Atlantic Richfield Company
(a BP affiliated company)

P.O. Box 1257
San Ramon, California 94583
Phone: (925) 275-3801
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14 August 2009

Re: On-Site Soil Investigation and Second Quarter 2009 Ground-Water Monitoring Report
Former BP Service Station #11266
1541 Park Street
Alameda, California
ACEH Case # RO0000318

"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

ON-SITE SOIL INVESTIGATION AND SECOND QUARTER 2009 GROUND-WATER MONITORING REPORT

Former BP Station No. 11266
1541 Park Street
Alameda, California
ACEH Case No. RO0000318

Prepared for:

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

Prepared by:

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

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14 August 2009

Project No. 06-88-658

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BROADBENT & ASSOCIATES, INC
ENVIRONMENTAL, WATER RESOURCES & ENGINEERING

14 August 2009

Project No. 06-88-658

Atlantic Richfield Company
P.O. Box 1257
San Ramon, CA 94583
Submitted via ENFOS

Attn.: Mr. Paul Supple

Re: On-Site Soil Investigation and Second Quarter 2009 Ground-Water Monitoring Report, Former BP Station No.11266, 1541 Park Street, Alameda, California; ACEH Case #RO0000318

Dear Mr. Supple:

Broadbent & Associates, Inc. (BAI) is pleased to submit this *On-Site Soil Investigation and Second Quarter 2009 Ground-Water Monitoring Report* for Former BP Station No.11266 (herein referred to as Station No.11266) located at 1541 Park Street, Alameda, California (Site). This report presents a description of field activities conducted and results obtained from the advancement of two soil borings at the Site on 10 June 2009. This work was conducted in accordance with the *Work Plan for Soil & Water Investigation* (BAI, 15 December 2008) and the *Addendum Work Plan for Soil & Water Investigation* (BAI, 8 May 2009), as approved with additional comments by Alameda County Environmental Health (ACEH) in their letter dated 8 April 2009. This report also presents a summary of results from the one-time ground-water monitoring event conducted at the Site during the Second Quarter of 2009.

Should you have questions or require additional information, please do not hesitate to contact us at (530) 566-1400.

Sincerely,
BROADBENT & ASSOCIATES, INC.

Jason Duda
Project Scientist

Thomas A. Venus, P.E.
Senior Engineer

Enclosures

cc: Mr. Paresh Khatri, Alameda County Environmental Health (Submitted via ACEH ftp site)
Mr. Chris Jimmerson, Delta Environmental Consultants (electronic copy uploaded to ENFOS)
Electronic copy uploaded to GeoTracker

ON-SITE SOIL INVESTIGATION AND SECOND QUARTER 2009 GROUND-WATER MONITORING REPORT

Former BP Station No.11266
1541 Park Street
Alameda, California

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Former BP Station No.11266
1541 Park Street
Alameda, California

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ON-SITE SOIL INVESTIGATION AND SECOND QUARTER 2009 GROUND-WATER MONITORING REPORT

Former BP Station No.11266
1541 Park Street
Alameda, California

1.0 INTRODUCTION

On behalf of the Atlantic Richfield Company, RM – a BP affiliated company, Broadbent & Associates, Inc. (BAI) has prepared this *On-Site Soil Investigation and Second Quarter 2009 Ground-Water Monitoring Report* for additional soil and ground-water characterization at the Former BP Station No.11266, located at 1541 Park Street, Alameda, California (Site). The on-site soil and water investigation was completed to evaluate the effectiveness of the remediation system that operated between 1992 and 1995 by assessing the presence of residual petroleum hydrocarbon-impacted soil within the source area. In addition, a one-time ground-water sampling event was also part of this investigation in order to refute or confirm the presence and significance of petroleum hydrocarbons within ground water at the Site. Investigation activities were conducted in accordance with the BAI *Work Plan for Soil & Water Investigation* dated 5 January 2009 and the *Addendum Work Plan for Soil & Water Investigation* dated 5 May 2009, as approved with additional comments by the Alameda County Environmental Health (ACEH) in their response letter dated 8 April 2009. A copy of this letter is provided in Appendix A. This report includes discussions on the Site Background, Site Geology and Hydrogeology, Soil Boring Investigation, Second Quarter 2009 Ground-Water Monitoring, Conclusions and Recommendations.

