southwest at hydraulic gradients ranging from 0.001 ft/ft to 0.01 ft/ft. The maximum TPH-G concentration was detected in well MW-3 at a concentration of 44,000 micrograms per liter ( $\mu\text{g/L}$ ) in January 1993. The maximum concentrations of Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) were detected in well MW-3 at 1,100  $\mu\text{g/L}$  (January 1993), 1,100  $\mu\text{g/L}$  (October 1992), 2,200  $\mu\text{g/L}$  (January 1993), and 9,600  $\mu\text{g/L}$  (January 1993), respectively. The maximum concentration of Methyl tert-butyl ether (MTBE) was also detected in well MW-3 at 2,200  $\mu\text{g/L}$  (August 1996). The wells have shown a decreasing trend with respect to TPH-G, BTEX, and MTBE concentrations between 1992 and 1998. TPH-G and BTEX have not been detected above the laboratory reporting limits since 1992 in wells MW-1, MW-4, and MW-9. Historic soil analytical data and ground-water elevations and analytical data are provided in Attachment B.

### **3.0 SECOND QUARTER 2008 GROUND-WATER MONITORING RESULTS**

The 25 April 2008 letter from ACEH requested the initiation of a single ground-water monitoring event at the Site due to the length of time elapsed since previous monitoring (1998) and to assess current ground-water conditions. Ground-water sampling was conducted on 4 June 2008 by Stratus Environmental, Inc. (Stratus). Monitor wells MW-2 through MW-10 were included in this sampling event. Gasoline range organics (GRO) and methyl-t-butyl ether (MTBE) were the only two constituents reported above laboratory detection limits. GRO was detected at 98 micrograms per liter ( $\mu\text{g/L}$ ) in well MW-3 and 360  $\mu\text{g/L}$  in well MW-6. MTBE was detected in offsite well MW-10 at 1.8  $\mu\text{g/L}$ . The GRO and MTBE concentrations detected during the 4 June 2008 monitoring did not exceed the San Francisco Bay Regional Water Quality Control Board Tier 1 Environmental Screening Levels for a non-drinking water resource at a commercial site (500  $\mu\text{g/L}$  for GRO and 1,800  $\mu\text{g/L}$  for MTBE). A copy of the laboratory analytical report is provided in Attachment C. A more detailed description of ground-water monitoring and sampling activities will be provided by 31 July 2008 in the Second Quarter 2008 Ground-Water Monitoring Report.

### **4.0 SITE GEOLOGY AND HYDROGEOLOGY**

According to the *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report* (California Regional Water Quality Control Board – San Francisco Bay Region/SFRWQCB, June 1999), the Site is located within the Oakland Sub-Area of the East Bay Plain of the San Francisco Basin. The Oakland Sub-Area contains a sequence of alluvial fans. The alluvial fill thickness ranges from 300 to 700 feet deep. There are no well-defined aquitards such as estuarine muds. The largest and deepest wells in this sub-area historically pumped one to two million gallons per day at depths greater than 200 feet. Overall, sustainable yields are low due in part to low recharge potential. The Merrit sand in West Oakland was an important part of the

early water supply for the City of Oakland. It is shallow (up to 60 feet), but before the turn of the last century, septic systems contaminated the water supply wells.

Throughout most of the Alameda County portion of the East Bay Plain, from Hayward north to Albany, water level contours show that the general direction of ground-water flow is from east to west or from the Hayward Fault to the San Francisco Bay. Ground-water flow direction generally correlates to topography. Flow direction and velocity are also influenced by buried stream channels that typically are oriented in an east to west direction. In the southern end of the study area however, near the San Lorenzo Sub-Area, the direction of flow may not be this simple. According to information presented in *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report*, the small set of water level measurements available seemed to show that the ground water in the upper aquifers may be flowing south, with the deeper aquifers, the Alameda Formation, moving north. The nearest natural drainage is Arroyo Viejo, located approximately 1.1 miles north of the Site and San Leandro Creek, located approximately 1.1 miles south of the Site. The Arroyo Viejo channel flows generally east to west while San Leandro creek generally flows west to southwest near the Site vicinity.

The Site elevation is approximately 34 feet above mean sea level. The water table fluctuates seasonally. Historically, depth-to-water measurements have ranged from 6 to 12 feet bgs. Ground-water flow direction during the fourth quarter monitoring event on 12 October 1998 was to the west at a gradient of 0.009 ft/ft.

According to the *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report*, the City of Oakland does not have "any plans to develop local ground-water resources for drinking water purposes, because of existing or potential saltwater intrusion, contamination, or poor or limited quantity." However, the RWQCB's Basin Plan denotes existing beneficial uses of municipal and domestic supply (MUN), industrial process supply (PROC), industrial service supply (IND), and agricultural supply (AGR) for the East Bay Plain ground-water basin.

The Site is typically underlain by silts and clays with 1 to 10 foot thick intervals of sands to a total explored depth of approximately 30 feet bgs. Boring logs for wells MW-3 and MW-6 indicate more than 5 feet of sand encountered, while those for wells MW-1, MW-2, MW-4, and MW-8 through MW-10 indicate less than 5 feet of sand encountered. In general, the lithology observed on the Site consists of an upper one to two foot layer of fill. Layers of silts and clay are found beneath the fill ranging from two to ten feet bgs. Sands and silty and clayey sands are typically encountered at depths ranging from approximately eight to 18 feet bgs. Another layer of silts and clay is generally observed ranging from approximately 15 to 20 feet bgs. Sands and silty and clayey sands have generally been recorded from 20 to 30.5 feet bgs at the Site. Copies of the geologic cross sections prepared by EMCON are provided in Attachment D.

## **5.0 PROPOSED SCOPE OF WORK**

At the request of ACEH, the purpose of the proposed on-site soil investigation is to investigate the concentration of petroleum hydrocarbons in soil immediately beneath the northern dispenser island at a depth of approximately 9.5 feet bgs. BAI proposes advancing one direct-push technology (DPT) boring to evaluate potential, residual petroleum hydrocarbon impacts to soil. One boring (B-1) is proposed approximately five feet northwest of the product line located along the northwestern edge of the northern dispenser island (see Drawing 2). This location is directly

adjacent to the soil sample Line-9 collected on 5 November 1991, referenced in the ACEH letter (see Attachment A). Due to the presence of the current dispenser island and product line, the proposed borehole can not be safely placed in the same position of the previous sample collected. The actual location may vary due to the potential presence of underground utility conflicts. The proposed boring location is shown in Drawing 2.

Prior to initiating field activities, Stratus Environmental Inc. (Stratus) will obtain the necessary drilling permit from Alameda County; prepare a site health and safety plan (HASP) for the proposed work, clear the Site for subsurface utilities, and provide 72-hour advance notification to ACEH prior to start of field activities. The utility clearance will include notifying Underground Service Alert (USA) of the pending work a minimum of 48 hours prior to initiating the field investigation, and securing the services of a private utility locating company to confirm the absence of underground utilities at the boring location. The borehole will be physically cleared to five feet bgs using hand auger or air knife methods.

The Site-specific HASP will be prepared for use by personnel implementing the work plan. A copy of the HASP will be available on-site during work. The subcontractor(s) performing field activities will be provided with a copy of the HASP prior to initiating work. A safety tailgate meeting will also be conducted daily to review potential hazards and scope of work.

A Stratus field geologist will observe a California-licensed drilling company advance the soil boring using a Geoprobe or similar DPT drilling rig to a total approximate depth of 9.5 feet bgs. Soils will be classified according to the Unified Soil Classification System (USCS), and will be examined using visual and manual methods for parameters including odor, staining, color, grain size, and moisture content. One soil sample will be collected at approximately 9.5 feet bgs. This soil sample will be submitted to the laboratory for chemical analysis. Following sample collection, the boring will be grouted to the surface using neat cement, and the surface refinished to match the surrounding area.

The sample will be submitted under chain-of-custody protocol to Calscience Environmental Laboratories, Inc. (Garden Grove), a California State-certified environmental laboratory. The soil sample will be analyzed for the following: Gasoline Range Organics (GRO, C6-C12), BTEX, MTBE, Ethyl tert-butyl ether (ETBE), tert-Amyl methyl ether (TAME), Di-isopropyl ether (DIPE), 1,2-Dichloroethane (1,2-DCA), 1,2-Dibromoethane (EDB), tert-Butyl alcohol (TBA), and ethanol using EPA Method 8260B.

Investigation-derived residuals will be temporarily stored onsite in 55-gallon, DOT-approved drums, pending characterization for proper management. Stratus will coordinate the removal and transportation of surplus soils and liquids to appropriate California-regulated facilities.

Upon completion of field activities and receipt of certified field data package (including copies of permits, field data sheets, boring logs, and the laboratory analytical report with chain-of-custody documentation), BAI will prepare a Soil Investigation Report. The report will document the results of the investigation, field activities, copies of required permit(s), copies of field notes, soil boring logs, laboratory analytical report with chain-of-custody documentation, discussion of findings, and conclusions. Deviations from the work plan or data inconsistencies will be discussed in the report.



## 6.0 PROPOSED SCHEDULE

The schedule for the above-noted work shall proceed as follows:

- Onsite Soil Investigation – Upon approval of this work plan and obtaining the necessary permits;
- Onsite Soil Investigation Report – Within 60 days after completion of fieldwork.

In addition, ground-water monitoring has already been completed onsite during the Second Quarter 2008, as requested by ACEH in their 25 April 2008 letter. A ground-water monitoring report will be submitted within 30 days following the end of the Second Quarter 2008.

## 7.0 CLOSURE

The findings presented in this document are based upon: observation of field personnel from previous consultants, the points investigated, and results of laboratory tests performed by various laboratories. Our services were performed in accordance with the generally accepted standard of practice at the time this document was written. No other warranty, expressed or implied was made. This report has been prepared for the exclusive use of Atlantic Richfield Company. It is possible that variations in soil or ground-water conditions could exist beyond points explored in this investigation. Also changes in site conditions could occur in the future due to variations in rainfall, temperature, regional water usage, or other factors.

## 8.0 REFERENCES

ACEH, 25 April 2008. Fuel Leak Case No. RO 0000392 and Geotracker Global ID T0600100114, ARCO #02185, 9800 International Blvd., Oakland, CA 94603. Letter from Mr. Paresh Khatri (ACEH) to Mr. Paul Supple (Atlantic Richfield Company).

California Regional Water Quality Control Board, San Francisco Bay Region, Groundwater Committee, June 1999. *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report, Alameda County and Contra Costa Counties, CA.*

EMCON, 8 January 1996. *Offsite Well Installation Report, ARCO Station #2185, Oakland, California, ACHCS Fuel Leak Case No. RO0000392.*

Pinnacle Environmental Solutions, 8 March 1999. *Quarterly Groundwater Monitoring Report, Fourth Quarter 1998, for ARCO Service Station #2185, Oakland, California.*

ROUX Associates, 22 November 1991. *UST and Line Replacement Report, ARCO Station #2185, Oakland, California.*

ROUX Associates, 8 August 1991. *Preliminary Tank Replacement Assessment, ARCO Facility No. 2185, Oakland, California.*

ROUX Associates, 17 June 1992. *Underground Storage Tank Removal and Soil Sampling, ARCO Facility No. 2185, Oakland, California.*

ROUX Associates, 28 September 1992. *Initial Subsurface Investigation at ARCO Station 2185, Oakland, California.*

ROUX Associates, 12 October 1993. *Initial Off-site and Additional On-site Subsurface Investigation and Pumping Test at ARCO Station 2185, Oakland, California.*

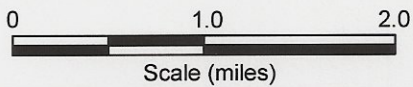
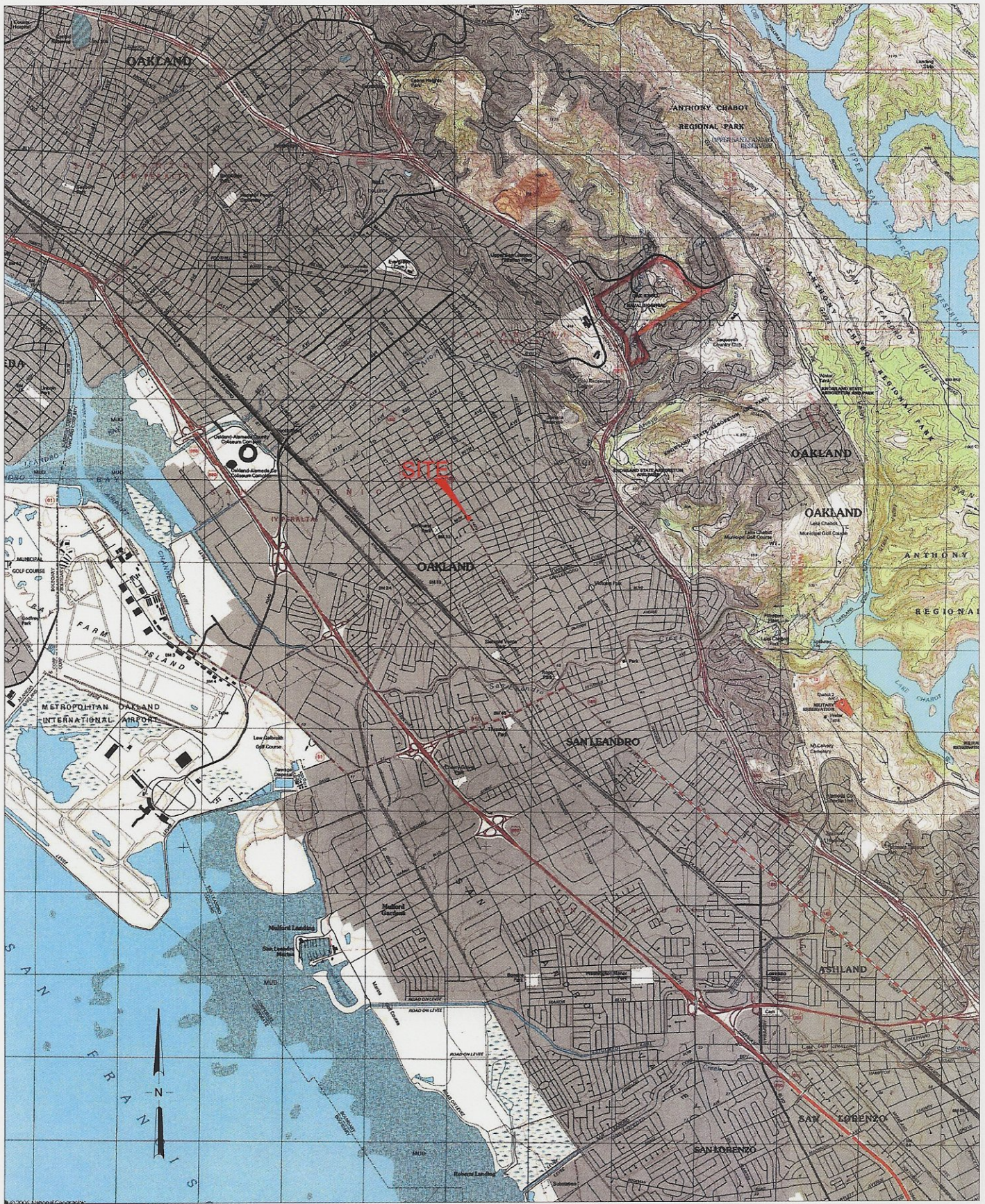
ROUX Associates, 6 June 1994. *Installation of Compliance Well MW-10, ARCO Service Station 2185, Oakland, California.*

## LIST OF DRAWINGS

Drawing 1. Site Location Map

Drawing 2. Site Layout Plan with Proposed Soil Boring Location





**BROADBENT & ASSOCIATES, INC.**  
 ENGINEERING, WATER RESOURCES & ENVIRONMENTAL  
 1324 Mangrove Ave. Suite 212, Chico, California 95926  
 Project No.: 06-08-649 Date: 6/2/08

Station #2185  
 9800 International Blvd.  
 Oakland, California

Site Location Map

Figure

1



CITY OF OAKLAND  
FIRE STATION

98TH AVENUE

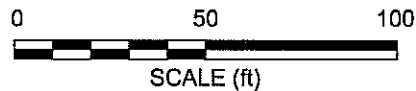
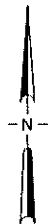
INTERNATIONAL BOULEVARD

McDONALDS  
(Former  
Exxon Station)

NON-NATIVE SOIL  
BACKFILL AREA

BIG-O TIRES  
(FORMER GAS STATION)

APPROXIMATE LOCATION OF  
FORMER PUMP ISLAND



**BROADBENT & ASSOCIATES, INC.**

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

Project No.: 06-08-622 Date: 5/29/08






Station #2185  
9800 International Blvd.  
Oakland, California

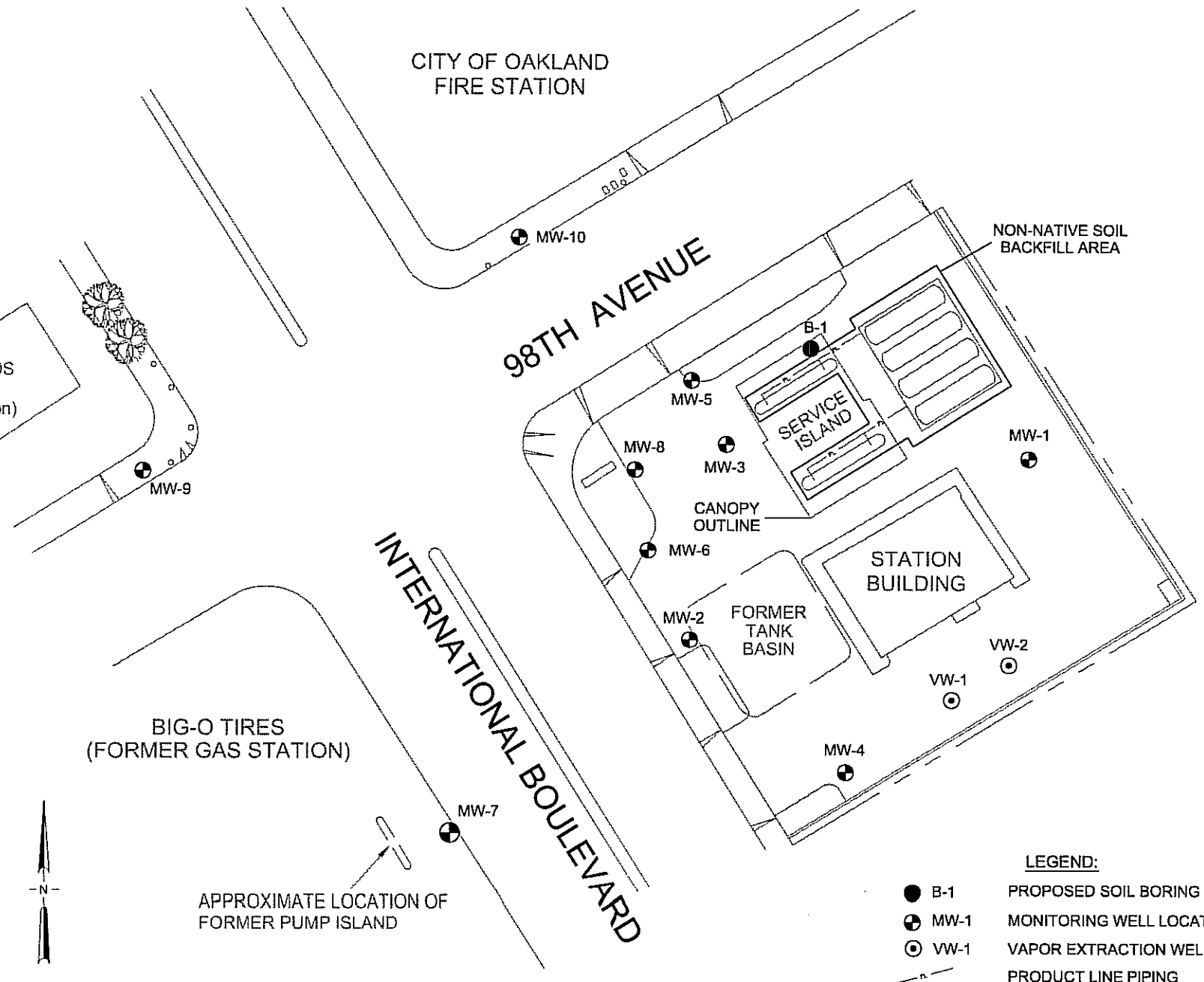
Site Layout Plan with Proposed  
Soil Boring Location

Drawing

2

**LEGEND:**

-  B-1 PROPOSED SOIL BORING LOCATION
-  MW-1 MONITORING WELL LOCATION
-  VW-1 VAPOR EXTRACTION WELL LOCATION
-  PRODUCT LINE PIPING
-  APPROXIMATE LIMITS OF EXCAVATION



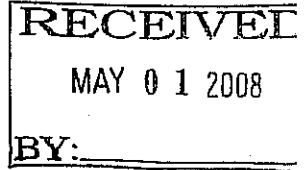
ATTACHMENT A.  
RECENT REGULATORY CORRESPONDENCE



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

April 25, 2008

Paul Supple  
Atlantic Richfield Company  
(A BP Affiliated Company)  
P.O. Box 1257  
San Ramon, CA 94583



Subject: Fuel Leak Case No. RO0000392 and Geotracker Global ID T0600100114, ARCO  
#02185, 9800 International Boulevard, Oakland, CA 94603

Dear Mr. Supple:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the recently submitted document entitled, "Tier1, Tier 2 Risk-Based correction Action Evaluation," dated October 6, 1997, which was prepared by Pinnacle Environmental Solutions and the document entitled "Request for Case Closure," dated September 9, 2003, which was prepared by URS Corporation for the subject site. The October 6, 1997 report indicates that the "site does not present a significant health risk to receptors," and requested case closure. Our March 18, 1999 correspondence expressed concerns regarding the elevated residual benzene concentrations detected in soil beneath the dispenser islands, particularly soil sample Line-9 (5,400 mg/kg TPH-g and 22 mg/kg benzene) collected at 9.5 feet bgs, and requested collecting either confirmation soil samples or soil vapor samples to verify current contaminant concentrations and evaluate risk thereof. In the September 9, 2003 report, confirmation soil samples were collected from underneath the dispenser islands following piping and dispenser upgrades. Two soil samples, DI-4 (collected at 5 feet bgs) and LS-4 (collected at 6 feet bgs), were collected in the vicinity of soil sample Line-9. Soil sample analytical results did not detect contaminants above the laboratory detection limit. Subsequently, URS states that "this addresses ACHCSA's concerns for residual benzene concentrations at the respective Site and qualifies the Site for case closure." However, since the over-excavation bottom sample Line-9 was collected at 9.5 feet bgs, it is likely that the subsequent shallower soil samples collected are indicative of fill material underneath the dispensers and not representative of residual benzene concentrations detected in soil sample Line-9 collected at 9.5 feet bgs.

Therefore, ACEH cannot consider case closure for the subject site at this time. This decision to deny closure is subject to appeal to the State Water Resources Control Board (SWRCB), pursuant to Section 25299.39.2(b) of the Health and Safety Code (Thompson-Richter Underground Storage Tank Reform Act - Senate Bill 562). Please contact the SWRCB Underground Storage Tank Program at (916) 341-5851 for information regarding the appeal process.

We request that you address the following technical comments, perform the proposed work, and send us the technical reports requested below.

### **TECHNICAL COMMENTS**

1. **Residual Hydrocarbons in Soil** – As stated above, elevated TPH-g and benzene concentrations were detected at depths of up to 9.5 feet bgs in soil samples collected from underneath the former dispensers in November 1991. Dispenser and piping upgrade confirmation soil samples collected at depths of 5 to 6 feet bgs in November 2002 did not detect concentrations of hydrocarbons above the laboratory detection limit. However, the sampling depth appears too shallow to adequately characterize the known residual soil contamination. Please propose a scope of work to address the above-mentioned concerns and submit a work plan by the due date specified below.
2. **Groundwater Contaminant Plume Monitoring** - According to our records, the most recent groundwater monitoring event was conducted on February 25, 1998. Please initiate groundwater monitoring at the site. Prior to collecting groundwater samples, it is recommended that the monitoring wells be re-developed so that groundwater samples representative of actual site conditions are collected. Please collect the groundwater samples and submit a report by the due date specified below.

### **TECHNICAL REPORT REQUEST**

Please submit technical reports to Alameda County Environmental Health (Paresh Khatri), according to the following schedule:

- **Monday, June 16, 2008** – Soil Investigation Work Plan
- **Wednesday, July 30, 2008** - Groundwater Monitoring Report (2<sup>nd</sup> Quarter, 2008)

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

### **ELECTRONIC SUBMITTAL OF REPORTS**

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.



Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements ([http://www.swrcb.ca.gov/ust/cleanup/electronic\\_reporting](http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting)).

#### 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.

#### PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans 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.

#### UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

#### AGENCY OVERSIGHT

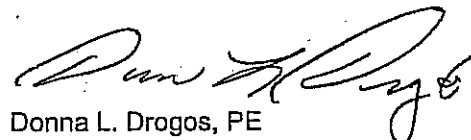
If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section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

If you have any questions, please call me at (510) 777-2478 or send me an electronic mail message at paresh.khatri@acgov.org.

Sincerely,



Paresh C. Khatri  
Hazardous Materials Specialist



Donna L. Drogos, PE  
Supervising Hazardous Material Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Tom Venus, Broadbent & Associates, Inc., 1324 Mangrove Ave., Ste 212, Chico, CA 95926  
Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA  
94612-2032  
Donna Drogos, ACEH  
Paresh Khatri, ACEH  
File

ATTACHMENT B.  
HISTORIC SOIL AND GROUND-WATER DATA

TABLE 1: Summary of Soil Analyses: Former Tank Cavity and Product Line Trenches  
ARCO Facility No. 2185, Oakland, California

| Sample Designation           | Date    | Depth (feet bgs) | TPH-G(1) | BTEX Distinction (1) |         |              |         |
|------------------------------|---------|------------------|----------|----------------------|---------|--------------|---------|
|                              |         |                  |          | Benzene              | Toluene | Ethylbenzene | Xylenes |
| <b>Former Tank Cavity</b>    |         |                  |          |                      |         |              |         |
| SW-1                         | 11/1/91 | 14               | 810      | 3.4                  | 1       | 13           | 50      |
| SW-2                         | 11/1/91 | 6                | ND       | ND                   | ND      | ND           | ND      |
| SW-3                         | 11/1/91 | 14               | 370      | 1.6                  | 17      | 8.8          | 53      |
| SW-4                         | 11/1/91 | 14               | 220      | 0.73                 | 1.2     | 2.8          | 15      |
| SW-5                         | 11/1/91 | 6                | 1.1      | 0.014                | 0.0069  | 0.012        | 0.034   |
| SW-6                         | 11/1/91 | 14               | 230      | 0.84                 | 2.3     | 2.4          | 15      |
| SW-7                         | 11/1/91 | 14               | 1,100    | 5.9                  | 28      | 15           | 90      |
| SW-8                         | 11/1/91 | 6                | 1.3      | 0.11                 | 0.0054  | ND           | 0.016   |
| SW-9                         | 11/1/91 | 14               | 500      | 3.7                  | 0.92    | 7.1          | 32      |
| SW-10                        | 11/1/91 | 14               | 750      | 5.9                  | 5.3     | 10           | 61      |
| SW-11                        | 11/1/91 | 6                | ND       | ND                   | ND      | ND           | 0.012   |
| SW-12                        | 11/1/91 | 14               | 210      | 1.6                  | 0.26    | 3.2          | 5       |
| <b>Product Line Trenches</b> |         |                  |          |                      |         |              |         |
| LINE-1                       | 11/5/91 | 3                | ND       | ND                   | ND      | ND           | ND      |
| LINE-2                       | 11/5/91 | 3                | ND       | ND                   | ND      | ND           | ND      |
| LINE-3                       | 11/5/91 | 5                | 1,400    | 0.51                 | 87      | 55           | 350     |
| LINE-4                       | 11/6/91 | 11               | 450      | 2.6                  | 24      | 8.7          | 56      |
| LINE-5                       | 11/6/91 | 8                | 18       | ND                   | 0.029   | 0.042        | 0.38    |
| LINE-6                       | 11/6/91 | 8                | ND       | ND                   | ND      | ND           | ND      |
| LINE-7                       | 11/6/91 | 8                | 5.1      | 0.032                | 0.047   | 0.058        | 0.013   |
| LINE-8                       | 11/6/91 | 8                | 240      | 0.17                 | 2.8     | 2.8          | 15      |
| LINE-9                       | 11/6/91 | 9.5              | 5,400    | 22                   | 330     | 120          | 640     |
| LINE-10                      | 11/6/91 | 8                | 2,600    | 5                    | 130     | 53           | 29      |
| LINE-11                      | 11/6/91 | 3                | 1.4      | ND                   | 0.014   | 0.012        | 0.1     |
| LINE-12                      | 11/6/91 | 3                | ND       | ND                   | ND      | ND           | ND      |
| LINE-13                      | 11/6/91 | 3                | 13       | ND                   | 0.026   | 0.05         | 0.7     |
| LINE-14                      | 11/6/91 | 3                | ND       | ND                   | ND      | ND           | ND      |

**FOOTNOTES**

(1) = Concentrations reported in mg/kg (ppm)

TPH-G = Total Petroleum Hydrocarbons As Gasoline (Modified USEPA 8015)

BTEX Distinction (USEPA 8020)

NA = Not Analyzed

ND = Not Detected (for detection limits see laboratory analytical results, Appendix B)

bgs = Below ground surface

**Table 1**  
**Historical Groundwater Elevation and Analytical Data**  
**Petroleum Hydrocarbons and Their Constituents**  
**1995 - Present\***

**ARCO Service Station 2185**  
**9800 East 14th Street, Oakland, California**

| Well Designation | Water Level Field Date | Top of Casing Elevation<br>ft-MSL | Depth to Water<br>feet | Groundwater Elevation<br>ft-MSL | Flaming Product Thickness<br>feet | Groundwater Flow Direction<br>MWN | Hydraulic Gradient<br>ft/ft | Water Sample Field Date | TPHC LUFT Method<br>µg/L                                     | Benzene EPA 8020<br>µg/L | Toluene EPA 8020<br>µg/L | Ethylbenzene EPA 8020<br>µg/L | Total Xylenes EPA 8020<br>µg/L | MTBE EPA 8020<br>µg/L | MTBE EPA 8240/8160<br>µg/L |
|------------------|------------------------|-----------------------------------|------------------------|---------------------------------|-----------------------------------|-----------------------------------|-----------------------------|-------------------------|--|--------------------------|--------------------------|-------------------------------|--------------------------------|-----------------------|----------------------------|
| MW-1             | 03-15-95               | 29.15                             | 8.50                   | 20.65                           | ND                                | NW                                | 0.01                        | 03-15-95                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | --                    | --                         |
| MW-1             | 05-30-95               | 29.15                             | 10.28                  | 18.87                           | ND                                | SW                                | 0.005                       | 05-30-95                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                            |
| MW-1             | 09-20-95               | 29.15                             | 11.70                  | 17.45                           | ND                                | WSW                               | 0.005                       | 09-20-95                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                            |
| MW-1             | 11-07-95               | 29.15                             | 12.12                  | 17.03                           | ND                                | WSW                               | 0.004                       | 11-07-95                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                            |
| MW-1             | 02-28-96               | 29.15                             | 8.54                   | 20.61                           | ND                                | NW                                | 0.009                       | 02-28-96                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | ∆                     | --                         |
| MW-1             | 05-30-96               | 29.15                             | 10.05                  | 19.10                           | ND                                | W                                 | 0.007                       | 05-31-96                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                            |
| MW-1             | 08-20-96               | 29.15                             | 11.35                  | 17.80                           | ND                                | SW                                | 0.005                       | 08-20-96                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                            |
| MW-1             | 11-19-96               | 29.15                             | 11.20                  | 17.95                           | ND                                | WSW                               | 0.005                       | 11-19-96                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                            |
| MW-1             | 03-25-97               | 29.15                             | 10.12                  | 19.03                           | ND                                | WNW                               | 0.006                       | 03-25-97                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | ∆                     | --                         |
| MW-1             | 06-17-97               | 29.15                             | 11.27                  | 17.88                           | ND                                | W                                 | 0.001                       | 06-17-97                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                            |
| MW-1             | 08-07-97               | 29.15                             | 11.83                  | 17.32                           | ND                                | SW                                | 0.005                       | 08-07-97                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                            |
| MW-1             | 11-18-97               | 29.15                             | 11.80                  | 17.35                           | ND                                | SW                                | 0.004                       | 11-18-97                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                            |
| MW-1             | 02-25-98               | 29.15                             | 7.02                   | 22.13                           | ND                                | NW                                | 0.011                       | 02-25-98                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | ∆                     | --                         |
| MW-1             | 05-11-98               | 29.15                             | 9.17                   | 19.98                           | ND                                | WNW                               | 0.01                        | 05-11-98                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                            |
| MW-1             | 07-29-98               | 29.15                             | 10.46                  | 18.69                           | ND                                | W                                 | 0.009                       | 07-29-98                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                            |
| MW-1             | 10-12-98               | 29.15                             | 11.27                  | 17.88                           | ND                                | W                                 | 0.009                       | 10-12-98                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                            |
| MW-2             | 03-15-95               | 28.47                             | 8.37                   | 20.10                           | ND                                | NW                                | 0.01                        | 03-15-95                | 2100   | 7.4                      | <0.5                     | 130                           | 39                             | --                    | --                         |
| MW-2             | 05-30-95               | 28.47                             | 9.95                   | 18.52                           | ND                                | SW                                | 0.005                       | 05-30-95                | 1700   | 3.3                      | <0.5                     | 120                           | 31                             | --                    | --                         |
| MW-2             | 09-20-95               | 28.47                             | 11.37                  | 17.10                           | ND                                | WSW                               | 0.005                       | 09-21-95                | 1200   | 1                        | <1                       | 68                            | 16                             | ∆                     | --                         |
| MW-2             | 11-07-95               | 28.47                             | 11.73                  | 16.74                           | ND                                | WSW                               | 0.004                       | 11-07-95                | 1100   | ∆                        | ∆                        | 74                            | 14                             | ∆                     | --                         |
| MW-2             | 02-28-96               | 28.47                             | 8.12                   | 20.35                           | ND                                | NW                                | 0.009                       | 02-29-96                | 2200   | ∆                        | ∆                        | 130                           | 27                             | ∆                     | --                         |
| MW-2             | 05-30-96               | 28.47                             | 9.89                   | 18.58                           | ND                                | W                                 | 0.007                       | 05-31-96                | 970  | ∆                        | <1                       | 29                            | 3                              | ∆                     | --                         |
| MW-2             | 08-20-96               | 28.47                             | 11.05                  | 17.42                           | ND                                | SW                                | 0.005                       | 08-20-96                | 670  | <1                       | <1                       | 16                            | 1                              | ∆                     | --                         |
| MW-2             | 11-19-96               | 28.47                             | 10.96                  | 17.51                           | ND                                | WSW                               | 0.005                       | 11-19-96                | 990  | <1                       | <1                       | 46                            | 3                              | ∆                     | --                         |
| MW-2             | 03-25-97               | 28.47                             | 9.84                   | 18.63                           | ND                                | WNW                               | 0.006                       | 03-25-97                | 540  | <1                       | <1                       | <1                            | <1                             | ∆                     | --                         |
| MW-2             | 06-17-97               | 28.47                             | 10.99                  | 17.48                           | ND                                | W                                 | 0.001                       | 06-17-97                | 510  | <1                       | 0.9                      | 1.1                           | ∆                              | ∆                     | --                         |
| MW-2             | 08-07-97               | 28.47                             | 11.50                  | 16.97                           | ND                                | SW                                | 0.005                       | 08-07-97                | 280  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | ∆                     | --                         |
| MW-2             | 11-18-97               | 28.47                             | 11.41                  | 17.06                           | ND                                | SW                                | 0.004                       | 11-18-97                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | ∆                     | --                         |
| MW-2             | 02-25-98               | 28.47                             | 6.33                   | 22.14                           | ND                                | NW                                | 0.011                       | 02-25-98                | 850  | <0.5                     | 1.1                      | 13                            | 1.4                            | ∆                     | --                         |
| MW-2             | 05-11-98               | 28.47                             | 8.89                   | 19.58                           | ND                                | WNW                               | 0.01                        | 05-11-98                | 290  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | ∆                     | --                         |
| MW-2             | 07-29-98               | 28.47                             | 10.22                  | 18.25                           | ND                                | W                                 | 0.009                       | 07-29-98                | 310  | <0.5                     | 0.5                      | <0.5                          | 1.1                            | ∆                     | --                         |
| MW-2             | 10-12-98               | 28.47                             | 10.95                  | 17.52                           | ND                                | W                                 | 0.009                       | 10-12-98                | 280  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | ∆                     | --                         |

**Table 1**  
**Historical Groundwater Elevation and Analytical Data**  
**Petroleum Hydrocarbons and Their Constituents**  
**1995 - Present\***

**ARCO Service Station 2185**  
**9800 East 14th Street, Oakland, California**

| Well Designation | Water Level Field Date | Top of Casing Elevation | Depth to Water | Groundwater Elevation | Floating Product Thickness | Groundwater Flow Direction | Hydraulic Gradient | Water Sample Field Date | TPHC LUFT Method   | Benzene EPA 8020 | Toluene EPA 8020 | Ethylbenzene EPA 8020 | Total Nylenes EPA 8020 | MTBE EPA 8020 | MTDE EPA 8340/8360 |
|------------------|------------------------|-------------------------|----------------|-----------------------|----------------------------|----------------------------|--------------------|-------------------------|--|------------------|------------------|-----------------------|------------------------|---------------|--------------------|
|                  |                        | ft-MSL                  | feet           | ft-MSL                | feet                       | MWN                        | ft/ft              |                         | µg/L   | µg/L             | µg/L             | µg/L                  | µg/L                   | µg/L          | µg/L               |
| MW-3             | 03-15-95               | 28.57                   | 8.47           | 20.10                 | ND                         | NW                         | 0.01               | 03-15-95                | 2000   | <2.5             | <2.5             | 88                    | 82                     | --            | --                 |
| MW-3             | 05-30-95               | 28.57                   | 10.03          | 18.54                 | ND                         | SW                         | 0.005              | 05-30-95                | 2000   | 3.2              | <2.5             | 70                    | 46                     | --            | --                 |
| MW-3             | 09-20-95               | 28.57                   | 11.30          | 17.27                 | ND                         | WSW                        | 0.005              | 09-21-95                | 2100   | 12               | 0                | 77                    | 38                     | 280           | --                 |
| MW-3             | 11-07-95               | 28.57                   | 11.65          | 16.92                 | ND                         | WSW                        | 0.004              | 11-07-95                | 3000   | 18               | 0                | 120                   | 62                     | --            | 430[1]             |
| MW-3             | 02-28-96               | 28.57                   | 8.35           | 20.22                 | ND                         | NW                         | 0.009              | 02-29-96                | 5100   | 83               | 0                | 160                   | 57                     | 640           | --                 |
| MW-3             | 05-30-96               | 28.57                   | 9.77           | 18.80                 | ND                         | W                          | 0.007              | 05-31-96                | 2100   | 41               | 0                | 57                    | 15                     | 890           | --                 |
| MW-3             | 08-20-96               | 28.57                   | 11.00          | 17.57                 | ND                         | SW                         | 0.005              | 08-20-96                | 2500   | 94               | <2.5             | 62                    | 14                     | 2200          | --                 |
| MW-3             | 11-19-96               | 28.57                   | 10.92          | 17.65                 | ND                         | WSW                        | 0.005              | 11-19-96                | 2400   | 84               | <2.5             | 73                    | 22                     | 1300          | --                 |
| MW-3             | 03-25-97               | 28.57                   | 9.90           | 18.67                 | ND                         | WNW                        | 0.006              | 03-25-97                | <50  | <0.5             | <0.5             | <0.5                  | <0.5                   | 48            | --                 |
| MW-3             | 06-17-97               | 28.57                   | 10.95          | 17.62                 | ND                         | W                          | 0.001              | 06-17-97                | <200   | <2               | <2               | <2                    | <2                     | 200           | --                 |
| MW-3             | 08-07-97               | 28.57                   | 11.44          | 17.13                 | ND                         | SW                         | 0.005              | 08-07-97                | <500   | <5               | <5               | <5                    | <5                     | 490           | --                 |
| MW-3             | 11-18-97               | 28.57                   | 11.35          | 17.22                 | ND                         | SW                         | 0.004              | 11-18-97                | 200  | 9                | <2               | 7                     | <2                     | 300           | --                 |
| MW-3             | 02-25-98               | 28.57                   | 6.98           | 21.59                 | ND                         | NW                         | 0.011              | 02-25-98                | 250  | <2               | <2               | 7                     | <2                     | 370           | --                 |
| MW-3             | 05-11-98               | 28.57                   | 9.07           | 19.50                 | ND                         | WNW                        | 0.01               | 05-11-98                | <50  | <0.5             | <0.5             | <0.5                  | <0.5                   | <2            | --                 |
| MW-3             | 07-29-98               | 28.57                   | 10.06          | 18.51                 | ND                         | W                          | 0.009              | 07-29-98                | <50  | <0.5             | <0.5             | <0.5                  | <0.5                   | 51            | --                 |
| MW-3             | 10-12-98               | 28.57                   | 10.96          | 17.61                 | ND                         | W                          | 0.009              | 10-12-98                | <50  | <0.5             | <0.5             | <0.5                  | <0.5                   | 98            | --                 |
| MW-4             | 03-15-95               | 29.21                   | 8.69           | 20.52                 | ND                         | NW                         | 0.01               | 03-15-95                | <50  | <0.5             | <0.5             | <0.5                  | <0.5                   | --            | --                 |
| MW-4             | 05-30-95               | 29.21                   | 10.57          | 18.64                 | ND                         | SW                         | 0.005              | 05-30-95                | Not sampled: well sampled annually, during the first quarter |                  |                  |                       |                        |               |                    |
| MW-4             | 09-20-95               | 29.21                   | 12.02          | 17.19                 | ND                         | WSW                        | 0.005              | 09-20-95                | Not sampled: well sampled annually, during the first quarter |                  |                  |                       |                        |               |                    |
| MW-4             | 11-07-95               | 29.21                   | 12.42          | 16.79                 | ND                         | WSW                        | 0.004              | 11-07-95                | Not sampled: well sampled annually, during the first quarter |                  |                  |                       |                        |               |                    |
| MW-4             | 02-28-96               | 29.21                   | 8.66           | 20.55                 | ND                         | NW                         | 0.009              | 02-28-96                | <50  | <0.5             | <0.5             | <0.5                  | <0.5                   | <2            | --                 |
| MW-4             | 05-30-96               | 29.21                   | 10.34          | 18.87                 | ND                         | W                          | 0.007              | 05-31-96                | Not sampled: well sampled annually, during the first quarter |                  |                  |                       |                        |               |                    |
| MW-4             | 08-20-96               | 29.21                   | 11.67          | 17.54                 | ND                         | SW                         | 0.005              | 08-20-96                | Not sampled: well sampled annually, during the first quarter |                  |                  |                       |                        |               |                    |
| MW-4             | 11-19-96               | 29.21                   | 11.50          | 17.71                 | ND                         | WSW                        | 0.005              | 11-19-96                | Not sampled: well sampled annually, during the first quarter |                  |                  |                       |                        |               |                    |
| MW-4             | 03-25-97               | 29.21                   | 10.42          | 18.79                 | ND                         | WNW                        | 0.006              | 03-25-97                | <50  | <0.5             | <0.5             | <0.5                  | <0.5                   | <2            | --                 |
| MW-4             | 06-17-97               | 29.21                   | 11.60          | 17.61                 | ND                         | W                          | 0.001              | 06-17-97                | Not sampled: well sampled annually, during the first quarter |                  |                  |                       |                        |               |                    |
| MW-4             | 08-07-97               | 29.21                   | 12.17          | 17.04                 | ND                         | SW                         | 0.005              | 08-07-97                | Not sampled: well sampled annually, during the first quarter |                  |                  |                       |                        |               |                    |
| MW-4             | 11-18-97               | 29.21                   | 12.05          | 17.16                 | ND                         | SW                         | 0.004              | 11-18-97                | Not sampled: well sampled annually, during the first quarter |                  |                  |                       |                        |               |                    |
| MW-4             | 02-25-98               | 29.21                   | 6.91           | 22.30                 | ND                         | NW                         | 0.011              | 02-25-98                | <50  | <0.5             | <0.5             | <0.5                  | <0.5                   | <2            | --                 |
| MW-4             | 05-11-98               | 29.21                   | 9.45           | 19.76                 | ND                         | WNW                        | 0.01               | 05-11-98                | Not sampled: well sampled annually, during the first quarter |                  |                  |                       |                        |               |                    |
| MW-4             | 07-29-98               | 29.21                   | 10.80          | 18.41                 | ND                         | W                          | 0.009              | 07-29-98                | Not sampled: well sampled annually, during the first quarter |                  |                  |                       |                        |               |                    |
| MW-4             | 10-12-98               | 29.21                   | 11.58          | 17.63                 | ND                         | W                          | 0.009              | 10-12-98                | Not sampled: well sampled annually, during the first quarter |                  |                  |                       |                        |               |                    |