2.0 SITE BACKGROUND

The Site is an active 76-brand retail gasoline service station located on the southwestern corner of Park Street and Lincoln Avenue in Alameda, California (Drawing 1 and Drawing 2). The land use in the immediate vicinity of the Site is commercial. The Site consists of a service station building, two pump islands, one 12,000-gallon and two 10,000-gallon double-walled fiberglass gasoline underground storage tanks (USTs) with associated piping and dispensers, and one 1,000-gallon double-walled fiberglass used oil UST. Each of the four USTs at the Site was installed in 1987 after the former USTs were removed. The Site is covered with asphalt or concrete surfacing except for planters along the property boundaries containing shrubs and trees.

Numerous subsurface investigations and remedial activities have been conducted on-site since 1987. A comprehensive Site history can be found within the *Work Plan for Soil & Water Investigation* prepared by BAI dated 15 December 2008. Section 4.0 of this report details the most recent subsurface investigation field activities conducted in response to the request by ACEH.

3.0 SITE GEOLOGY AND HYDROGEOLOGY

According to the *East Bay Plain Ground-water Basin Beneficial Use Evaluation Report* (California Regional Water Quality Control Board – San Francisco Bay Region/SFRWQCB, June 1999), the Site is located along the northeastern edge of the Central Sub-Area of the East Bay Plain of the San Francisco Basin. The Central Sub-Area extends beneath San Francisco

Bay. The boundaries of the sub-area are based on the Young Bay Mud. The Young Bay Mud has a sharp "edge" in some areas, and in other areas, the boundary is less well-defined. Alameda and Bay Farm Islands are located along the northeastern edge of the sub-area. Historically, there were artesian wells in the sub-area that produced from gravels below the Yerba Buena Mud, but saltwater intrusion shut down these wells. Single-family residences historically relied on the Merrit Sand for water supply. However, septic systems and some saltwater intrusion resulted in localized contamination. More recently, deep wells (700 to 1,000 feet deep) were drilled at the Alameda City Golf Course. Production rates were lower than expected but this is believed due to drilling problems. Water quality was satisfactory for irrigation.

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 (SFRWQCB, 1999). The nearest natural water body is the Tidal Canal, located approximately 0.4 miles northeast of the Site.

The Site elevation is approximately 29 feet above mean sea level. The water table fluctuates seasonally. According to historic data provided by previous consultants, depth-to-water measurements have ranged from 6.24 to 23.40 feet below the measuring points of the Site monitoring wells. Previous to this investigation and Second Quarter 2009 ground-water monitoring event, the previous most recently measured ground-water flow direction during the one-time Third Quarter 2006 monitoring event on 24 August 2006 was to the south at a gradient of 0.01 ft/ft.

According to the *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report*, the single-most important ground-water quality parameter directly influencing a beneficial use determination is the Total Dissolved Solids (TDS) concentration. Resolution 89-39, Sources of Drinking Water, exempts the Municipal and Domestic (MUN) Supply Beneficial Use designations for ground waters with TDS concentrations greater than 3,000 mg/l and are not reasonably expected by the SFRWQCB to supply a public water system (note that the United States Environmental Protection Agency uses the 10,000 mg/l TDS value in determining potential drinking water sources). In 1996, SFRWQCB staff reviewed the General Plans for the East Bay Plain Cities of Alameda, Albany, El Cerrito, Berkeley, Emeryville, Hayward, Oakland, Piedmont, Richmond, and San Leandro, along with the Alameda County Resource Conservation District, the Alameda County Flood Control and Water Conservation District, the North Richmond Shoreline, and Alameda County. None of these cities had "any plans to develop local groundwater resources for drinking water purposes, because of existing or potential saltwater intrusion, contamination, or poor or limited quantity." However, the SFRWQCB's Basin Plan denotes existing beneficial uses of MUN, industrial process supply (PROC), industrial service

supply (IND), and agricultural supply (AGR) for the East Bay Plain ground-water basin (SFRWQCB, 1999).