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**Petroleum Hydrocarbons and Their Constituents**  
**1995 - Present\***

**ARCO Service Station 2185**  
**9800 East 14th Street, Oakland, California**

| Well Designation | Water Level Field Date | Top of Casing Elevation<br>ft-MSL | Depth to Water<br>ft | Groundwater Elevation<br>ft-MSL | Floating Product Thickness<br>feet | Groundwater Flow Direction<br>MWN | Hydraulic Gradient<br>ft/ft | Water Sample Field Date | TPHG LUFT Method<br>µg/L   | Benzene EPA 8020<br>µg/L | Toluene EPA 8020<br>µg/L | Ethylbenzene EPA 8020<br>µg/L | Total Xylenes EPA 8020<br>µg/L | MTBE EPA 8020<br>µg/L | MTBE EPA 8240/8260<br>µg/L |
|------------------|------------------------|-----------------------------------|----------------------|---------------------------------|------------------------------------|-----------------------------------|-----------------------------|-------------------------|--|--------------------------|--------------------------|-------------------------------|--------------------------------|-----------------------|----------------------------|
| MW-5             | 03-15-95               | 28.12                             | 8.47                 | 19.65                           | ND                                 | NW                                | 0.01                        | 03-15-95                | 170  | 5.6                      | <0.5                     | 17                            | 11                             | --                    | --                         |
| MW-5             | 05-30-95               | 28.12                             | 9.69                 | 18.43                           | ND                                 | SW                                | 0.005                       | 05-30-95                | 53   | 0.6                      | <0.5                     | 4.8                           | 2.8                            | --                    | --                         |
| MW-5             | 09-20-95               | 28.12                             | 10.90                | 17.22                           | ND                                 | WSW                               | 0.005                       | 09-21-95                | 1500   | 47                       | 2                        | 120                           | 86                             | 70                    | --                         |
| MW-5             | 11-07-95               | 28.12                             | 11.20                | 16.92                           | ND                                 | WSW                               | 0.004                       | 11-07-95                | 140  | 4.5                      | <0.5                     | 8.3                           | 16                             | 10                    | --                         |
| MW-5             | 02-28-96               | 28.12                             | 8.15                 | 19.97                           | ND                                 | NW                                | 0.009                       | 02-29-96                | 900  | 11                       | <1                       | 59                            | 29                             | 99                    | --                         |
| MW-5             | 05-30-96               | 28.12                             | 9.48                 | 18.64                           | ND                                 | W                                 | 0.007                       | 05-31-96                | Not sampled; well sampled semi-annually, during the first and third quarters |                          |                          |                               |                                |                       |                            |
| MW-5             | 08-20-96               | 28.12                             | 10.58                | 17.54                           | ND                                 | SW                                | 0.005                       | 08-20-96                | 67   | 0.7                      | <0.5                     | 3.6                           | 0.6                            | 27                    | --                         |
| MW-5             | 11-19-96               | 28.12                             | 10.50                | 17.62                           | ND                                 | WSW                               | 0.005                       | 11-19-96                | Not sampled; well sampled semi-annually, during the first and third quarters |                          |                          |                               |                                |                       |                            |
| MW-5             | 03-25-97               | 28.12                             | 9.58                 | 18.54                           | ND                                 | WNW                               | 0.006                       | 03-25-97                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | <0.5                  | --                         |
| MW-5             | 06-17-97               | 28.12                             | 10.52                | 17.60                           | ND                                 | W                                 | 0.001                       | 06-17-97                | Not sampled; well sampled semi-annually, during the first and third quarters |                          |                          |                               |                                |                       |                            |
| MW-5             | 08-07-97               | 28.12                             | 11.00                | 17.12                           | ND                                 | SW                                | 0.005                       | 08-07-97                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | <0.5                  | <0.5                       |
| MW-5             | 11-18-97               | 28.12                             | 10.93                | 17.19                           | ND                                 | SW                                | 0.004                       | 11-18-97                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | <0.5                  | <0.5                       |
| MW-5             | 02-25-98               | 28.12                             | 6.75                 | 21.37                           | ND                                 | NW                                | 0.011                       | 02-25-98                | 370  | 2                        | 6                        | 11                            | 9                              | 270                   | --                         |
| MW-5             | 05-11-98               | 28.12                             | 9.11                 | 19.01                           | ND                                 | WNW                               | 0.01                        | 05-11-98                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | <0.5                  | <0.5                       |
| MW-5             | 07-29-98               | 28.12                             | 9.89                 | 18.23                           | ND                                 | W                                 | 0.009                       | 07-29-98                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | <0.5                  | <0.5                       |
| MW-5             | 10-12-98               | 28.12                             | 10.52                | 17.60                           | ND                                 | W                                 | 0.009                       | 10-12-98                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | <0.5                  | <0.5                       |
| MW-6             | 03-15-95               | 27.79                             | 7.75                 | 20.04                           | ND                                 | NW                                | 0.01                        | 03-15-95                | 3600   | 77                       | <0.5                     | 420                           | 180                            | --                    | --                         |
| MW-6             | 05-30-95               | 27.79                             | 9.48                 | 18.31                           | ND                                 | SW                                | 0.005                       | 05-30-95                | 5000   | 68                       | <0.5                     | 530                           | 250                            | --                    | --                         |
| MW-6             | 09-20-95               | 27.79                             | 10.75                | 17.04                           | ND                                 | WSW                               | 0.005                       | 09-21-95                | 3300   | 36                       | <0.5                     | 360                           | 120                            | <30                   | --                         |
| MW-6             | 11-07-95               | 27.79                             | 11.06                | 16.73                           | ND                                 | WSW                               | 0.004                       | 11-07-95                | 3500   | 33                       | <0.5                     | 410                           | 110                            | <30                   | --                         |
| MW-6             | 02-28-96               | 27.79                             | 7.86                 | 19.93                           | ND                                 | NW                                | 0.009                       | 02-29-96                | 520  | 33                       | <0.5                     | 480                           | 160                            | <30                   | --                         |
| MW-6             | 05-30-96               | 27.79                             | 9.35                 | 18.44                           | ND                                 | W                                 | 0.007                       | 05-31-96                | Not sampled; well sampled semi-annually, during the first and third quarters |                          |                          |                               |                                |                       |                            |
| MW-6             | 08-20-96               | 27.79                             | 10.43                | 17.36                           | ND                                 | SW                                | 0.005                       | 08-20-96                | 1900   | 3.4                      | <2.5                     | 150                           | 21                             | <12                   | --                         |
| MW-6             | 11-19-96               | 27.79                             | 10.36                | 17.43                           | ND                                 | WSW                               | 0.005                       | 11-19-96                | Not sampled; well sampled semi-annually, during the first and third quarters |                          |                          |                               |                                |                       |                            |
| MW-6             | 03-25-97               | 27.79                             | 9.35                 | 18.44                           | ND                                 | WNW                               | 0.006                       | 03-25-97                | 1100   | <2                       | <2                       | 5                             | 5                              | <10                   | --                         |
| MW-6             | 06-17-97               | 27.79                             | 10.37                | 17.42                           | ND                                 | W                                 | 0.001                       | 06-17-97                | Not sampled; well sampled semi-annually, during the first and third quarters |                          |                          |                               |                                |                       |                            |
| MW-6             | 08-07-97               | 27.79                             | 10.85                | 16.94                           | ND                                 | SW                                | 0.005                       | 08-07-97                | 53   | <0.5                     | <0.5                     | <0.5                          | <0.5                           | <0.5                  | <0.5                       |
| MW-6             | 11-18-97               | 27.79                             | 10.75                | 17.04                           | ND                                 | SW                                | 0.004                       | 11-18-97                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | <0.5                  | <0.5                       |
| MW-6             | 02-25-98               | 27.79                             | 6.30                 | 21.49                           | ND                                 | NW                                | 0.011                       | 02-25-98                | 3500   | <5                       | 18                       | 190                           | 54                             | <30                   | --                         |
| MW-6             | 05-11-98               | 27.79                             | 8.55                 | 19.24                           | ND                                 | WNW                               | 0.01                        | 05-11-98                | 730  | <1                       | <1                       | 4                             | <1                             | <6                    | --                         |
| MW-6             | 07-29-98               | 27.79                             | 9.71                 | 18.08                           | ND                                 | W                                 | 0.009                       | 07-29-98                | 77   | <0.5                     | <0.5                     | <0.5                          | <0.5                           | <0.5                  | <0.5                       |
| MW-6             | 10-12-98               | 27.79                             | 10.37                | 17.42                           | ND                                 | W                                 | 0.009                       | 10-12-98                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | <0.5                  | <0.5                       |

**Table 1**  
**Historical Groundwater Elevation and Analytical Data**  
**Petroleum Hydrocarbons and Their Constituents**  
**1995 - Present\***

**ARCO Service Station 2185**  
**9800 East 14th Street, Oakland, California**

| Well Designation | Water Level Field Date | Top of Casing Elevation<br>ft-MSL | Depth to Water<br>feet | Groundwater Elevation<br>ft-MSL | Flushing Product Thickness<br>feet | Groundwater Flow Direction<br>MWN | Hydraulic Gradient<br>ft/ft | Water Sample Field Date | TPHG LUFT Method<br>µg/L   | Benzene EPA 8020<br>µg/L | Toluene EPA 8020<br>µg/L | Ethylbenzene EPA 8020<br>µg/L | Total Xylenes EPA 8020<br>µg/L | MTBE EPA 8020<br>µg/L | MTBE EPA 8240/8260<br>µg/L |
|------------------|------------------------|-----------------------------------|------------------------|---------------------------------|------------------------------------|-----------------------------------|-----------------------------|-------------------------|--|--------------------------|--------------------------|-------------------------------|--------------------------------|-----------------------|----------------------------|
| MW-7             | 03-15-95               | 27.88                             | 8.13                   | 19.75                           | ND                                 | NW                                | 0.01                        | 03-15-95                | 150**  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | --                    | --                         |
| MW-7             | 05-30-95               | 27.88                             | 10.14                  | 17.74                           | ND                                 | SW                                | 0.005                       | 05-30-95                | 110**  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | --                    | --                         |
| MW-7             | 09-20-95               | 27.88                             | 11.52                  | 16.36                           | ND                                 | WSW                               | 0.005                       | 09-20-95                | <400**   | <0.8                     | <0.5                     | <0.5                          | <0.5                           | <7                    | --                         |
| MW-7             | 11-07-95               | 27.88                             | 11.70                  | 16.18                           | ND                                 | WSW                               | 0.004                       | 11-07-95                | <500   | 2                        | <1                       | <1                            | <1                             | <6                    | --                         |
| MW-7             | 02-28-96               | 27.88                             | 8.19                   | 19.69                           | ND                                 | NW                                | 0.009                       | 02-29-96                | <300**   | <0.5                     | <0.5                     | <0.5                          | <0.5                           | <6                    | --                         |
| MW-7             | 05-30-96               | 27.88                             | 9.98                   | 17.90                           | ND                                 | W                                 | 0.007                       | 05-31-96                | <100**   | <0.5                     | <0.5                     | <0.5                          | <0.5                           | <6                    | --                         |
| MW-7             | 08-20-96               | 27.88                             | 11.15                  | 16.73                           | ND                                 | SW                                | 0.005                       | 08-20-96                | <200**   | <0.5                     | <0.5                     | <0.5                          | <0.5                           | <6                    | --                         |
| MW-7             | 11-19-96               | 27.88                             | 10.92                  | 16.96                           | ND                                 | WSW                               | 0.005                       | 11-19-96                | Not sampled: well sampled annually, during the first quarter                 |                          |                          |                               |                                |                       | --                         |
| MW-7             | 03-25-97               | 27.88                             | 9.88                   | 18.00                           | ND                                 | WNW                               | 0.006                       | 03-25-97                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | <6                    | --                         |
| MW-7             | 06-17-97               | 27.88                             | 11.13                  | 16.75                           | ND                                 | W                                 | 0.001                       | 06-17-97                | Not sampled: well sampled annually, during the first quarter                 |                          |                          |                               |                                |                       | --                         |
| MW-7             | 08-07-97               | 27.88                             | 11.65                  | 16.23                           | ND                                 | SW                                | 0.005                       | 08-07-97                | Not sampled: well sampled annually, during the first quarter                 |                          |                          |                               |                                |                       | --                         |
| MW-7             | 11-18-97               | 27.88                             | 11.46                  | 16.42                           | ND                                 | SW                                | 0.004                       | 11-18-97                | Not sampled: well sampled annually, during the first quarter                 |                          |                          |                               |                                |                       | --                         |
| MW-7             | 02-25-98               | 27.88                             | 6.35                   | 21.53                           | ND                                 | NW                                | 0.011                       | 02-25-98                | <50  | <0.5                     | 0.5                      | <0.5                          | 0.7                            | 14                    | --                         |
| MW-7             | 05-11-98               | 27.88                             | 9.15                   | 18.73                           | ND                                 | WNW                               | 0.01                        | 05-11-98                | Not sampled: well sampled annually, during the first quarter                 |                          |                          |                               |                                |                       | --                         |
| MW-7             | 07-29-98               | 27.88                             | 10.56                  | 17.32                           | ND                                 | W                                 | 0.009                       | 07-29-98                | Not sampled: well sampled annually, during the first quarter                 |                          |                          |                               |                                |                       | --                         |
| MW-7             | 10-12-98               | 27.88                             | 11.22                  | 16.66                           | ND                                 | W                                 | 0.009                       | 10-12-98                | Not sampled: well sampled annually, during the first quarter                 |                          |                          |                               |                                |                       | --                         |
| MW-8             | 03-15-95               | NR                                | 8.43                   | NR                              | ND                                 | NR                                | NR                          | 03-15-95                | 280  | <0.5                     | <0.5                     | 0.7                           | 0.7                            | --                    | --                         |
| MW-8             | 05-30-95               | NR                                | 9.86                   | NR                              | ND                                 | NR                                | NR                          | 05-30-95                | 340  | <0.5                     | <0.5                     | <2                            | 1.6                            | --                    | --                         |
| MW-8             | 09-20-95               | 28.08                             | 11.07                  | 17.01                           | ND                                 | WSW                               | 0.005                       | 09-21-95                | 470  | <0.5                     | <0.5                     | 3                             | 1.2                            | 52                    | --                         |
| MW-8             | 11-07-95               | 28.08                             | 11.44                  | 16.68                           | ND                                 | WSW                               | 0.004                       | 11-07-95                | 280  | <0.5                     | <0.5                     | 0.6                           | <0.5                           | 94                    | --                         |
| MW-8             | 02-28-96               | 28.08                             | 8.30                   | 19.78                           | ND                                 | NW                                | 0.009                       | 02-29-96                | 160  | <0.5                     | <0.5                     | <0.9                          | <0.6                           | 32                    | --                         |
| MW-8             | 05-30-96               | 28.08                             | 9.68                   | 18.40                           | ND                                 | W                                 | 0.007                       | 05-31-96                | 100  | <0.5                     | <0.5                     | <0.6                          | <0.5                           | 16                    | --                         |
| MW-8             | 08-20-96               | 28.08                             | 10.72                  | 17.36                           | ND                                 | SW                                | 0.005                       | 08-20-96                | 140  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 190                   | --                         |
| MW-8             | 11-19-96               | 28.08                             | 10.58                  | 17.50                           | ND                                 | WSW                               | 0.005                       | 11-19-96                | Not sampled: well sampled semi-annually, during the first and third quarters |                          |                          |                               |                                |                       | --                         |
| MW-8             | 03-25-97               | 28.08                             | 9.73                   | 18.35                           | ND                                 | WNW                               | 0.006                       | 03-25-97                | 63   | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 38                    | --                         |
| MW-8             | 06-17-97               | 28.08                             | 10.67                  | 17.41                           | ND                                 | W                                 | 0.001                       | 06-17-97                | Not sampled: well sampled semi-annually, during the first and third quarters |                          |                          |                               |                                |                       | --                         |
| MW-8             | 08-07-97               | 28.08                             | 11.15                  | 16.93                           | ND                                 | SW                                | 0.005                       | 08-07-97                | 53   | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 390                   | --                         |
| MW-8             | 11-18-97               | 28.08                             | 11.05                  | 17.03                           | ND                                 | SW                                | 0.004                       | 11-18-97                | <500   | <5                       | <5                       | <5                            | <5                             | 640                   | --                         |
| MW-8             | 02-25-98               | 28.08                             | 7.25                   | 20.83                           | ND                                 | NW                                | 0.011                       | 02-25-98                | <50  | <0.5                     | 0.7                      | <0.5                          | 0.9                            | 56                    | --                         |
| MW-8             | 05-11-98               | 28.08                             | 9.00                   | 19.08                           | ND                                 | WNW                               | 0.01                        | 05-11-98                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 18                    | --                         |
| MW-8             | 07-29-98               | 28.08                             | 10.03                  | 18.05                           | ND                                 | W                                 | 0.009                       | 07-29-98                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 19                    | 21(2)                      |
| MW-8             | 10-12-98               | 28.08                             | 10.70                  | 17.38                           | ND                                 | W                                 | 0.009                       | 10-12-98                | <100   | <1                       | <1                       | <1                            | <1                             | 81                    | --                         |



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**1995 - Present\***

**ARCO Service Station 2185**  
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| Well Designation | Water Level Field Date | Top of Casing Elevation<br>ft-MSL | Depth to Water<br>feet | Groundwater Elevation<br>ft-MSL | Floating Product Thickness<br>feet | Groundwater Flow Direction<br>MWN | Hydraulic Gradient<br>ft/ft | Water Sample Field Date | TPHC LUFT Method<br>µg/L                                     | Benzene EPA 8020<br>µg/L | Toluene EPA 8020<br>µg/L | Ethylbenzene EPA 8020<br>µg/L | Total Xylenes EPA 8020<br>µg/L | MTBE EPA 8020<br>µg/L | MTBE EPA 8240B260<br>µg/L |
|------------------|------------------------|-----------------------------------|------------------------|---------------------------------|------------------------------------|-----------------------------------|-----------------------------|-------------------------|--|--------------------------|--------------------------|-------------------------------|--------------------------------|-----------------------|---------------------------|
| MW-9             | 09-20-95               | 27.73                             | 11.67                  | 16.06                           | ND                                 | WSW                               | 0.005                       | 09-20-95                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 4                     | --                        |
| MW-9             | 11-07-95               | 27.73                             | 11.70                  | 16.03                           | ND                                 | WSW                               | 0.004                       | 11-07-95                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 4                     | --                        |
| MW-9             | 02-28-96               | 27.73                             | 9.23                   | 18.50                           | ND                                 | NW                                | 0.009                       | 02-29-96                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 6                     | --                        |
| MW-9             | 05-30-96               | 27.73                             | 10.50                  | 17.23                           | ND                                 | W                                 | 0.007                       | 05-31-96                | <50  | 0.6                      | <0.5                     | <0.5                          | <0.5                           | 5                     | --                        |
| MW-9             | 08-20-96               | 27.73                             | 11.33                  | 16.40                           | ND                                 | SW                                | 0.005                       | 08-20-96                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 7                     | --                        |
| MW-9             | 11-19-96               | 27.73                             | 11.20                  | 16.53                           | ND                                 | WSW                               | 0.005                       | 11-19-96                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                           |
| MW-9             | 03-25-97               | 27.73                             | 10.41                  | 17.32                           | ND                                 | WNW                               | 0.006                       | 03-25-97                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 6                     | --                        |
| MW-9             | 06-17-97               | 27.73                             | 11.30                  | 16.43                           | ND                                 | W                                 | 0.001                       | 06-17-97                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                           |
| MW-9             | 08-07-97               | 27.73                             | 11.70                  | 16.03                           | ND                                 | SW                                | 0.005                       | 08-07-97                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                           |
| MW-9             | 11-18-97               | 27.73                             | 11.42                  | 16.31                           | ND                                 | SW                                | 0.004                       | 11-18-97                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 3                     | --                        |
| MW-9             | 02-25-98               | 27.73                             | 8.72                   | 19.01                           | ND                                 | NW                                | 0.011                       | 02-25-98                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 8                     | --                        |
| MW-9             | 05-11-98               | 27.73                             | 10.05                  | 17.68                           | ND                                 | WNW                               | 0.01                        | 05-11-98                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 5                     | --                        |
| MW-9             | 07-29-98               | 27.73                             | 11.04                  | 16.69                           | ND                                 | W                                 | 0.009                       | 07-29-98                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 6                     | --                        |
| MW-9             | 10-12-98               | 27.73                             | 11.55                  | 16.18                           | ND                                 | W                                 | 0.009                       | 10-12-98                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 5                     | --                        |
| MW-10            | 09-20-95               | 27.55                             | 10.65                  | 16.90                           | ND                                 | WSW                               | 0.005                       | 09-21-95                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 3                     | --                        |
| MW-10            | 11-07-95               | 27.55                             | 10.85                  | 16.70                           | ND                                 | WSW                               | 0.004                       | 11-07-95                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 3                     | --                        |
| MW-10            | 02-28-96               | 27.55                             | 9.38                   | 18.17                           | ND                                 | NW                                | 0.009                       | 02-29-96                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 3                     | --                        |
| MW-10            | 05-30-96               | 27.55                             | 9.99                   | 17.56                           | ND                                 | W                                 | 0.007                       | 05-31-96                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 3                     | --                        |
| MW-10            | 08-20-96               | 27.55                             | 10.47                  | 17.08                           | ND                                 | SW                                | 0.005                       | 08-20-96                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 3                     | --                        |
| MW-10            | 11-19-96               | 27.55                             | 10.44                  | 17.11                           | ND                                 | WSW                               | 0.005                       | 11-19-96                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                           |
| MW-10            | 03-25-97               | 27.55                             | 10.02                  | 17.53                           | ND                                 | WNW                               | 0.006                       | 03-25-97                | <50  | <0.5                     | <0.5                     | <0.5                          | <0.5                           | 3                     | --                        |
| MW-10            | 06-17-97               | 27.55                             | 10.40                  | 17.15                           | ND                                 | W                                 | 0.001                       | 06-17-97                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                           |
| MW-10            | 08-07-97               | 27.55                             | 10.75                  | 16.80                           | ND                                 | SW                                | 0.005                       | 08-07-97                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                           |
| MW-10            | 11-18-97               | 27.55                             | 10.67                  | 16.88                           | ND                                 | SW                                | 0.004                       | 11-18-97                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                           |
| MW-10            | 02-25-98               | 27.55                             | 9.02                   | 18.53                           | ND                                 | NW                                | 0.011                       | 02-25-98                | <50  | <0.5                     | 1.4                      | <0.5                          | 1.8                            | 12                    | --                        |
| MW-10            | 05-11-98               | 27.55                             | 9.63                   | 17.92                           | ND                                 | WNW                               | 0.01                        | 05-11-98                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                           |
| MW-10            | 07-29-98               | 27.55                             | 10.15                  | 17.40                           | ND                                 | W                                 | 0.009                       | 07-29-98                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                           |
| MW-10            | 10-12-98               | 27.55                             | 10.55                  | 17.00                           | ND                                 | W                                 | 0.009                       | 10-12-98                | Not sampled: well sampled annually, during the first quarter |                          |                          |                               |                                |                       |                           |

**Table 1  
Historical Groundwater Elevation and Analytical Data  
Petroleum Hydrocarbons and Their Constituents  
1995 - Present\***

**ARCO Service Station 2185  
9800 East 14th Street, Oakland, California**

| Well Designation | Water Level<br>Field Date | Top of Casing<br>Elevation | Depth to Water | Groundwater<br>Elevation | Floating Product<br>Thickness | Groundwater<br>Flow Direction | Hydraulic<br>Gradient | Water Sample<br>Field Date | TPHG<br>LUFT Method | Benzene<br>EPA 8020 | Toluene<br>EPA 8020 | Ethylbenzene<br>EPA 8020 | Total Xylenes<br>EPA 8020 | MTBE<br>EPA 8020 | MTBE<br>EPA 8240/8260 |
|------------------|---------------------------|----------------------------|----------------|--------------------------|-------------------------------|-------------------------------|-----------------------|----------------------------|---------------------|---------------------|---------------------|--------------------------|---------------------------|------------------|-----------------------|
|                  |                           | ft-MSL                     | feet           | ft-MSL                   | feet                          | MWN                           | ft/ft                 |                            | µg/L                | µg/L                | µg/L                | µg/L                     | µg/L                      | µg/L             | µg/L                  |

ft-MSL: elevation in feet, relative to mean sea level

MWN: ground-water flow direction and gradient apply to the entire monitoring well network

ft/ft: foot per foot

TPHG: total petroleum hydrocarbons as gasoline, California DHS LUFT Method

µg/L: micrograms per liter

EPA: United States Environmental Protection Agency

MTBE: Methyl tert-butyl ether

ND: none detected

NR: not reported; data not available or not measurable

W: west

--: not analyzed or not applicable

[1]: confirmed by EPA method 8240

[2]: confirmed by EPA method 8260

\*: For previous historical groundwater elevation and analytical data please refer to *Fourth Quarter 1995 Groundwater Monitoring Program Results, ARCO Service Station 2185, Oakland, California*.

(EMCON, February 27, 1996).

\*\* : chromatogram does not match the typical gasoline fingerprint

Table 2  
Historical Groundwater Elevation Data

ARCO Service Station 2185  
9800 East 14th Street, Oakland, California

Date: 11-08-95

| Well Designation | Water Level Field Date | TOC Elevation<br>ft-MSL | Depth to Water<br>feet | Ground-Water Elevation<br>ft-MSL | Floating Product Thickness<br>feet | Ground-Water Flow Direction<br>MWN | Hydraulic Gradient<br>foot/foot |
|------------------|------------------------|-------------------------|------------------------|----------------------------------|------------------------------------|------------------------------------|---------------------------------|
| MW-1             | 07-24-92               | 29.15                   | 13.38                  | 15.77                            | ND                                 | NR                                 | NR                              |
| MW-1             | 08-26-92               | 29.15                   | 13.92                  | 15.23                            | ND                                 | NR                                 | NR                              |
| MW-1             | 09-22-92               | 29.15                   | 14.18                  | 14.97                            | ND                                 | NR                                 | NR                              |
| MW-1             | 10-19-92               | 29.15                   | 14.52                  | 14.63                            | ND                                 | NR                                 | NR                              |
| MW-1             | 11-23-92               | 29.15                   | 14.54                  | 14.61                            | ND                                 | NR                                 | NR                              |
| MW-1             | 12-16-92               | 29.15                   | 12.20                  | 16.95                            | ND                                 | NR                                 | NR                              |
| MW-1             | 01-14-93               | 29.15                   | 9.32                   | 19.83                            | ND                                 | NR                                 | NR                              |
| MW-1             | 02-26-93               | 29.15                   | 9.38                   | 19.77                            | ND                                 | NR                                 | NR                              |
| MW-1             | 03-26-93               | 29.15                   | 10.04                  | 19.11                            | ND                                 | NR                                 | NR                              |
| MW-1             | 04-09-93               | 29.15                   | 10.50                  | 18.65                            | ND                                 | NR                                 | NR                              |
| MW-1             | 05-19-93               | 29.15                   | 11.26                  | 17.89                            | ND                                 | NR                                 | NR                              |
| MW-1             | 06-17-93               | 29.15                   | 11.53                  | 17.62                            | ND                                 | NR                                 | NR                              |
| MW-1             | 07-28-93               | 29.15                   | 12.00                  | 17.15                            | ND                                 | NR                                 | NR                              |
| MW-1             | 08-23-93               | 29.15                   | 12.31                  | 16.84                            | ND                                 | NR                                 | NR                              |
| MW-1             | 09-28-93               | 29.15                   | 12.60                  | 16.55                            | ND                                 | NR                                 | NR                              |
| MW-1             | 10-11-93               | 29.15                   | 12.74                  | 16.41                            | ND                                 | NR                                 | NR                              |
| MW-1             | 11-16-93               | 29.15                   | 12.96                  | 16.19                            | ND                                 | NR                                 | NR                              |
| MW-1             | 12-16-93               | 29.15                   | 11.68                  | 17.47                            | ND                                 | NR                                 | NR                              |
| MW-1             | 02-08-94               | 29.15                   | 11.29                  | 17.86                            | ND                                 | NR                                 | NR                              |
| MW-1             | 03-04-94               | 29.15                   | 10.61                  | 18.54                            | ND                                 | NR                                 | NR                              |
| MW-1             | 05-10-94               | 29.15                   | 11.12                  | 18.03                            | ND                                 | NR                                 | NR                              |
| MW-1             | 08-12-94               | 29.15                   | 12.55                  | 16.60                            | ND                                 | SW                                 | 0.004                           |
| MW-1             | 09-23-94               | 29.15                   | 11.27                  | 17.88                            | ND                                 | NR                                 | NR                              |
| MW-1             | 11-22-94               | 29.15                   | 11.12                  | 18.03                            | ND                                 | SW                                 | 0.003                           |
| MW-1             | 03-15-95               | 29.15                   | 8.50                   | 20.65                            | ND                                 | NW                                 | 0.01                            |
| MW-1             | 05-30-95               | 29.15                   | 10.28                  | 18.87                            | ND                                 | SW                                 | 0.005                           |
| MW-1             | 09-20-95               | 29.15                   | 11.70                  | 17.45                            | ND                                 | WSW                                | 0.005                           |

Table 2  
Historical Groundwater Elevation Data

ARCO Service Station 2185  
9800 East 14th Street, Oakland, California

Date: 11-08-95

| Well Designation | Water Level Field Date | TOC Elevation<br>ft-MSL | Depth to Water<br>feet | Ground-Water Elevation<br>ft-MSL | Floating Product Thickness<br>feet | Ground-Water Flow Direction<br>MWN | Hydraulic Gradient<br>foot/foot |
|------------------|------------------------|-------------------------|------------------------|----------------------------------|------------------------------------|------------------------------------|---------------------------------|
| MW-2             | 07-24-92               | 28.47                   | 12.95                  | 15.52                            | ND                                 | NR                                 | NR                              |
| MW-2             | 08-26-92               | 28.47                   | 13.55                  | 14.92                            | ND                                 | NR                                 | NR                              |
| MW-2             | 09-22-92               | 28.47                   | 13.78                  | 14.69                            | ND                                 | NR                                 | NR                              |
| MW-2             | 10-19-92               | 28.47                   | 14.09                  | 14.38                            | ND                                 | NR                                 | NR                              |
| MW-2             | 11-23-92               | 28.47                   | 14.06                  | 14.41                            | ND                                 | NR                                 | NR                              |
| MW-2             | 12-16-92               | 28.47                   | 11.70                  | 16.77                            | ND                                 | NR                                 | NR                              |
| MW-2             | 01-14-93               | 28.47                   | 8.87                   | 19.60                            | ND                                 | NR                                 | NR                              |
| MW-2             | 02-26-93               | 28.47                   | 8.98                   | 19.49                            | ND                                 | NR                                 | NR                              |
| MW-2             | 03-26-93               | 28.47                   | 9.57                   | 18.90                            | ND                                 | NR                                 | NR                              |
| MW-2             | 04-09-93               | 28.47                   | 10.02                  | 18.45                            | ND                                 | NR                                 | NR                              |
| MW-2             | 05-19-93               | 28.47                   | 10.81                  | 17.66                            | ND                                 | NR                                 | NR                              |
| MW-2             | 06-17-93               | 28.47                   | 11.08                  | 17.39                            | ND                                 | NR                                 | NR                              |
| MW-2             | 07-28-93               | 28.47                   | 11.60                  | 16.87                            | ND                                 | NR                                 | NR                              |
| MW-2             | 08-23-93               | 28.47                   | 11.90                  | 16.57                            | ND                                 | NR                                 | NR                              |
| MW-2             | 09-28-93               | 28.47                   | 12.17                  | 16.30                            | ND                                 | NR                                 | NR                              |
| MW-2             | 10-11-93               | 28.47                   | 12.31                  | 16.16                            | ND                                 | NR                                 | NR                              |
| MW-2             | 11-16-93               | 28.47                   | 12.54                  | 15.93                            | Sheen                              | NR                                 | NR                              |
| MW-2             | 12-16-93               | 28.47                   | 11.29                  | 17.18                            | ND                                 | NR                                 | NR                              |
| MW-2             | 02-08-94               | 28.47                   | 10.85                  | 17.62                            | ND                                 | NR                                 | NR                              |
| MW-2             | 03-04-94               | 28.47                   | 10.16                  | 18.31                            | ND                                 | NR                                 | NR                              |
| MW-2             | 05-10-94               | 28.47                   | 10.70                  | 17.77                            | ND                                 | NR                                 | NR                              |
| MW-2             | 08-12-94               | 28.47                   | 12.12                  | 16.35                            | ND                                 | SW                                 | 0.004                           |
| MW-2             | 09-23-94               | 28.47                   | 10.87                  | 17.60                            | ND                                 | NR                                 | NR                              |
| MW-2             | 11-22-94               | 28.47                   | 10.65                  | 17.82                            | ND                                 | SW                                 | 0.003                           |
| MW-2             | 03-15-95               | 28.47                   | 8.37                   | 20.10                            | ND                                 | NW                                 | 0.01                            |
| MW-2             | 05-30-95               | 28.47                   | 9.95                   | 18.52                            | ND                                 | SW                                 | 0.005                           |
| MW-2             | 09-20-95               | 28.47                   | 11.37                  | 17.10                            | ND                                 | WSW                                | 0.005                           |

Table 2  
Historical Groundwater Elevation Data

ARCO Service Station 2185  
9800 East 14th Street, Oakland, California

Date: 11-08-95

| Well<br>Desig-<br>nation | Water<br>Level<br>Field<br>Date | TOC<br>Elevation<br>ft-MSL | Depth<br>to<br>Water<br>feet | Ground-<br>Water<br>Elevation<br>ft-MSL | Floating<br>Product<br>Thickness<br>feet | Ground-<br>Water<br>Flow<br>Direction<br>MWN | Hydraulic<br>Gradient<br>foot/foot |
|--------------------------|---------------------------------|----------------------------|------------------------------|---|--|--|------------------------------------|
| MW-3                     | 07-24-92                        | 28.57                      | 12.90                        | 15.67                                   | Sheen                                    | NR   | NR                                 |
| MW-3                     | 08-26-92                        | 28.57                      | 13.51                        | 15.06                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 09-22-92                        | 28.57                      | 13.73                        | 14.84                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 10-19-92                        | 28.57                      | 14.04                        | 14.53                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 11-23-92                        | 28.57                      | 14.02                        | 14.55                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 12-16-92                        | 28.57                      | 11.73                        | 16.84                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 01-14-93                        | 28.57                      | 9.17                         | 19.40                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 02-26-93                        | 28.57                      | 9.30                         | 19.27                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 03-26-93                        | 28.57                      | 9.83                         | 18.74                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 04-09-93                        | 28.57                      | 10.22                        | 18.35                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 05-19-93                        | 28.57                      | 10.91                        | 17.66                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 06-17-93                        | 28.57                      | 10.74                        | 17.83                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 07-28-93                        | 28.57                      | 11.60                        | 16.97                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 08-23-93                        | 28.57                      | 11.93                        | 16.64                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 09-28-93                        | 28.57                      | 12.13                        | 16.44                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 10-11-93                        | 28.57                      | 12.26                        | 16.31                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 11-16-93                        | 28.57                      | 12.48                        | 16.09                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 12-16-93                        | 28.57                      | 11.26                        | 17.31                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 02-08-94                        | 28.57                      | 10.93                        | 17.64                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 03-04-94                        | 28.57                      | 10.33                        | 18.24                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 05-10-94                        | 28.57                      | 10.77                        | 17.80                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 08-12-94                        | 28.57                      | 12.07                        | 16.50                                   | ND                                       | SW   | 0.004                              |
| MW-3                     | 09-23-94                        | 28.57                      | 10.94                        | 17.63                                   | ND                                       | NR   | NR                                 |
| MW-3                     | 11-22-94                        | 28.57                      | 10.76                        | 17.81                                   | ND                                       | SW   | 0.003                              |
| MW-3                     | 03-15-95                        | 28.57                      | 8.47                         | 20.10                                   | ND                                       | NW   | 0.01                               |
| MW-3                     | 05-30-95                        | 28.57                      | 10.03                        | 18.54                                   | ND                                       | SW   | 0.005                              |
| MW-3                     | 09-20-95                        | 28.57                      | 11.30                        | 17.27                                   | ND                                       | WSW  | 0.005                              |

Table 2  
Historical Groundwater Elevation Data

ARCO Service Station 2185  
9800 East 14th Street, Oakland, California

Date: 11-08-95

| Well Designation | Water Level Field Date | TOC Elevation<br>ft-MSL | Depth to Water<br>feet | Ground-Water Elevation<br>ft-MSL | Floating Product Thickness<br>feet | Ground-Water Flow Direction<br>MWN | Hydraulic Gradient<br>foot/foot |
|------------------|------------------------|-------------------------|------------------------|----------------------------------|------------------------------------|------------------------------------|---------------------------------|
| MW-4             | 07-24-92               | 29.21                   | 13.68                  | 15.53                            | ND                                 | NR                                 | NR                              |
| MW-4             | 08-26-92               | 29.21                   | 14.12                  | 15.09                            | ND                                 | NR                                 | NR                              |
| MW-4             | 09-22-92               | 29.21                   | 14.46                  | 14.75                            | ND                                 | NR                                 | NR                              |
| MW-4             | 10-19-92               | 29.21                   | 14.74                  | 14.47                            | ND                                 | NR                                 | NR                              |
| MW-4             | 11-23-92               | 29.21                   | 14.75                  | 14.46                            | ND                                 | NR                                 | NR                              |
| MW-4             | 12-16-92               | 29.21                   | 12.45                  | 16.76                            | ND                                 | NR                                 | NR                              |
| MW-4             | 01-14-93               | 29.21                   | 9.46                   | 19.75                            | ND                                 | NR                                 | NR                              |
| MW-4             | 02-26-93               | 29.21                   | 9.54                   | 19.67                            | ND                                 | NR                                 | NR                              |
| MW-4             | 03-26-93               | 29.21                   | 10.19                  | 19.02                            | ND                                 | NR                                 | NR                              |
| MW-4             | 04-09-93               | 29.21                   | 10.67                  | 18.54                            | ND                                 | NR                                 | NR                              |
| MW-4             | 05-19-93               | 29.21                   | 11.52                  | 17.69                            | ND                                 | NR                                 | NR                              |
| MW-4             | 06-17-93               | 29.21                   | 11.79                  | 17.42                            | ND                                 | NR                                 | NR                              |
| MW-4             | 07-28-93               | 29.21                   | 12.30                  | 16.91                            | ND                                 | NR                                 | NR                              |
| MW-4             | 08-23-93               | 29.21                   | 12.60                  | 16.61                            | ND                                 | NR                                 | NR                              |
| MW-4             | 09-28-93               | 29.21                   | 12.88                  | 16.33                            | ND                                 | NR                                 | NR                              |
| MW-4             | 10-11-93               | 29.21                   | 13.03                  | 16.18                            | ND                                 | NR                                 | NR                              |
| MW-4             | 11-16-93               | 29.21                   | 13.24                  | 15.97                            | ND                                 | NR                                 | NR                              |
| MW-4             | 12-16-93               | 29.21                   | 11.96                  | 17.25                            | ND                                 | NR                                 | NR                              |
| MW-4             | 02-08-94               | 29.21                   | 11.54                  | 17.67                            | ND                                 | NR                                 | NR                              |
| MW-4             | 03-04-94               | 29.21                   | 10.84                  | 18.37                            | ND                                 | NR                                 | NR                              |
| MW-4             | 05-10-94               | 29.21                   | 11.38                  | 17.83                            | ND                                 | NR                                 | NR                              |
| MW-4             | 08-12-94               | 29.21                   | 12.82                  | 16.39                            | ND                                 | SW                                 | 0.004                           |
| MW-4             | 09-23-94               | 29.21                   | 11.54                  | 17.67                            | ND                                 | NR                                 | NR                              |
| MW-4             | 11-22-94               | 29.21                   | 11.35                  | 17.86                            | ND                                 | SW                                 | 0.003                           |
| MW-4             | 03-15-95               | 29.21                   | 8.69                   | 20.52                            | ND                                 | NW                                 | 0.01                            |
| MW-4             | 05-30-95               | 29.21                   | 10.57                  | 18.64                            | ND                                 | SW                                 | 0.005                           |
| MW-4             | 09-20-95               | 29.21                   | 12.02                  | 17.19                            | ND                                 | WSW                                | 0.005                           |