Geologic data derived from on-site borings generally indicates that the soils underlying the Site consist primarily of poorly graded fine- to medium-grained sands from the surface to the total depth explored (25 feet bgs).

4.0 SOIL BORING INVESTIGATION

This on-site soil investigation was completed to evaluate the effectiveness of the remediation system that operated between 1992 and 1995 by assessing the presence of residual petroleum hydrocarbon-impacted soil. On 10 June 2009, Stratus attempted to advance two hand auger soil borings (identified as B-1 and B-2) at the Site. Soil boring B-1 was initially proposed in the general vicinity of the previously collected soil sample C-1, immediately south of the existing USTs in between the dispenser islands. However, during soil boring advancement, pea gravel, concrete and a metal object were encountered. Due to the presence of pea gravel and the close proximity of the boring to the dispenser islands, product lines, and underground utilities, the boring was abandoned. Boring B-2 was advanced in the general vicinity of historic sample W.O.-1, approximately five feet west-northwest of well MW-3, near the former waste oil tank excavation pit. The soil boring locations from this investigation are shown in Drawing 2.

4.1 Preliminary Field Activities

Prior to initiating field activities, Stratus obtained the necessary well drilling permits from the Alameda County Public Works Agency (See Appendix B), prepared a site health and safety plan specific to the work scope; and cleared the Site for subsurface utilities. The utility clearance included notifying Underground Service Alert of the work a minimum of 48 hours prior to initiating the field investigation, and additionally securing the services of Cruz Brothers, a private utility locating company to confirm the absence of underground utilities at the boring location.

4.2 Soil Boring Advancement and Soil Sampling

On 26 March 2009, Stratus personnel observed RSI Drilling of Woodland, California as they attempted to advance two soil borings (B-1 and B-2). Soil boring B-1 was abandoned due to the presence of pea gravel and its close proximity to the dispenser islands, product lines, and underground utilities. A hand auger was utilized to collect depth-discrete samples at soil boring location B-2 to a maximum depth of 9.5 ft bgs. Physical soil samples were collected at specific depths for laboratory analysis based on field observations and the scope of work proposed in the work plan. Soil samples were collected from boring B-2 at five, 6.5, eight, and 9.5 feet bgs. Reportedly, no obvious visual contamination was observed. Screening with a photo-ionization detector found no evidence of contamination by volatile organic compounds between approximately 2.5 and 9.5 feet bgs. Silty sand was observed from below the surface asphalt to approximately seven feet bgs and nine to 9.5 feet bgs, the final depth of the boring. Silty sand with clay was encountered from approximately seven to nine feet bgs. Following completion of

soil boring advancement and collection of samples, neat cement grout was used to fill the boring to just below ground surface and was completed to match the existing surface surroundings. The boring log (GEO_BORE) for B-2 was uploaded to the GeoTracker AB2886 database. The GeoTracker upload confirmation receipt is provided in Appendix C.

4.3 Investigation-Derived Residuals Management

Residual solids and liquids generated during the Site investigation activities were stored temporarily onsite in Department of Transportation-approved 55-gallon drums pending analytical results and profiling. Following characterization and profiling, Belshire Environmental Services was scheduled to transport the investigation-derived residuals to an Atlantic Richfield Company-approved facility for treatment or disposal.

4.4 Site Survey

Since the Site had not been previously surveyed to GeoTracker standards, Stratus commissioned a survey of the Site by Wood Rodgers Engineering, Mapping, Planning and Surveying. The Site wells and recent boring latitude and longitude positions were surveyed in accordance with GeoTracker standards to the North American Datum of 1983 (NAD83). Elevations of the measuring points within the Site monitoring wells were surveyed in accordance with GeoTracker standards to the North American Vertical Datum of 1988 (NAVD88). A Site Map (GEO_MAP), monitoring well and recent boring positions (GEO_XY) and monitoring well elevations (GEO_Z) were uploaded to the GeoTracker AB2886 database. Copies of the GeoTracker upload confirmation receipts are provided within Appendix C.