Table 2  
Historical Groundwater Elevation Data

ARCO Service Station 2185  
9800 East 14th Street, Oakland, California

Date: 11-08-95

| Well<br>Desig-<br>nation | Water<br>Level<br>Field<br>Date | TOC<br>Elevation<br>ft-MSL | Depth<br>to<br>Water<br>feet | Ground-<br>Water<br>Elevation<br>ft-MSL | Floating<br>Product<br>Thickness<br>feet | Ground-<br>Water<br>Flow<br>Direction<br>MWN | Hydraulic<br>Gradient<br>foot/foot |
|--------------------------|---------------------------------|----------------------------|------------------------------|---|--|--|------------------------------------|
|                          |                                 |                            |                              |   |  |  |                                    |
| MW-5                     | 02-26-93                        | 28.12                      | 9.00                         | 19.12                                   | ND                                       | NR   | NR                                 |
| MW-5                     | 03-26-93                        | 28.12                      | 9.41                         | 18.71                                   | ND                                       | NR   | NR                                 |
| MW-5                     | 04-09-93                        | 28.12                      | 9.80                         | 18.32                                   | ND                                       | NR   | NR                                 |
| MW-5                     | 05-19-93                        | 28.12                      | 10.50                        | 17.62                                   | ND                                       | NR   | NR                                 |
| MW-5                     | 06-17-93                        | 28.12                      | 10.73                        | 17.39                                   | ND                                       | NR   | NR                                 |
| MW-5                     | 07-28-93                        | 28.12                      | 11.15                        | 16.97                                   | ND                                       | NR   | NR                                 |
| MW-5                     | 08-23-93                        | 28.12                      | 11.43                        | 16.69                                   | ND                                       | NR   | NR                                 |
| MW-5                     | 09-28-93                        | 28.12                      | 11.66                        | 16.46                                   | ND                                       | NR   | NR                                 |
| MW-5                     | 10-11-93                        | 28.12                      | 11.80                        | 16.32                                   | ND                                       | NR   | NR                                 |
| MW-5                     | 11-16-93                        | 28.12                      | 12.00                        | 16.12                                   | ND                                       | NR   | NR                                 |
| MW-5                     | 12-16-93                        | 28.12                      | 10.81                        | 17.31                                   | ND                                       | NR   | NR                                 |
| MW-5                     | 02-08-94                        | 28.12                      | 10.53                        | 17.59                                   | ND                                       | NR   | NR                                 |
| MW-5                     | 03-04-94                        | 28.12                      | 9.89                         | 18.23                                   | ND                                       | NR   | NR                                 |
| MW-5                     | 05-10-94                        | 28.12                      | 10.37                        | 17.75                                   | ND                                       | NR   | NR                                 |
| MW-5                     | 08-12-94                        | 28.12                      | 11.60                        | 16.52                                   | ND                                       | SW   | 0.004                              |
| MW-5                     | 09-23-94                        | 28.12                      | 10.52                        | 17.60                                   | ND                                       | NR   | NR                                 |
| MW-5                     | 11-22-94                        | 28.12                      | 10.29                        | 17.83                                   | ND                                       | SW   | 0.003                              |
| MW-5                     | 03-15-95                        | 28.12                      | 8.47                         | 19.65                                   | ND                                       | NW   | 0.01                               |
| MW-5                     | 05-30-95                        | 28.12                      | 9.69                         | 18.43                                   | ND                                       | SW   | 0.005                              |
| MW-5                     | 09-20-95                        | 28.12                      | 10.90                        | 17.22                                   | ND                                       | WSW  | 0.005                              |
| MW-6                     | 02-26-93                        | 27.79                      | 8.47                         | 19.32                                   | ND                                       | NR   | NR                                 |
| MW-6                     | 03-26-93                        | 27.79                      | 9.07                         | 18.72                                   | ND                                       | NR   | NR                                 |
| MW-6                     | 04-09-93                        | 27.79                      | 9.53                         | 18.26                                   | ND                                       | NR   | NR                                 |
| MW-6                     | 05-19-93                        | 27.79                      | 10.23                        | 17.56                                   | ND                                       | NR   | NR                                 |
| MW-6                     | 06-17-93                        | 27.79                      | 10.51                        | 17.28                                   | ND                                       | NR   | NR                                 |
| MW-6                     | 07-28-93                        | 27.79                      | 10.98                        | 16.81                                   | ND                                       | NR   | NR                                 |
| MW-6                     | 08-23-93                        | 27.79                      | 11.28                        | 16.51                                   | ND                                       | NR   | NR                                 |
| MW-6                     | 09-28-93                        | 27.79                      | 11.50                        | 16.29                                   | ND                                       | NR   | NR                                 |
| MW-6                     | 10-11-93                        | 27.79                      | 11.65                        | 16.14                                   | ND                                       | NR   | NR                                 |
| MW-6                     | 11-16-93                        | 27.79                      | 11.87                        | 15.92                                   | ND                                       | NR   | NR                                 |
| MW-6                     | 12-16-93                        | 27.79                      | 10.63                        | 17.16                                   | ND                                       | NR   | NR                                 |
| MW-6                     | 02-08-94                        | 27.79                      | 10.28                        | 17.51                                   | ND                                       | NR   | NR                                 |
| MW-6                     | 03-04-94                        | 27.79                      | 9.67                         | 18.12                                   | ND                                       | NR   | NR                                 |
| MW-6                     | 05-10-94                        | 27.79                      | 10.13                        | 17.66                                   | ND                                       | NR   | NR                                 |
| MW-6                     | 08-12-94                        | 27.79                      | 11.44                        | 16.35                                   | ND                                       | SW   | 0.004                              |
| MW-6                     | 09-23-94                        | 27.79                      | 10.27                        | 17.52                                   | ND                                       | NR   | NR                                 |
| MW-6                     | 11-22-94                        | 27.79                      | 10.10                        | 17.69                                   | ND                                       | SW   | 0.003                              |
| MW-6                     | 03-15-95                        | 27.79                      | 7.75                         | 20.04                                   | ND                                       | NW   | 0.01                               |
| MW-6                     | 05-30-95                        | 27.79                      | 9.48                         | 18.31                                   | ND                                       | SW   | 0.005                              |
| MW-6                     | 09-20-95                        | 27.79                      | 10.75                        | 17.04                                   | ND                                       | WSW  | 0.005                              |

Table 2  
Historical Groundwater Elevation Data

ARCO Service Station 2185  
9800 East 14th Street, Oakland, California

Date: 11-08-95

| Well Designation | Water Level Field Date | TOC Elevation<br>ft-MSL | Depth to Water<br>feet | Ground-Water Elevation<br>ft-MSL | Floating Product Thickness<br>feet | Ground-Water Flow Direction<br>MWN | Hydraulic Gradient<br>foot/foot |
|------------------|------------------------|-------------------------|------------------------|----------------------------------|------------------------------------|------------------------------------|---------------------------------|
| MW-7             | 07-28-93               | 27.88                   | 11.67                  | 16.21                            | ND                                 | NR                                 | NR                              |
| MW-7             | 08-23-93               | 27.88                   | 12.00                  | 15.88                            | ND                                 | NR                                 | NR                              |
| MW-7             | 09-28-93               | 27.88                   | 12.17                  | 15.71                            | ND                                 | NR                                 | NR                              |
| MW-7             | 10-11-93               | 27.88                   | 12.33                  | 15.55                            | ND                                 | NR                                 | NR                              |
| MW-7             | 11-16-93               | 27.88                   | 12.46                  | 15.42                            | ND                                 | NR                                 | NR                              |
| MW-7             | 12-16-93               | 27.88                   | 11.23                  | 16.65                            | ND                                 | NR                                 | NR                              |
| MW-7             | 02-08-94               | 27.88                   | 10.83                  | 17.05                            | ND                                 | NR                                 | NR                              |
| MW-7             | 03-04-94               | 27.88                   | 10.13                  | 17.75                            | ND                                 | NR                                 | NR                              |
| MW-7             | 05-10-94               | 27.88                   | 10.68                  | 17.20                            | ND                                 | NR                                 | NR                              |
| MW-7             | 08-12-94               | 27.88                   | 12.05                  | 15.83                            | ND                                 | SW                                 | 0.004                           |
| MW-7             | 09-23-94               | 27.88                   | 10.85                  | 17.03                            | ND                                 | NR                                 | NR                              |
| MW-7             | 11-22-94               | 27.88                   | 10.60                  | 17.28                            | ND                                 | SW                                 | 0.003                           |
| MW-7             | 03-15-95               | 27.88                   | 8.13                   | 19.75                            | ND                                 | NW                                 | 0.01                            |
| MW-7             | 05-30-95               | 27.88                   | 10.14                  | 17.74                            | ND                                 | SW                                 | 0.005                           |
| MW-7             | 09-20-95               | 27.88                   | 11.52                  | 16.36                            | ND                                 | WSW                                | 0.005                           |
| MW-8             | 08-12-94               | NR                      | 11.43                  | NR                               | ND                                 | NR                                 | NR                              |
| MW-8             | 09-23-94               | NR                      | 10.99                  | NR                               | ND                                 | NR                                 | NR                              |
| MW-8             | 11-22-94               | NR                      | 10.42                  | NR                               | ND                                 | NR                                 | NR                              |
| MW-8             | 03-15-95               | NR                      | 8.43                   | NR                               | ND                                 | NR                                 | NR                              |
| MW-8             | 05-30-95               | NR                      | 9.86                   | NR                               | ND                                 | NR                                 | NR                              |
| MW-8             | 09-20-95               | 28.08                   | 11.07                  | 17.01                            | ND                                 | WSW                                | 0.005                           |
| MW-9             | 09-20-95               | 27.73                   | 11.67                  | 16.06                            | ND                                 | WSW                                | 0.005                           |
| MW-10            | 09-20-95               | 27.55                   | 10.65                  | 16.90                            | ND                                 | WSW                                | 0.005                           |

TOC: top of casing  
ft-MSL: elevation in feet, relative to mean sea level  
MWN: ground-water flow direction and gradient apply to the entire monitoring well network  
ND: none detected  
NR: not reported; data not available or not measurable  
SW: southwest  
NW: northwest  
WSW: west-southwest



Table 4  
Historical Groundwater Analytical Data

ARCO Service Station 2185  
9800 East 14th Street, Oakland, California

Date: 11-08-95

| Well Designation | Water Sample Field Date | TPHG   | Benzene | Toluene | Ethylbenzene | Total Xylenes |
|------------------|-------------------------|--|---------|---------|--------------|---------------|
|                  |                         | µg/L   | µg/L    | µg/L    | µg/L         | µg/L          |
| MW-1             | 07-24-92                | <50  | <0.5    | <0.5    | <0.5         | <0.5          |
| MW-1             | 10-19-92                | <50  | <0.5    | <0.5    | <0.5         | <0.5          |
| MW-1             | 01-14-93                | <50  | <0.5    | <0.5    | <0.5         | <0.5          |
| MW-1             | 04-09-93                | <50  | <0.5    | <0.5    | <0.5         | <0.5          |
| MW-1             | 08-23-93                | <50  | <0.5    | <0.5    | <0.5         | <0.5          |
| MW-1             | 10-11-93                | <50  | <0.5    | <0.5    | <0.5         | <0.5          |
| MW-1             | 03-04-94                | <50  | <0.5    | <0.5    | <0.5         | <0.5          |
| MW-1             | 05-10-94                | <50  | <0.5    | <0.5    | <0.5         | <0.5          |
| MW-1             | 08-12-94                | <50  | <0.5    | <0.5    | <0.5         | <0.5          |
| MW-1             | 11-22-94                | <50  | <0.5    | <0.5    | <0.5         | <0.5          |
| MW-1             | 03-15-95                | <50  | <0.5    | <0.5    | <0.5         | <0.5          |
| MW-1             | 05-30-95                | Not sampled: not scheduled for chemical analysis |         |         |              |               |
| MW-1             | 09-20-95                | Not sampled: not scheduled for chemical analysis |         |         |              |               |
|                  |                         |  |         |         |              |               |
| MW-2             | 07-24-92                | 5900   | 510     | <10     | 370          | 430           |
| MW-2             | 10-19-92                | 4100   | 110     | <10     | 100          | 62            |
| MW-2             | 01-14-93                | 12000  | 700     | 10      | 720          | 680           |
| MW-2             | 04-09-93                | 8400   | 220     | <10     | 480          | 320           |
| MW-2             | 08-23-93                | 3700   | 89      | <5      | 230          | 150           |
| MW-2             | 10-11-93                | 2700   | 50      | <2.5    | <140         | 68            |
| MW-2             | 03-04-94                | 3100   | 49      | <2.5    | 180          | 98            |
| MW-2             | 05-10-94                | 3100   | 39      | <2.5    | 220          | 99            |
| MW-2             | 08-12-94                | 1800   | 13      | <2.5    | 120          | 35            |
| MW-2             | 11-22-94                | 2300   | 45      | <0.5    | 190          | 93            |
| MW-2             | 03-15-95                | 2100   | 7.4     | <2.5    | 130          | 39            |
| MW-2             | 05-30-95                | 1700   | 3.3     | <2.5    | 120          | 31            |
| MW-2             | 09-21-95                | 1200   | 1       | <1      | 68           | 16            |
|                  |                         |  |         |         |              |               |
| MW-3             | 07-24-92                | Not sampled; well contained floating product     |         |         |              |               |
| MW-3             | 10-19-92                | 42000  | 740     | 1100    | 1500         | 5700          |
| MW-3             | 01-14-93                | 44000  | 1100    | 840     | 2200         | 9600          |
| MW-3             | 04-09-93                | 21000  | 33      | 69      | 350          | 1600          |
| MW-3             | 08-23-93                | 13000  | 63      | 21      | 530          | 1300          |
| MW-3             | 10-11-93                | 11000  | 56      | 13      | 530          | 1200          |
| MW-3             | 03-04-94                | 17000  | 50      | <10     | 790          | 1600          |
| MW-3             | 05-10-94                | 14000  | 32      | <10     | 710          | 1200          |
| MW-3             | 08-12-94                | 13000  | 37      | <10     | 640          | 970           |
| MW-3             | 11-22-94                | 15000  | 150     | <10     | 1300         | 2000          |
| MW-3             | 03-15-95                | 2000   | <2.5    | <2.5    | 88           | 82            |
| MW-3             | 05-30-95                | 2000   | 3.2     | <2.5    | 70           | 46            |
| MW-3             | 09-21-95                | 2100   | 12      | <3      | 77           | 38            |

Table 4  
Historical Groundwater Analytical Data

ARCO Service Station 2185  
9800 East 14th Street, Oakland, California

Date: 11-08-95

| Well Designation | Water Sample Field Date | TPHG<br>µg/L                                     | Benzene<br>µg/L | Toluene<br>µg/L | Ethylbenzene<br>µg/L | Total Xylenes<br>µg/L |
|------------------|-------------------------|--|-----------------|-----------------|----------------------|-----------------------|
| MW-4             | 07-24-92                | <50  | <0.5            | <0.5            | <0.5                 | <0.5                  |
| MW-4             | 10-19-92                | <50  | <0.5            | <0.5            | <0.5                 | <0.5                  |
| MW-4             | 01-14-93                | <50  | <0.5            | <0.5            | <0.5                 | <0.5                  |
| MW-4             | 04-09-93                | <50  | <0.5            | <0.5            | <0.5                 | <0.5                  |
| MW-4             | 08-23-93                | <50  | <0.5            | <0.5            | <0.5                 | <0.5                  |
| MW-4             | 10-11-93                | <50  | <0.5            | <0.5            | <0.5                 | <0.5                  |
| MW-4             | 03-04-94                | <50  | <0.5            | <0.5            | <0.5                 | <0.5                  |
| MW-4             | 05-10-94                | <50  | <0.5            | <0.5            | <0.5                 | <0.5                  |
| MW-4             | 08-12-94                | <50  | <0.5            | <0.5            | <0.5                 | <0.5                  |
| MW-4             | 11-22-94                | <50  | <0.5            | <0.5            | <0.5                 | <0.5                  |
| MW-4             | 03-15-95                | <50  | <0.5            | <0.5            | <0.5                 | <0.5                  |
| MW-4             | 05-30-95                | Not sampled: not scheduled for chemical analysis |                 |                 |                      |                       |
| MW-4             | 09-20-95                | Not sampled: not scheduled for chemical analysis |                 |                 |                      |                       |
|                  |                         |  |                 |                 |                      |                       |
| MW-5             | 02-11-93                | 9300   | 620             | <50             | 890                  | 2200                  |
| MW-5             | 04-09-93                | 960  | 29              | <1              | 100                  | 96                    |
| MW-5             | 08-23-93                | 2700   | 50              | <2.5            | 260                  | 250                   |
| MW-5             | 10-11-93                | 840  | 9               | <1              | 87                   | 41                    |
| MW-5             | 03-04-94                | 540  | 0.9             | 0.6             | 16                   | 6.3                   |
| MW-5             | 05-10-94                | 1300   | 11              | <2.5            | 110                  | 68                    |
| MW-5             | 08-12-94                | 1500   | 10              | <2.5            | 110                  | 30                    |
| MW-5             | 11-22-94                | 84   | 1               | <0.5            | 5                    | 2                     |
| MW-5             | 03-15-95                | 170  | 5.6             | <0.5            | 17                   | 11                    |
| MW-5             | 05-30-95                | 53   | 0.6             | <0.5            | 4.8                  | 2.8                   |
| MW-5             | 09-21-95                | 1500   | 47              | 2               | 120                  | 86                    |
|                  |                         |  |                 |                 |                      |                       |
| MW-6             | 02-11-93                | 4800   | 630             | <10             | 490                  | 460                   |
| MW-6             | 04-09-93                | 13000  | 880             | <10             | 1000                 | 1000                  |
| MW-6             | 08-23-93                | 6300   | 390             | <20             | 450                  | 390                   |
| MW-6             | 10-11-93                | 2900   | 150             | 3.4             | 190                  | 140                   |
| MW-6             | 03-04-94                | 5800   | 320             | <5              | 510                  | 360                   |
| MW-6             | 05-10-94                | 11000  | 470             | <10             | 880                  | 650                   |
| MW-6             | 08-12-94                | 4400   | 170             | <10             | 390                  | 210                   |
| MW-6             | 11-22-94                | 7300   | 390             | <5              | 940                  | 640                   |
| MW-6             | 03-15-95                | 3600   | 77              | <5              | 420                  | 180                   |
| MW-6             | 05-30-95                | 5000   | 68              | <5              | 530                  | 250                   |
| MW-6             | 09-21-95                | 3300   | 36              | <5              | 360                  | 120                   |

Table 4  
Historical Groundwater Analytical Data

ARCO Service Station 2185  
9800 East 14th Street, Oakland, California

Date: 11-08-95

| Well Designation | Water Sample Field Date | TPHG<br>µg/L | Benzene<br>µg/L | Toluene<br>µg/L | Ethyl-benzene<br>µg/L | Total Xylenes<br>µg/L |
|------------------|-------------------------|--------------|-----------------|-----------------|-----------------------|-----------------------|
| MW-7             | 05-14-93                | 350          | 0.83            | <0.5            | <0.5                  | <0.5                  |
| MW-7             | 08-23-93                | 630*         | 7.3             | <1              | <1                    | <1                    |
| MW-7             | 10-11-93                | 620*         | 3.5             | <0.5            | <0.5                  | <0.5                  |
| MW-7             | 03-04-94                | 320*         | <0.5            | <0.5            | <0.5                  | <0.5                  |
| MW-7             | 05-10-94                | 330*         | 0.6             | <0.5            | <0.5                  | <0.5                  |
| MW-7             | 08-12-94                | 360*         | <0.5            | <0.5            | <0.5                  | <0.5                  |
| MW-7             | 11-22-94                | <50          | <0.5            | <0.5            | <0.5                  | <0.5                  |
| MW-7             | 03-15-95                | 150*         | <0.5            | <0.5            | <0.5                  | <0.5                  |
| MW-7             | 05-30-95                | 110*         | <0.5            | <0.5            | <0.5                  | <0.5                  |
| MW-7             | 09-20-95                | <400*        | <0.8            | <0.5            | <0.5                  | <0.5                  |
| MW-8             | 08-12-94                | 5100         | 12              | <5              | 470                   | 53                    |
| MW-8             | 11-22-94                | 2300         | 16              | <0.5            | 140                   | 4                     |
| MW-8             | 03-15-95                | 280          | <0.5            | <0.5            | 0.7                   | 0.7                   |
| MW-8             | 05-30-95                | 390          | <0.5            | <0.5            | <2                    | 1.6                   |
| MW-8             | 09-21-95                | 470          | <0.5            | <0.5            | 3                     | 1.2                   |
| MW-9             | 09-20-95                | <50          | <0.5            | <0.5            | <0.5                  | <0.5                  |
| MW-10            | 09-21-95                | <50          | <0.5            | <0.5            | <0.5                  | <0.5                  |

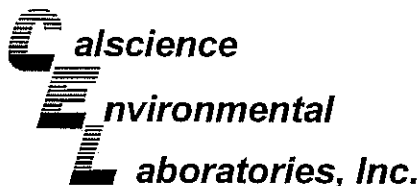
TPHG: total petroleum hydrocarbons as gasoline

µg/l: micrograms per liter

\*: chromatogram does not match the typical gasoline fingerprint

ATTACHMENT C.