4.5 Results of Investigation

Soil samples were shipped to Calscience Environmental Laboratories, Inc. (Garden Grove), a California State-certified laboratory, under chain-of-custody protocol. Samples were analyzed for Gasoline Range Organics (GRO, hydrocarbon chain lengths between C6-C12) by EPA Method 8015B; and for Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX), Methyl Tert-Butyl Ether (MTBE), Ethyl Tert-Butyl Ether (ETBE), Tert-Amyl Methyl Ether (TAME), Di-Isopropyl Ether (DIPE), Tert-Butyl Alcohol (TBA), 1,2-Dichloroethane (1,2-DCA), 1,2-Dibromoethane (EDB), and halogenated and non-halogenated volatile organic compounds using EPA Method 8260B; and Total Lead by EPA Method 200.7. No significant irregularities were reported during laboratory analysis of the soil boring samples.

Lead was detected above the laboratory reporting limit in each of the four soil samples collected at concentrations up to 96.6 milligrams per kilogram (mg/kg) in sample B-2 8'. However, the observed lead concentrations were significantly below the California Department of Public Health and California Environmental Protection Agency's concentrations of significance of 400 milligrams per kilogram (mg/kg). The remaining tested analytes were not detected above their respective laboratory reporting limit in the four soil samples collected. A copy of the laboratory analytical report with chain-of-custody documentation is provided in Appendix B. Laboratory analytical results (EDF) were uploaded to the GeoTracker AB2886 database. The GeoTracker upload confirmation receipt is provided in Appendix C.

5.0 SECOND QUARTER 2009 GROUND-WATER MONITORING

A special one-time monitoring and sampling event of the Site wells was conducted in the Second Quarter 2009 in accordance with the ACEH request and approved work plan. The results of this special ground-water monitoring event are summarized below.

5.1 Site Identification Summary

Facility No.: 11266 Address:	1541 Park Street, Alameda, California
Environmental Business Manager:	Mr. Paul Supple
Consulting Co./Contact Persons:	Broadbent & Associates, Inc.(BAI)/Rob Miller & Tom Venus (530) 566-1400
Consultant Project No.:	06-88-658
Primary Agency/Regulatory ID No.:	Alameda County Environmental Health (ACEH) ACEH Case #RO0000318
Facility Permits/Permitting Agency:	NA

5.2 Work Performed This Quarter (Second Quarter 2009)

- Prepared and submitted *First Quarter 2009 Status Report* (BAI, 4/30/2009).
- Prepared and submitted *Addendum Work Plan for Soil & Water Investigation* to ACEH on 8 May 2009.
- Conducted on-site soil boring investigation on 10 June 2009. Work performed by Stratus Environmental, Inc. (Stratus).
- Conducted position and elevation survey of the Site on 22 June 2009. Work performed by Wood Rodgers for Stratus.
- Conducted a special one-time ground-water monitoring/sampling event per request of ACEH. Work performed on 30 June 2009 by Stratus.

5.3 Work Proposed For Next Quarter (Third Quarter 2009)

- Prepared and submitted *On-Site Soil Investigation and Second Quarter 2009 Ground-Water Monitoring Report* (contained herein).
- No environmental field work is scheduled at the Site for the Third Quarter 2009.

5.4 Quarterly Results Summary

Current phase of project:	**Case Closure Evaluation**
Frequency of ground-water monitoring:	**One time event (Second Quarter 2009)**
Frequency of ground-water sampling:	**One time event (Second Quarter 2009)**
Is free product (FP) present on-site:	**No**
Current remediation techniques:	**NA**
Depth to ground water (below TOC):	**8.61 ft (MW-5) to 10.16 ft (RW-1)**
General ground-water flow direction:	**East**
Approximate hydraulic gradient:	**0.01 ft/ft**

5.5 Discussion

Second Quarter 2009 ground-water monitoring and sampling was conducted at Station #11266 on 30 June 2009 by Stratus. Water levels were gauged in each of the seven wells at the Site. No irregularities were noted during water level gauging. Depth-to-water measurements ranged from 8.61 ft at MW-5 to 10.16 ft at RW-1. Resulting ground-water surface elevations ranged from 20.14 ft above datum in well MW-4 to 18.47 ft in well RW-1. Water level elevations yielded a potentiometric ground-water flow direction and gradient to the east at approximately 0.01 ft/ft. Ground-water monitoring field data sheets are provided within Appendix D. Measured depths to ground water and respective ground-water elevations are summarized in Table 1. Potentiometric ground-water elevation contours are presented in Drawing 3.