SECOND QUARTER 2008 GROUND-WATER MONITORING ANALYTICAL DATA



June 10, 2008

Jay Johnson  
Stratus Environmental, inc.  
3330 Cameron Park Drive, Suite 550  
Cameron Park, CA 95682-8861

Subject: **Calscience Work Order No.: 08-06-0445**  
**Client Reference: ARCO 2185**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/5/2008 and analyzed in accordance with the attached chain-of-custody.

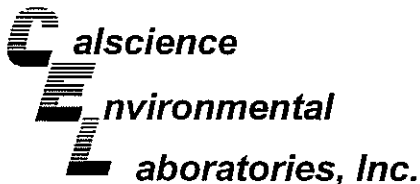
Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in cursive script that reads "Philip Samelle for".

Calscience Environmental  
Laboratories, Inc.  
Linda Scharpenberg  
Project Manager



Analytical Report



Stratus Environmental, inc.  
3330 Cameron Park Drive, Suite 550  
Cameron Park, CA 95682-8861

Date Received: 06/05/08  
Work Order No: 08-06-0445  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: ARCO 2185

Page 1 of 3

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| MW-2                 | 08-06-0445-1-D    | 06/04/08 11:45      | Aqueous | GC 29      | 06/09/08      | 06/10/08 03:59     | 080609B02   |

| Parameter                        | Result         | RL                    | DF | Qual        | Units |
|----------------------------------|----------------|-----------------------|----|-------------|-------|
| Gasoline Range Organics (C6-C12) | ND             | 50                    | 1  |             | ug/L  |
| <u>Surrogates:</u>               | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> |       |
| 1,4-Bromofluorobenzene           | 80             | 38-134                |    |             |       |

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| MW-3                 | 08-06-0445-2-E    | 06/04/08 11:28      | Aqueous | GC 29      | 06/09/08      | 06/10/08 10:45     | 080609B02   |

| Parameter                        | Result         | RL                    | DF | Qual        | Units |
|----------------------------------|----------------|-----------------------|----|-------------|-------|
| Gasoline Range Organics (C6-C12) | 98             | 50                    | 1  |             | ug/L  |
| <u>Surrogates:</u>               | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> |       |
| 1,4-Bromofluorobenzene           | 74             | 38-134                |    |             |       |

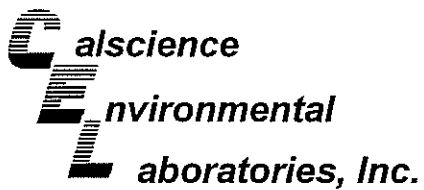
| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| MW-4                 | 08-06-0445-3-D    | 06/04/08 12:40      | Aqueous | GC 29      | 06/09/08      | 06/10/08 05:07     | 080609B02   |

| Parameter                        | Result         | RL                    | DF | Qual        | Units |
|----------------------------------|----------------|-----------------------|----|-------------|-------|
| Gasoline Range Organics (C6-C12) | ND             | 50                    | 1  |             | ug/L  |
| <u>Surrogates:</u>               | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> |       |
| 1,4-Bromofluorobenzene           | 63             | 38-134                |    |             |       |

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| MW-5                 | 08-06-0445-4-D    | 06/04/08 11:05      | Aqueous | GC 29      | 06/09/08      | 06/10/08 05:41     | 080609B02   |

| Parameter                        | Result         | RL                    | DF | Qual        | Units |
|----------------------------------|----------------|-----------------------|----|-------------|-------|
| Gasoline Range Organics (C6-C12) | ND             | 50                    | 1  |             | ug/L  |
| <u>Surrogates:</u>               | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> |       |
| 1,4-Bromofluorobenzene           | 74             | 38-134                |    |             |       |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Stratus Environmental, inc.  
 3330 Cameron Park Drive, Suite 550  
 Cameron Park, CA 95682-8861

Date Received: 06/05/08  
 Work Order No: 08-06-0445  
 Preparation: EPA 5030B  
 Method: EPA 8015B (M)

Project: ARCO 2185

Page 2 of 3

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| MW-6                 | 08-06-0445-5-D    | 06/04/08 12:10      | Aqueous | GC 29      | 06/09/08      | 06/10/08 06:15     | 080609B02   |

| Parameter                        | Result         | RL                    | DF | Qual        | Units |
|----------------------------------|----------------|-----------------------|----|-------------|-------|
| Gasoline Range Organics (C6-C12) | 360            | 50                    | 1  |             | ug/L  |
| <u>Surrogates:</u>               | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> |       |
| 1,4-Bromofluorobenzene           | 97             | 38-134                |    |             |       |

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| MW-7                 | 08-06-0445-6-D    | 06/04/08 14:15      | Aqueous | GC 29      | 06/09/08      | 06/10/08 06:49     | 080609B02   |

| Parameter                        | Result         | RL                    | DF | Qual        | Units |
|----------------------------------|----------------|-----------------------|----|-------------|-------|
| Gasoline Range Organics (C6-C12) | ND             | 50                    | 1  |             | ug/L  |
| <u>Surrogates:</u>               | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> |       |
| 1,4-Bromofluorobenzene           | 62             | 38-134                |    |             |       |

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| MW-8                 | 08-06-0445-7-D    | 06/04/08 10:40      | Aqueous | GC 29      | 06/09/08      | 06/10/08 07:23     | 080609B02   |

| Parameter                        | Result         | RL                    | DF | Qual        | Units |
|----------------------------------|----------------|-----------------------|----|-------------|-------|
| Gasoline Range Organics (C6-C12) | ND             | 50                    | 1  |             | ug/L  |
| <u>Surrogates:</u>               | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> |       |
| 1,4-Bromofluorobenzene           | 58             | 38-134                |    |             |       |

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| MW-9                 | 08-06-0445-8-D    | 06/04/08 13:30      | Aqueous | GC 29      | 06/09/08      | 06/10/08 09:04     | 080609B02   |

| Parameter                        | Result         | RL                    | DF | Qual        | Units |
|----------------------------------|----------------|-----------------------|----|-------------|-------|
| Gasoline Range Organics (C6-C12) | ND             | 50                    | 1  |             | ug/L  |
| <u>Surrogates:</u>               | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> |       |
| 1,4-Bromofluorobenzene           | 65             | 38-134                |    |             |       |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

## Analytical Report



Stratus Environmental, inc.  
3330 Cameron Park Drive, Suite 550  
Cameron Park, CA 95682-8861

Date Received: 06/05/08  
Work Order No: 08-06-0445  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: ARCO 2185

Page 3 of 3

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| MW-10                | 08-06-0445-9-D    | 06/04/08<br>13:05   | Aqueous | GC 29      | 06/09/08      | 06/10/08<br>09:38  | 080609B02   |

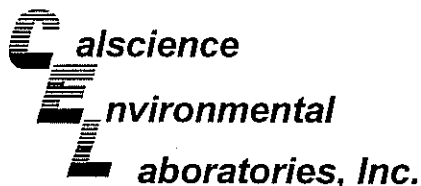
| <u>Parameter</u>                 | <u>Result</u>  | <u>RL</u>             | <u>DF</u> | <u>Qual</u> | <u>Units</u> |
|----------------------------------|----------------|-----------------------|-----------|-------------|--------------|
| Gasoline Range Organics (C6-C12) | ND             | 50                    | 1         |             | ug/L         |
| <u>Surrogates:</u>               | <u>REC (%)</u> | <u>Control Limits</u> |           | <u>Qual</u> |              |
| 1,4-Bromofluorobenzene           | 76             | 38-134                |           |             |              |

|              |                |     |         |       |          |                   |           |
|--------------|----------------|-----|---------|-------|----------|-------------------|-----------|
| Method Blank | 099-12-695-162 | N/A | Aqueous | GC 29 | 06/09/08 | 06/10/08<br>01:44 | 080609B02 |
|--------------|----------------|-----|---------|-------|----------|-------------------|-----------|

| <u>Parameter</u>                 | <u>Result</u>  | <u>RL</u>             | <u>DF</u> | <u>Qual</u> | <u>Units</u> |
|----------------------------------|----------------|-----------------------|-----------|-------------|--------------|
| Gasoline Range Organics (C6-C12) | ND             | 50                    | 1         |             | ug/L         |
| <u>Surrogates:</u>               | <u>REC (%)</u> | <u>Control Limits</u> |           | <u>Qual</u> |              |
| 1,4-Bromofluorobenzene           | 67             | 38-134                |           |             |              |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers





### Analytical Report



Stratus Environmental, inc.  
3330 Cameron Park Drive, Suite 550  
Cameron Park, CA 95682-8861

Date Received: 06/05/08  
Work Order No: 08-06-0445  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: ARCO 2185

Page 1 of 4

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| MW-2                 | 08-06-0445-1-A    | 06/04/08 11:45      | Aqueous | GC/MS BB   | 06/09/08      | 06/09/08 17:38     | 080609L01   |

| Parameter             | Result         | RL                    | DF | Qual        | Parameter                     | Result         | RL                    | DF | Qual        |
|-----------------------|----------------|-----------------------|----|-------------|-------------------------------|----------------|-----------------------|----|-------------|
| Benzene               | ND             | 0.50                  | 1  |             | Methyl-t-Butyl Ether (MTBE)   | ND             | 0.50                  | 1  |             |
| 1,2-Dibromoethane     | ND             | 0.50                  | 1  |             | Tert-Butyl Alcohol (TBA)      | ND             | 10                    | 1  |             |
| 1,2-Dichloroethane    | ND             | 0.50                  | 1  |             | Diisopropyl Ether (DIPE)      | ND             | 0.50                  | 1  |             |
| Ethylbenzene          | ND             | 0.50                  | 1  |             | Ethyl-t-Butyl Ether (ETBE)    | ND             | 0.50                  | 1  |             |
| Toluene               | ND             | 0.50                  | 1  |             | Tert-Amyl-Methyl Ether (TAME) | ND             | 0.50                  | 1  |             |
| Xylenes (total)       | ND             | 0.50                  | 1  |             | Ethanol                       | ND             | 300                   | 1  |             |
| <u>Surrogates:</u>    | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> | <u>Surrogates:</u>            | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> |
| 1,2-Dichloroethane-d4 | 105            | 73-157                |    |             | Dibromofluoromethane          | 109            | 82-142                |    |             |
| Toluene-d8            | 101            | 82-112                |    |             | 1,4-Bromofluorobenzene        | 87             | 75-105                |    |             |

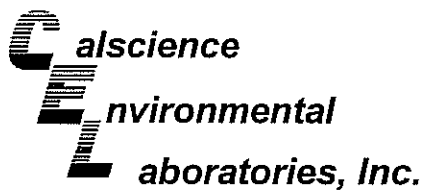
| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| MW-3                 | 08-06-0445-2-A    | 06/04/08 11:28      | Aqueous | GC/MS BB   | 06/09/08      | 06/09/08 19:48     | 080609L01   |

| Parameter             | Result         | RL                    | DF | Qual        | Parameter                     | Result         | RL                    | DF | Qual        |
|-----------------------|----------------|-----------------------|----|-------------|-------------------------------|----------------|-----------------------|----|-------------|
| Benzene               | ND             | 0.50                  | 1  |             | Methyl-t-Butyl Ether (MTBE)   | ND             | 0.50                  | 1  |             |
| 1,2-Dibromoethane     | ND             | 0.50                  | 1  |             | Tert-Butyl Alcohol (TBA)      | ND             | 10                    | 1  |             |
| 1,2-Dichloroethane    | ND             | 0.50                  | 1  |             | Diisopropyl Ether (DIPE)      | ND             | 0.50                  | 1  |             |
| Ethylbenzene          | ND             | 0.50                  | 1  |             | Ethyl-t-Butyl Ether (ETBE)    | ND             | 0.50                  | 1  |             |
| Toluene               | ND             | 0.50                  | 1  |             | Tert-Amyl-Methyl Ether (TAME) | ND             | 0.50                  | 1  |             |
| Xylenes (total)       | ND             | 0.50                  | 1  |             | Ethanol                       | ND             | 300                   | 1  |             |
| <u>Surrogates:</u>    | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> | <u>Surrogates:</u>            | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> |
| 1,2-Dichloroethane-d4 | 103            | 73-157                |    |             | Dibromofluoromethane          | 107            | 82-142                |    |             |
| Toluene-d8            | 105            | 82-112                |    |             | 1,4-Bromofluorobenzene        | 89             | 75-105                |    |             |

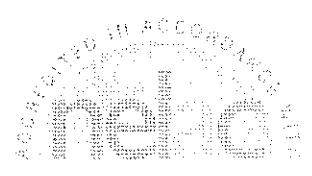
| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| MW-4                 | 08-06-0445-3-A    | 06/04/08 12:40      | Aqueous | GC/MS BB   | 06/09/08      | 06/09/08 20:20     | 080609L01   |

| Parameter             | Result         | RL                    | DF | Qual        | Parameter                     | Result         | RL                    | DF | Qual        |
|-----------------------|----------------|-----------------------|----|-------------|-------------------------------|----------------|-----------------------|----|-------------|
| Benzene               | ND             | 0.50                  | 1  |             | Methyl-t-Butyl Ether (MTBE)   | ND             | 0.50                  | 1  |             |
| 1,2-Dibromoethane     | ND             | 0.50                  | 1  |             | Tert-Butyl Alcohol (TBA)      | ND             | 10                    | 1  |             |
| 1,2-Dichloroethane    | ND             | 0.50                  | 1  |             | Diisopropyl Ether (DIPE)      | ND             | 0.50                  | 1  |             |
| Ethylbenzene          | ND             | 0.50                  | 1  |             | Ethyl-t-Butyl Ether (ETBE)    | ND             | 0.50                  | 1  |             |
| Toluene               | ND             | 0.50                  | 1  |             | Tert-Amyl-Methyl Ether (TAME) | ND             | 0.50                  | 1  |             |
| Xylenes (total)       | ND             | 0.50                  | 1  |             | Ethanol                       | ND             | 300                   | 1  |             |
| <u>Surrogates:</u>    | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> | <u>Surrogates:</u>            | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> |
| 1,2-Dichloroethane-d4 | 105            | 73-157                |    |             | Dibromofluoromethane          | 108            | 82-142                |    |             |
| Toluene-d8            | 95             | 82-112                |    |             | 1,4-Bromofluorobenzene        | 84             | 75-105                |    |             |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



### Analytical Report



Stratus Environmental, inc.  
3330 Cameron Park Drive, Suite 550  
Cameron Park, CA 95682-8861

Date Received: 06/05/08  
Work Order No: 08-06-0445  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: ARCO 2185

Page 2 of 4

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| MW-5                 | 08-06-0445-4-A    | 06/04/08 11:05      | Aqueous | GC/MS BB   | 06/09/08      | 06/09/08 20:52     | 080609L01   |

| Parameter             | Result         | RL                    | DF | Qual        | Parameter                     | Result         | RL                    | DF | Qual        |
|-----------------------|----------------|-----------------------|----|-------------|-------------------------------|----------------|-----------------------|----|-------------|
| Benzene               | ND             | 0.50                  | 1  |             | Methyl-t-Butyl Ether (MTBE)   | ND             | 0.50                  | 1  |             |
| 1,2-Dibromoethane     | ND             | 0.50                  | 1  |             | Tert-Butyl Alcohol (TBA)      | ND             | 10                    | 1  |             |
| 1,2-Dichloroethane    | ND             | 0.50                  | 1  |             | Diisopropyl Ether (DIPE)      | ND             | 0.50                  | 1  |             |
| Ethylbenzene          | ND             | 0.50                  | 1  |             | Ethyl-t-Butyl Ether (ETBE)    | ND             | 0.50                  | 1  |             |
| Toluene               | ND             | 0.50                  | 1  |             | Tert-Amyl-Methyl Ether (TAME) | ND             | 0.50                  | 1  |             |
| Xylenes (total)       | ND             | 0.50                  | 1  |             | Ethanol                       | ND             | 300                   | 1  |             |
| <u>Surrogates:</u>    | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> | <u>Surrogates:</u>            | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> |
| 1,2-Dichloroethane-d4 | 111            | 73-157                |    |             | Dibromofluoromethane          | 115            | 82-142                |    |             |
| Toluene-d8            | 101            | 82-112                |    |             | 1,4-Bromofluorobenzene        | 87             | 75-105                |    |             |

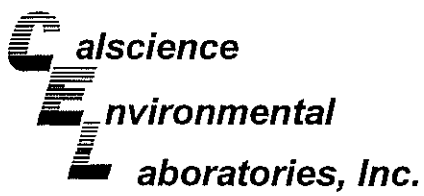
| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| MW-6                 | 08-06-0445-5-A    | 06/04/08 12:10      | Aqueous | GC/MS BB   | 06/09/08      | 06/09/08 21:25     | 080609L01   |

| Parameter             | Result         | RL                    | DF | Qual        | Parameter                     | Result         | RL                    | DF | Qual        |
|-----------------------|----------------|-----------------------|----|-------------|-------------------------------|----------------|-----------------------|----|-------------|
| Benzene               | ND             | 0.50                  | 1  |             | Methyl-t-Butyl Ether (MTBE)   | ND             | 0.50                  | 1  |             |
| 1,2-Dibromoethane     | ND             | 0.50                  | 1  |             | Tert-Butyl Alcohol (TBA)      | ND             | 10                    | 1  |             |
| 1,2-Dichloroethane    | ND             | 0.50                  | 1  |             | Diisopropyl Ether (DIPE)      | ND             | 0.50                  | 1  |             |
| Ethylbenzene          | ND             | 0.50                  | 1  |             | Ethyl-t-Butyl Ether (ETBE)    | ND             | 0.50                  | 1  |             |
| Toluene               | ND             | 0.50                  | 1  |             | Tert-Amyl-Methyl Ether (TAME) | ND             | 0.50                  | 1  |             |
| Xylenes (total)       | ND             | 0.50                  | 1  |             | Ethanol                       | ND             | 300                   | 1  |             |
| <u>Surrogates:</u>    | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> | <u>Surrogates:</u>            | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> |
| 1,2-Dichloroethane-d4 | 107            | 73-157                |    |             | Dibromofluoromethane          | 108            | 82-142                |    |             |
| Toluene-d8            | 108            | 82-112                |    |             | 1,4-Bromofluorobenzene        | 92             | 75-105                |    |             |

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| MW-7                 | 08-06-0445-6-A    | 06/04/08 14:15      | Aqueous | GC/MS BB   | 06/09/08      | 06/09/08 21:57     | 080609L01   |

| Parameter             | Result         | RL                    | DF | Qual        | Parameter                     | Result         | RL                    | DF | Qual        |
|-----------------------|----------------|-----------------------|----|-------------|-------------------------------|----------------|-----------------------|----|-------------|
| Benzene               | ND             | 0.50                  | 1  |             | Methyl-t-Butyl Ether (MTBE)   | ND             | 0.50                  | 1  |             |
| 1,2-Dibromoethane     | ND             | 0.50                  | 1  |             | Tert-Butyl Alcohol (TBA)      | ND             | 10                    | 1  |             |
| 1,2-Dichloroethane    | ND             | 0.50                  | 1  |             | Diisopropyl Ether (DIPE)      | ND             | 0.50                  | 1  |             |
| Ethylbenzene          | ND             | 0.50                  | 1  |             | Ethyl-t-Butyl Ether (ETBE)    | ND             | 0.50                  | 1  |             |
| Toluene               | ND             | 0.50                  | 1  |             | Tert-Amyl-Methyl Ether (TAME) | ND             | 0.50                  | 1  |             |
| Xylenes (total)       | ND             | 0.50                  | 1  |             | Ethanol                       | ND             | 300                   | 1  |             |
| <u>Surrogates:</u>    | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> | <u>Surrogates:</u>            | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> |
| 1,2-Dichloroethane-d4 | 109            | 73-157                |    |             | Dibromofluoromethane          | 111            | 82-142                |    |             |
| Toluene-d8            | 95             | 82-112                |    |             | 1,4-Bromofluorobenzene        | 84             | 75-105                |    |             |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



### Analytical Report



Stratus Environmental, inc.  
3330 Cameron Park Drive, Suite 550  
Cameron Park, CA 95682-8861

Date Received: 06/05/08  
Work Order No: 08-06-0445  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: ARCO 2185

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| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| MW-8                 | 08-06-0445-7-A    | 06/04/08 10:40      | Aqueous | GC/MS BB   | 06/09/08      | 06/10/08 02:15     | 080609L02   |

| Parameter             | Result         | RL                    | DF | Qual        | Parameter                     | Result         | RL                    | DF | Qual        |
|-----------------------|----------------|-----------------------|----|-------------|-------------------------------|----------------|-----------------------|----|-------------|
| Benzene               | ND             | 0.50                  | 1  |             | Methyl-t-Butyl Ether (MTBE)   | ND             | 0.50                  | 1  |             |
| 1,2-Dibromoethane     | ND             | 0.50                  | 1  |             | Tert-Butyl Alcohol (TBA)      | ND             | 10                    | 1  |             |
| 1,2-Dichloroethane    | ND             | 0.50                  | 1  |             | Diisopropyl Ether (DIPE)      | ND             | 0.50                  | 1  |             |
| Ethylbenzene          | ND             | 0.50                  | 1  |             | Ethyl-t-Butyl Ether (ETBE)    | ND             | 0.50                  | 1  |             |
| Toluene               | ND             | 0.50                  | 1  |             | Tert-Amyl-Methyl Ether (TAME) | ND             | 0.50                  | 1  |             |
| Xylenes (total)       | ND             | 0.50                  | 1  |             | Ethanol                       | ND             | 300                   | 1  |             |
| <u>Surrogates:</u>    | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> | <u>Surrogates:</u>            | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> |
| 1,2-Dichloroethane-d4 | 111            | 73-157                |    |             | Dibromofluoromethane          | 111            | 82-142                |    |             |
| Toluene-d8            | 97             | 82-112                |    |             | 1,4-Bromofluorobenzene        | 82             | 75-105                |    |             |

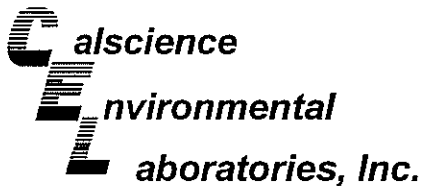
| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| MW-9                 | 08-06-0445-8-A    | 06/04/08 13:30      | Aqueous | GC/MS BB   | 06/09/08      | 06/10/08 02:48     | 080609L02   |

| Parameter             | Result         | RL                    | DF | Qual        | Parameter                     | Result         | RL                    | DF | Qual        |
|-----------------------|----------------|-----------------------|----|-------------|-------------------------------|----------------|-----------------------|----|-------------|
| Benzene               | ND             | 0.50                  | 1  |             | Methyl-t-Butyl Ether (MTBE)   | ND             | 0.50                  | 1  |             |
| 1,2-Dibromoethane     | ND             | 0.50                  | 1  |             | Tert-Butyl Alcohol (TBA)      | ND             | 10                    | 1  |             |
| 1,2-Dichloroethane    | ND             | 0.50                  | 1  |             | Diisopropyl Ether (DIPE)      | ND             | 0.50                  | 1  |             |
| Ethylbenzene          | ND             | 0.50                  | 1  |             | Ethyl-t-Butyl Ether (ETBE)    | ND             | 0.50                  | 1  |             |
| Toluene               | ND             | 0.50                  | 1  |             | Tert-Amyl-Methyl Ether (TAME) | ND             | 0.50                  | 1  |             |
| Xylenes (total)       | ND             | 0.50                  | 1  |             | Ethanol                       | ND             | 300                   | 1  |             |
| <u>Surrogates:</u>    | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> | <u>Surrogates:</u>            | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> |
| 1,2-Dichloroethane-d4 | 111            | 73-157                |    |             | Dibromofluoromethane          | 110            | 82-142                |    |             |
| Toluene-d8            | 99             | 82-112                |    |             | 1,4-Bromofluorobenzene        | 83             | 75-105                |    |             |

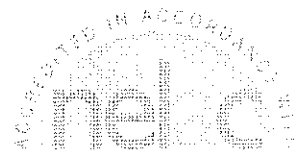
| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| MW-10                | 08-06-0445-9-A    | 06/04/08 13:05      | Aqueous | GC/MS BB   | 06/09/08      | 06/10/08 03:20     | 080609L02   |

| Parameter             | Result         | RL                    | DF | Qual        | Parameter                     | Result         | RL                    | DF | Qual        |
|-----------------------|----------------|-----------------------|----|-------------|-------------------------------|----------------|-----------------------|----|-------------|
| Benzene               | ND             | 0.50                  | 1  |             | Methyl-t-Butyl Ether (MTBE)   | 1.8            | 0.50                  | 1  |             |
| 1,2-Dibromoethane     | ND             | 0.50                  | 1  |             | Tert-Butyl Alcohol (TBA)      | ND             | 10                    | 1  |             |
| 1,2-Dichloroethane    | ND             | 0.50                  | 1  |             | Diisopropyl Ether (DIPE)      | ND             | 0.50                  | 1  |             |
| Ethylbenzene          | ND             | 0.50                  | 1  |             | Ethyl-t-Butyl Ether (ETBE)    | ND             | 0.50                  | 1  |             |
| Toluene               | ND             | 0.50                  | 1  |             | Tert-Amyl-Methyl Ether (TAME) | ND             | 0.50                  | 1  |             |
| Xylenes (total)       | ND             | 0.50                  | 1  |             | Ethanol                       | ND             | 300                   | 1  |             |
| <u>Surrogates:</u>    | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> | <u>Surrogates:</u>            | <u>REC (%)</u> | <u>Control Limits</u> |    | <u>Qual</u> |
| 1,2-Dichloroethane-d4 | 101            | 73-157                |    |             | Dibromofluoromethane          | 112            | 82-142                |    |             |
| Toluene-d8            | 94             | 82-112                |    |             | 1,4-Bromofluorobenzene        | 81             | 75-105                |    |             |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Stratus Environmental, inc.  
3330 Cameron Park Drive, Suite 550  
Cameron Park, CA 95682-8861

Date Received: 06/05/08  
Work Order No: 08-06-0445  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: ARCO 2185

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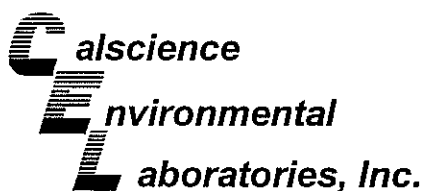
| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| Method Blank         | 099-12-703-265    | N/A                 | Aqueous | GC/MS BB   | 06/09/08      | 06/09/08 17:06     | 080609L01   |

| Parameter             | Result  | RL             | DF | Qual | Parameter                     | Result  | RL             | DF | Qual |
|-----------------------|---------|----------------|----|------|-------------------------------|---------|----------------|----|------|
| Benzene               | ND      | 0.50           | 1  |      | Methyl-t-Butyl Ether (MTBE)   | ND      | 0.50           | 1  |      |
| 1,2-Dibromoethane     | ND      | 0.50           | 1  |      | Tert-Butyl Alcohol (TBA)      | ND      | 10             | 1  |      |
| 1,2-Dichloroethane    | ND      | 0.50           | 1  |      | Diisopropyl Ether (DIPE)      | ND      | 0.50           | 1  |      |
| Ethylbenzene          | ND      | 0.50           | 1  |      | Ethyl-t-Butyl Ether (ETBE)    | ND      | 0.50           | 1  |      |
| Toluene               | ND      | 0.50           | 1  |      | Tert-Amyl-Methyl Ether (TAME) | ND      | 0.50           | 1  |      |
| Xylenes (total)       | ND      | 0.50           | 1  |      | Ethanol                       | ND      | 300            | 1  |      |
| Surrogates:           | REC (%) | Control Limits |    | Qual | Surrogates:                   | REC (%) | Control Limits |    | Qual |
| 1,2-Dichloroethane-d4 | 107     | 73-157         |    |      | Dibromofluoromethane          | 105     | 82-142         |    |      |
| Toluene-d8            | 95      | 82-112         |    |      | 1,4-Bromofluorobenzene        | 85      | 75-105         |    |      |

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| Method Blank         | 099-12-703-266    | N/A                 | Aqueous | GC/MS BB   | 06/09/08      | 06/10/08 01:43     | 080609L02   |

| Parameter             | Result  | RL             | DF | Qual | Parameter                     | Result  | RL             | DF | Qual |
|-----------------------|---------|----------------|----|------|-------------------------------|---------|----------------|----|------|
| Benzene               | ND      | 0.50           | 1  |      | Methyl-t-Butyl Ether (MTBE)   | ND      | 0.50           | 1  |      |
| 1,2-Dibromoethane     | ND      | 0.50           | 1  |      | Tert-Butyl Alcohol (TBA)      | ND      | 10             | 1  |      |
| 1,2-Dichloroethane    | ND      | 0.50           | 1  |      | Diisopropyl Ether (DIPE)      | ND      | 0.50           | 1  |      |
| Ethylbenzene          | ND      | 0.50           | 1  |      | Ethyl-t-Butyl Ether (ETBE)    | ND      | 0.50           | 1  |      |
| Toluene               | ND      | 0.50           | 1  |      | Tert-Amyl-Methyl Ether (TAME) | ND      | 0.50           | 1  |      |
| Xylenes (total)       | ND      | 0.50           | 1  |      | Ethanol                       | ND      | 300            | 1  |      |
| Surrogates:           | REC (%) | Control Limits |    | Qual | Surrogates:                   | REC (%) | Control Limits |    | Qual |
| 1,2-Dichloroethane-d4 | 115     | 73-157         |    |      | Dibromofluoromethane          | 107     | 82-142         |    |      |
| Toluene-d8            | 97      | 82-112         |    |      | 1,4-Bromofluorobenzene        | 86      | 75-105         |    |      |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



## Quality Control - Spike/Spike Duplicate



Stratus Environmental, inc.  
3330 Cameron Park Drive, Suite 550  
Cameron Park, CA 95682-8861

Date Received: 06/05/08  
Work Order No: 08-06-0445  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project ARCO 2185

| Quality Control Sample ID | Matrix  | Instrument | Date Prepared | Date Analyzed | MS/MSD Batch Number |
|---------------------------|---------|------------|---------------|---------------|---------------------|
| MW-8                      | Aqueous | GC 29      | 06/09/08      | 06/10/08      | 080609S02           |

| Parameter                        | MS %REC | MSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|----------------------------------|---------|----------|---------|-----|--------|------------|
| Gasoline Range Organics (C6-C12) | 104     | 106      | 38-134  | 1   | 0-25   |            |

RPD - Relative Percent Difference, CL - Control Limit

**Quality Control - Spike/Spike Duplicate**



Stratus Environmental, inc.  
 3330 Cameron Park Drive, Suite 550  
 Cameron Park, CA 95682-8861

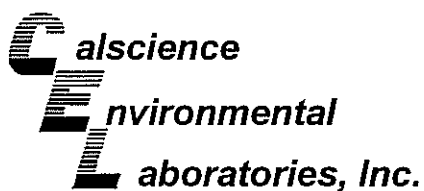
Date Received: 06/05/08  
 Work Order No: 08-06-0445  
 Preparation: EPA 5030B  
 Method: EPA 8260B

Project ARCO 2185

| Quality Control Sample ID | Matrix  | Instrument | Date Prepared | Date Analyzed | MS/MSD Batch Number |
|---------------------------|---------|------------|---------------|---------------|---------------------|
| MW-2                      | Aqueous | GC/MS BB   | 06/09/08      | 06/09/08      | 080609S01           |

| <u>Parameter</u>              | <u>MS %REC</u> | <u>MSD %REC</u> | <u>%REC CL</u> | <u>RPD</u> | <u>RPD CL</u> | <u>Qualifiers</u> |
|-------------------------------|----------------|-----------------|----------------|------------|---------------|-------------------|
| Benzene                       | 99             | 96              | 86-122         | 4          | 0-8           |                   |
| Carbon Tetrachloride          | 94             | 95              | 78-138         | 1          | 0-9           |                   |
| Chlorobenzene                 | 101            | 101             | 90-120         | 0          | 0-9           |                   |
| 1,2-Dibromoethane             | 95             | 103             | 70-130         | 7          | 0-30          |                   |
| 1,2-Dichlorobenzene           | 101            | 98              | 89-119         | 3          | 0-10          |                   |
| 1,1-Dichloroethene            | 80             | 86              | 52-142         | 8          | 0-23          |                   |
| Ethylbenzene                  | 95             | 99              | 70-130         | 4          | 0-30          |                   |
| Toluene                       | 97             | 95              | 85-127         | 2          | 0-12          |                   |
| Trichloroethene               | 92             | 91              | 78-126         | 2          | 0-10          |                   |
| Vinyl Chloride                | 90             | 93              | 56-140         | 4          | 0-21          |                   |
| Methyl-t-Butyl Ether (MTBE)   | 99             | 98              | 64-136         | 1          | 0-28          |                   |
| Tert-Butyl Alcohol (TBA)      | 91             | 96              | 27-183         | 6          | 0-60          |                   |
| Diisopropyl Ether (DIPE)      | 103            | 100             | 78-126         | 3          | 0-16          |                   |
| Ethyl-t-Butyl Ether (ETBE)    | 103            | 104             | 67-133         | 1          | 0-21          |                   |
| Tert-Amyl-Methyl Ether (TAME) | 108            | 102             | 63-141         | 6          | 0-21          |                   |
| Ethanol                       | 92             | 79              | 11-167         | 16         | 0-64          |                   |

RPD - Relative Percent Difference , CL - Control Limit



## Quality Control - LCS/LCS Duplicate



Stratus Environmental, inc.  
3330 Cameron Park Drive, Suite 550  
Cameron Park, CA 95682-8861

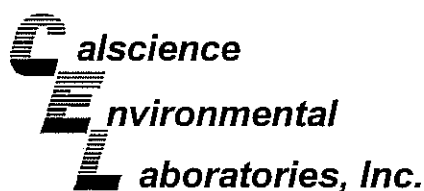
Date Received: N/A  
Work Order No: 08-06-0445  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: ARCO 2185

| Quality Control Sample ID | Matrix  | Instrument | Date Prepared | Date Analyzed | LCS/LCSD Batch Number |
|---------------------------|---------|------------|---------------|---------------|-----------------------|
| 099-12-695-162            | Aqueous | GC 29      | 06/09/08      | 06/10/08      | 080609B02             |

| Parameter                        | <u>LCS %REC</u> | <u>LCSD %REC</u> | <u>%REC CL</u> | <u>RPD</u> | <u>RPD CL</u> | <u>Qualifiers</u> |
|----------------------------------|-----------------|------------------|----------------|------------|---------------|-------------------|
| Gasoline Range Organics (C6-C12) | 99              | 95               | 78-120         | 5          | 0-20          |                   |

RPD - Relative Percent Difference , CL - Control Limit



## Quality Control - LCS/LCS Duplicate



Stratus Environmental, inc.  
3330 Cameron Park Drive, Suite 550  
Cameron Park, CA 95682-8861

Date Received: N/A  
Work Order No: 08-06-0445  
Preparation: EPA 5030B  
Method: EPA 8260B

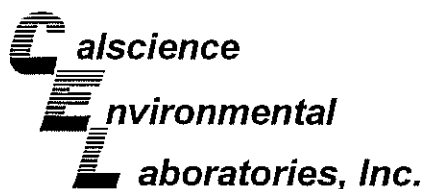
Project: ARCO 2185

| Quality Control Sample ID | Matrix  | Instrument | Date Prepared | Date Analyzed | LCS/LCSD Batch Number |
|---------------------------|---------|------------|---------------|---------------|-----------------------|
| 099-12-703-265            | Aqueous | GC/MS BB   | 06/09/08      | 06/09/08      | 080609L01             |

| Parameter                     | LCS %REC | LCSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|-------------------------------|----------|-----------|---------|-----|--------|------------|
| Benzene                       | 100      | 94        | 87-117  | 6   | 0-7    |            |
| Carbon Tetrachloride          | 97       | 98        | 78-132  | 1   | 0-8    |            |
| Chlorobenzene                 | 100      | 101       | 88-118  | 2   | 0-8    |            |
| 1,2-Dibromoethane             | 104      | 98        | 80-120  | 6   | 0-20   |            |
| 1,2-Dichlorobenzene           | 100      | 99        | 88-118  | 1   | 0-8    |            |
| 1,1-Dichloroethene            | 99       | 94        | 71-131  | 5   | 0-14   |            |
| Ethylbenzene                  | 104      | 103       | 80-120  | 0   | 0-20   |            |
| Toluene                       | 100      | 97        | 85-127  | 3   | 0-7    |            |
| Trichloroethene               | 97       | 95        | 85-121  | 2   | 0-11   |            |
| Vinyl Chloride                | 106      | 97        | 64-136  | 8   | 0-10   |            |
| Methyl-t-Butyl Ether (MTBE)   | 100      | 97        | 67-133  | 4   | 0-16   |            |
| Tert-Butyl Alcohol (TBA)      | 91       | 92        | 34-154  | 2   | 0-19   |            |
| Diisopropyl Ether (DIPE)      | 100      | 95        | 80-122  | 4   | 0-8    |            |
| Ethyl-t-Butyl Ether (ETBE)    | 104      | 97        | 73-127  | 7   | 0-11   |            |
| Tert-Amyl-Methyl Ether (TAME) | 103      | 98        | 69-135  | 5   | 0-12   |            |
| Ethanol                       | 88       | 97        | 34-124  | 9   | 0-44   |            |

RPD - Relative Percent Difference, CL - Control Limit





## Quality Control - LCS/LCS Duplicate



Stratus Environmental, inc.  
3330 Cameron Park Drive, Suite 550  
Cameron Park, CA 95682-8861

Date Received: N/A  
Work Order No: 08-06-0445  
Preparation: EPA 5030B  
Method: EPA 8260B

Project: ARCO 2185

| Quality Control Sample ID | Matrix  | Instrument | Date Prepared | Date Analyzed | LCS/LCSD Batch Number |
|---------------------------|---------|------------|---------------|---------------|-----------------------|
| 099-12-703-266            | Aqueous | GC/MS BB   | 06/09/08      | 06/09/08      | 080609L02             |

| Parameter                     | LCS %REC | LCSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|-------------------------------|----------|-----------|---------|-----|--------|------------|
| Benzene                       | 98       | 98        | 87-117  | 0   | 0-7    |            |
| Carbon Tetrachloride          | 99       | 100       | 78-132  | 1   | 0-8    |            |
| Chlorobenzene                 | 100      | 102       | 88-118  | 2   | 0-8    |            |
| 1,2-Dibromoethane             | 96       | 95        | 80-120  | 1   | 0-20   |            |
| 1,2-Dichlorobenzene           | 95       | 97        | 88-118  | 2   | 0-8    |            |
| 1,1-Dichloroethene            | 100      | 97        | 71-131  | 2   | 0-14   |            |
| Ethylbenzene                  | 103      | 102       | 80-120  | 2   | 0-20   |            |
| Toluene                       | 100      | 99        | 85-127  | 0   | 0-7    |            |
| Trichloroethene               | 102      | 103       | 85-121  | 2   | 0-11   |            |
| Vinyl Chloride                | 99       | 99        | 64-136  | 0   | 0-10   |            |
| Methyl-t-Butyl Ether (MTBE)   | 101      | 103       | 67-133  | 1   | 0-16   |            |
| Tert-Butyl Alcohol (TBA)      | 93       | 92        | 34-154  | 2   | 0-19   |            |
| Diisopropyl Ether (DIPE)      | 105      | 109       | 80-122  | 3   | 0-8    |            |
| Ethyl-t-Butyl Ether (ETBE)    | 107      | 110       | 73-127  | 3   | 0-11   |            |
| Tert-Amyl-Methyl Ether (TAME) | 99       | 102       | 69-135  | 3   | 0-12   |            |
| Ethanol                       | 103      | 83        | 34-124  | 21  | 0-44   |            |

RPD - Relative Percent Difference , CL - Control Limit



Work Order Number: 08-06-0445

| <u>Qualifier</u> | <u>Definition</u>   |
|------------------|---|
| *                | See applicable analysis comment.  |
| 1                | Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.  |
| 2                | Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.                              |
| 3                | Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.     |
| 4                | The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.   |
| 5                | The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required. |
| A                | Result is the average of all dilutions, as defined by the method.   |
| B                | Analyte was present in the associated method blank.   |
| C                | Analyte presence was not confirmed on primary column.   |
| E                | Concentration exceeds the calibration range.  |
| H                | Sample received and/or analyzed past the recommended holding time.  |
| J                | Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.   |
| N                | Nontarget Analyte.  |
| ND               | Parameter not detected at the indicated reporting limit.  |
| Q                | Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.   |
| U                | Undetected at the laboratory method detection limit.  |
| X                | % Recovery and/or RPD out-of-range.   |
| Z                | Analyte presence was not confirmed by second column or GC/MS analysis.  |



# Chain of Custody Record

OHHS

Project Name: Arco 2185  
 BP BU/AR Region/Enfos Segment: \_\_\_\_\_  
 State or Lead Regulatory Agency: \_\_\_\_\_  
 Requested Due Date (mm/dd/yy): STD-TAT

|                        |               |            |      |
|------------------------|---------------|------------|------|
| On-site Time:          | 0915          | Temp:      | 60's |
| Off-site Time:         | 1435          | Temp:      | 80's |
| Sky Conditions:        | SUNNY - Clear |            |      |
| Meteorological Events: |               |            |      |
| Wind Speed:            | -             | Direction: | -    |

|   |  |   |
|---|--|---|
| Lab Name: <u>Cal Science Environmental Laboratories, Inc.</u> | BP/AR Facility No.: <u>2185</u>                                      | Consultant/Contractor: <u>Status Environmental inc.</u>                 |
| Address: <u>7440 Lincoln Way Garden Grove, CA</u>             | BP/AR Facility Address: <u>7800 International Blvd / Oakland, CA</u> | Address: <u>3330 Cameron Park Dr. Suite 550 Cameron Park, CA, 95682</u> |
| Lab PM: <u>Linda Shearpenberg</u>                             | Site Lat/Long:   | Consultant/Contractor Project No.: <u>E 2185</u>                        |
| Tele/Fax: <u>925-714-8915-5494 / 714-895-7501</u>             | California Global ID No.:  | Consultant/Contractor PM: <u>Jay Johnson</u>                            |
| BP/AR EBM: <u>Charles Carnell</u>                             | Enfos Project No.:   | Tele/Fax: <u>916-530-676-6000 / 530-676-6005</u>                        |
| Address: <u>PO Box 1257 San Ramon, CA 94583</u>               | Provision or OOC (circle one) <u>Provision</u>                       | Report Type & QC Level: <u>Level 1 w/ EDF</u>                           |
| Tele/Fax: <u>925-715-3803 / 925-715-5815</u>                  | Phase/WBS: <u>04 - Monitoring</u>                                    | E-mail EDD To: <u>SHAPE@statusinc.net</u>                               |
|   | Sub Phase/Task: <u>03 - Analytical</u>                               | Invoice to: Consultant or BP or Atlantic Richfield Co. (circle one)     |
|   | Cost Element: <u>Subcontractor Cost</u>                              |   |

| Item No. | Sample Description | Time | Date   | Matrix     |              |     | Laboratory No. | No. of Containers | Preservative |                                |                  |     |          | Requested Analysis |      |         |         |     |           | Sample Point Lat/Long and Comments |                     |
|----------|--------------------|------|--------|------------|--------------|-----|----------------|-------------------|--------------|--------------------------------|------------------|-----|----------|--------------------|------|---------|---------|-----|-----------|------------------------------------|---------------------|
|          |                    |      |        | Soil/Solid | Water/Liquid | Air |                |                   | Unpreserved  | H <sub>2</sub> SO <sub>4</sub> | HNO <sub>3</sub> | HCl | Methanol | GR0                | BTEX | 5 OXY'S | 1,2 DCA | EDB | ETHANOL * |                                    |                     |
| 1        | MW- 2              | 1145 | 6/4    | X          |              |     | 6              |                   |              |                                |                  |     |          | X                  | X    | X       | X       | X   | X         |                                    | * by limited 8260 B |
| 2        | MW- 3              | 1128 |        |            |              |     |                |                   |              |                                |                  |     |          |                    |      |         |         |     |           |                                    |                     |
| 3        | MW- 4              | 1240 |        |            |              |     |                |                   |              |                                |                  |     |          |                    |      |         |         |     |           |                                    |                     |
| 4        | MW- 5              | 1105 |        |            |              |     |                |                   |              |                                |                  |     |          |                    |      |         |         |     |           |                                    |                     |
| 5        | MW- 6              | 1210 |        |            |              |     |                |                   |              |                                |                  |     |          |                    |      |         |         |     |           |                                    |                     |
| 6        | MW- 7              | 1415 |        |            |              |     |                |                   |              |                                |                  |     |          |                    |      |         |         |     |           |                                    |                     |
| 7        | MW- 8              | 1046 |        |            |              |     |                |                   |              |                                |                  |     |          |                    |      |         |         |     |           |                                    |                     |
| 8        | MW- 9              | 1350 |        |            |              |     |                |                   |              |                                |                  |     |          |                    |      |         |         |     |           |                                    |                     |
| 9        | MW- 10             | 1305 |        |            |              |     |                |                   |              |                                |                  |     |          |                    |      |         |         |     |           |                                    |                     |
| 10       | TB-2185-06042008   |      | 6/4/08 |            |              |     | 2              |                   |              |                                |                  |     |          |                    |      |         |         |     |           |                                    | ON Hold             |

|                                |   |   |                   |   |                     |                   |
|--------------------------------|---|---|-------------------|---|---------------------|-------------------|
| Sampler's Name: <u>A. Hill</u> | Relinquished By / Affiliation: <u>[Signature]</u> | Date: <u>6/4/08</u>                           | Time: <u>1540</u> | Accepted By / Affiliation: <u>[Signature]</u> | Date: <u>6/4/08</u> | Time: <u>1540</u> |
| Shipment Date: <u>5/14/08</u>  | Shipment Method: <u>GSO 509709571</u>             | Special Instructions: <u>Tom Apply to GSO</u> |                   |   |                     |                   |
| Shipment Tracking No: _____    |   |   |                   |   |                     |                   |

Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

**Philip Sanelle**

---

**From:** Sandy Hayes [shayes@stratusinc.net]  
**Sent:** Monday, June 09, 2008 1:42 PM  
**To:** Philip Sanelle  
**Subject:** RE: Enfos ID? Site 2185

Philip, can you please place the rush for us? If we can get by end of day tomorrow that would be awesome, Wed will be good as well.

Thank you!!!!

Sandy Hayes  
 Stratus Environmental, Inc.  
 3330 Cameron Park Drive, Suite 550  
 Cameron Park, CA 95682  
 shayes@stratusinc.net  
 Phone: 530.313.9964  
 Fax: 530.676.6005

-----Original Message-----

From: Philip Sanelle [mailto:PSanelle@calscience.com]  
 Sent: Monday, June 09, 2008 11:07 AM  
 To: shayes@stratusinc.net  
 Subject: RE: Enfos ID? Site 2185

Sandy,  
 Attached is the COC for site 2185. The samples were marked as standard TAT. As of now the data will be ready late next week around 6/19/08. I checked with the lab and we could get data to you Wednesday morning or possibly end of day tomorrow.

Please let me know if you need anything else.

Thank you,  
 Phil

-----Original Message-----

From: Sandy Hayes [mailto:shayes@stratusinc.net]  
 Sent: Monday, June 09, 2008 11:55 AM  
 To: Philip Sanelle  
 Subject: RE: Enfos ID? Site 2185

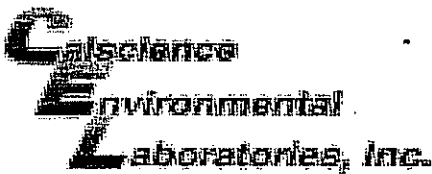
Hi Phil,

Can you please send me the COC for 2185? The field techs were supposed to put a 24 hr TAT on it but I don't have a copy and apparantly they did not. Do you know when those results will be available, and is there any way to rush the results at this point?

Thanks,

Sandy Hayes  
 Stratus Environmental, Inc.  
 3330 Cameron Park Drive, Suite 550  
 Cameron Park, CA 95682  
 shayes@stratusinc.net  
 Phone: 530.313.9964  
 Fax: 530.676.6005

-----Original Message-----



WORK ORDER #: 08 - 06 - 0445

Cooler 01 of 1

SAMPLE RECEIPT FORM

CLIENT: Stratus

DATE: 6/5/08

TEMPERATURE - SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

- Chilled, cooler with temperature blank provided.
Chilled, cooler without temperature blank.
Chilled and placed in cooler with wet ice.
Ambient and placed in cooler with wet ice.
Ambient temperature.
C Temperature blank.

LABORATORY (Other than Calscience Courier):

- 3.4 C Temperature blank.
C IR thermometer.
Ambient temperature.

Initial: [Signature]

CUSTODY SEAL INTACT:

Sample(s): Cooler: [checked] No (Not Intact): Not Present:

Initial: [Signature]

SAMPLE CONDITION:

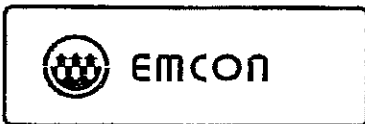
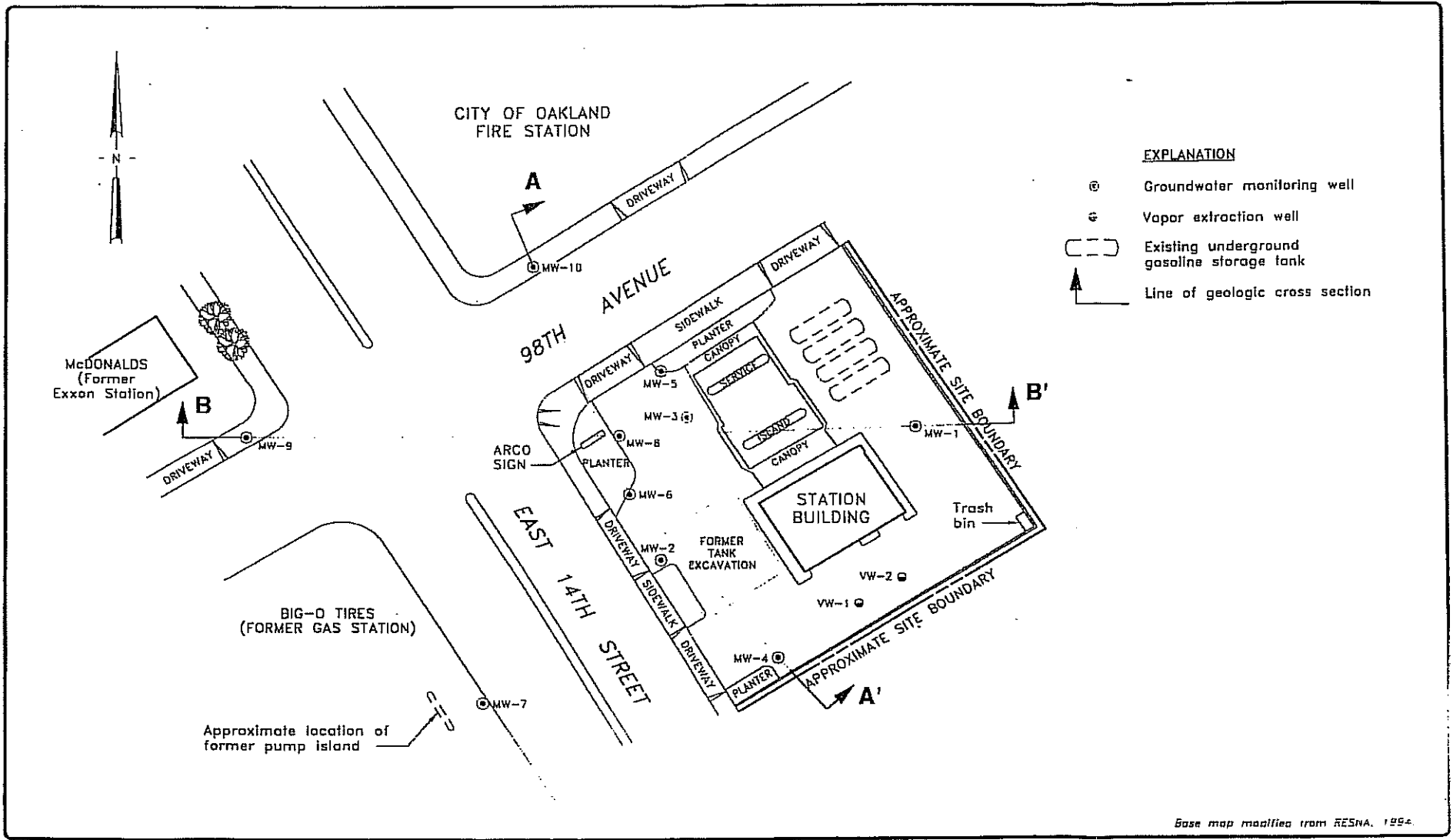
Table with 4 columns: Description, Yes, No, N/A. Rows include Chain-Of-Custody document(s), Sampler's name, Sample container label(s), Sample container(s) intact, Correct containers and volume, Proper preservation, VOA vial(s) free of headspace, Tedlar bag(s) free of condensation.

Initial: [Signature]

COMMENTS:

Blank lines for handwritten comments.

ATTACHMENT D.  
GEOLOGIC CROSS SECTIONS



SCALE: 0 40 80 FEET  
(APPROXIMATE)

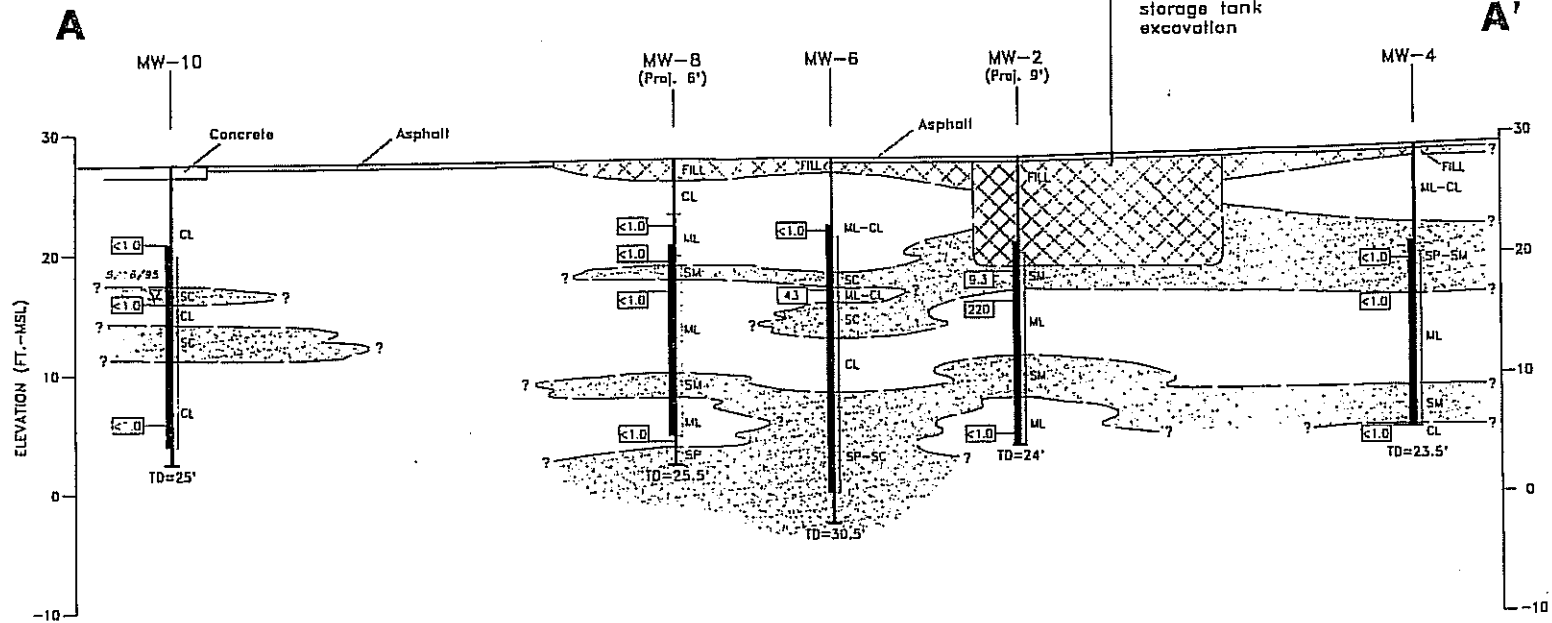
ARCO PRODUCTS COMPANY  
SERVICE STATION 2185, 9800 E. 14TH STREET  
OFFSITE ASSESSMENT  
OAKLAND, CALIFORNIA

SITE PLAN




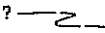
FIGURE NO.  
**2**  
PROJECT NO.  
805-130.02

NORTHWEST







SOUTHEAST



**EXPLANATION**

-  FILL
-  SILTS AND CLAYS (ML, CL)
-  SANDS, SILTY AND CLAYEY SANDS (SP, SM, SC)
-  Geologic contact; dashed where approximate, queried where uncertain

**MW-4 Well/boring designation**

-  Borehole
-  TPH as gasoline (ppm)
-  Sand pack interval
-  First encountered groundwater (showing date measured)
-  Screened interval
-  Total depth of boring

**NOTES:**

1. See Figure 2 for location of cross section.
2. See Appendix F for soil symbol explanation.



SCALE: 0 20 40 FEET  
(Horizontal)

ARCO PRODUCTS COMPANY  
SERVICE STATION 2125, 9800 E. 14TH STREET  
OFFSITE ASSESSMENT  
OAKLAND, CALIFORNIA

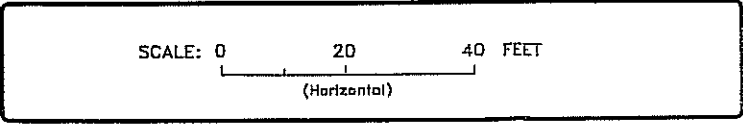
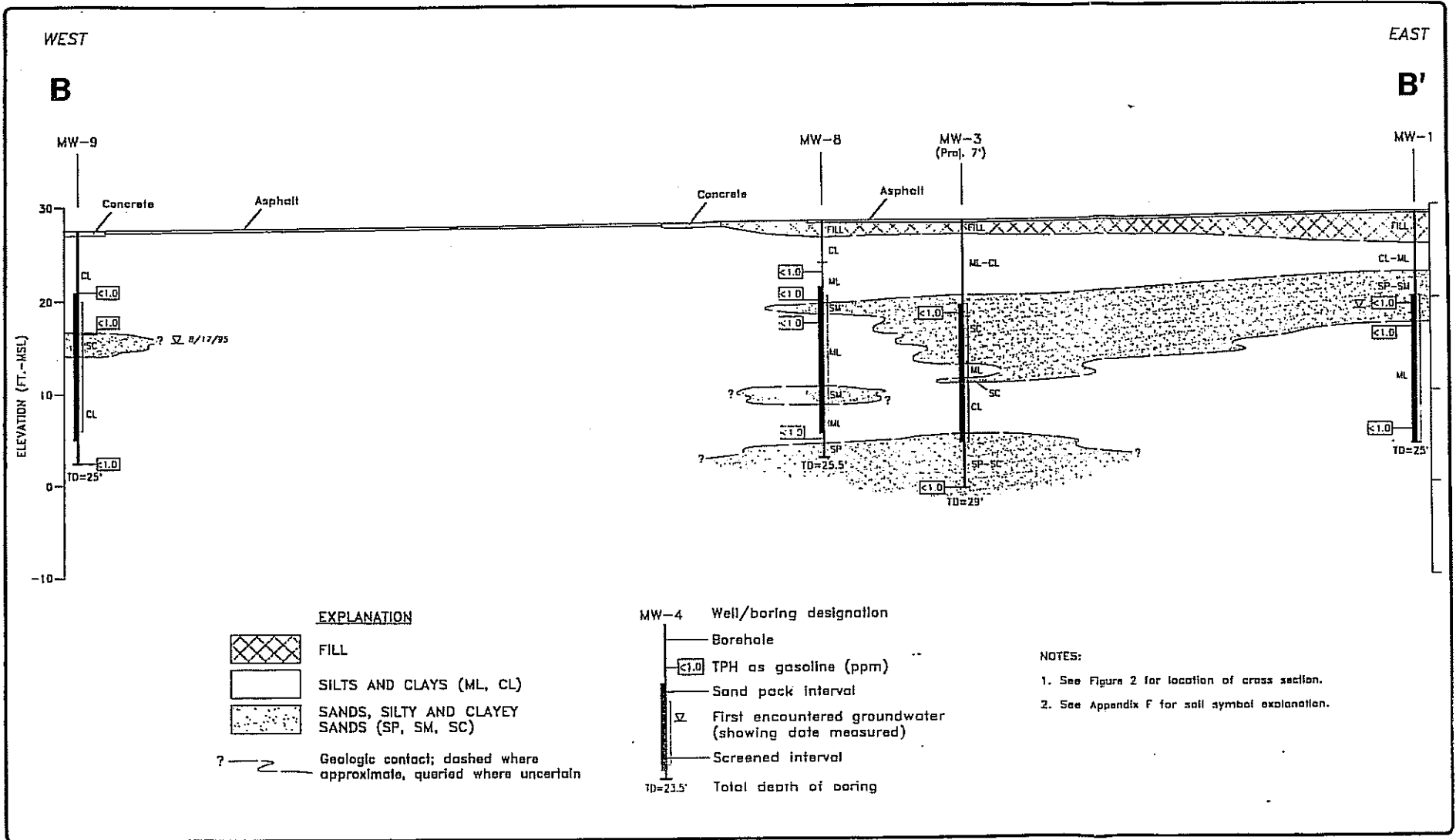
GEOLOGIC CROSS SECTION A-A'

FIGURE NO.

**3**

PROJECT NO.  
805-130.02





ARCO PRODUCTS COMPANY  
 SERVICE STATION 2185, 9800 E. 14TH STREET  
 OFFSITE ASSESSMENT  
 OAKLAND, CALIFORNIA

GEOLOGIC CROSS SECTION B-B'

FIGURE NO.  
**4**  
 PROJECT NO.  
 B05-130.02