Water samples were collected from wells MW-1 through MW-6 and RW-1 on 30 June 2009. The water column in well MW-5 was approximately one foot or less, which resulted in Stratus deeming the well dry. Hence a sample was not collected from well MW-5. No other irregularities were reported during sampling. Samples were submitted under chain-of-custody protocol to Calscience Environmental Laboratories, Inc. (Garden Grove, California), for analysis of GRO (C6-C12) by EPA Method 8015B; Lead by EPA Method 200.7; and for the full spectrum of volatile organic compounds (VOCs) available through analysis by EPA Method 8260B in order to evaluate the absence or presence and significance of halogenated and non-halogenated VOCs as analyzed in historic ground-water samples. The reporting limits for 8260B laboratory analyses performed on the sample collected from well MW-6 were raised due to high levels of non-target analytes. No other significant irregularities were encountered during laboratory analysis of the samples. Ground-water sampling field data sheets and the laboratory analytical report, including chain-of-custody documentation, are provided in Appendix D.

Gasoline Range Organics (GRO) were detected above the laboratory reporting limit in two of the six wells sampled at concentrations of 290 micrograms per liter (µg/L) in well RW-1 and 11,000 µg/L in well MW-1. Benzene was detected above the laboratory reporting limit in one of the six wells sampled at a concentration of 5.1 µg/L in well MW-1. Toluene was detected above the laboratory reporting limit in two of the six wells sampled at concentrations of 15 µg/L in well RW-1 and 29 µg/L in well MW-1. Ethylbenzene was detected above the laboratory reporting limit in two of the six wells sampled at concentrations of 9.6 µg/L in well RW-1 and 310 µg/L in well MW-1. Total Xylenes were detected above laboratory reporting limits in two of the six wells sampled at concentrations of 51 µg/L in well RW-1 and 1,200 µg/L in well MW-1. TAME was detected above the laboratory reporting limit in one of the six wells sampled at a concentration of 1.0 µg/L in well MW-2. TBA was detected above the laboratory reporting limit in one of the six wells sampled at a concentration of 10 µg/L in well MW-1. MTBE was detected above the laboratory reporting limit in one of the six wells sampled at a concentration of 17 µg/L in well MW-2. Lead was detected above the laboratory reporting limit in five of the six wells sampled at concentrations up to 54.2 µg/L in well MW-1. Chlorobenzene was detected above the laboratory reporting limit in two of the six wells sampled at concentrations of 1.9 µg/L in well MW-1 and 0.81 µg/L in well MW-3. 1,2-Dichlorobenzene was detected above the laboratory reporting limit in one of the six wells sampled at a concentration of 1.5 µg/L in well MW-3. The remaining analytes were not detected above their laboratory reporting limits in the six wells sampled during this event.

Detected analyte concentrations were within the historic minimum and maximum ranges recorded for each well with the exception of MTBE, which reached a historic minimum concentration of <0.50 µg/L in well MW-1. Historic laboratory analytical results are summarized in Table 1, Table 2, and Appendix E. The most recent GRO, Benzene, and MTBE concentrations are also presented in Drawing 3. A copy of the Laboratory Analytical Report, including chain-of-custody documentation is provided in Appendix D. Ground-water monitoring data (GEO_WELL) and laboratory analytical results (EDF) were uploaded to the GeoTracker AB2886 database. GeoTracker upload confirmation receipts are provided in Appendix C.

6.0 CONCLUSIONS

On behalf of the Atlantic Richfield Company, RM – a BP affiliated company, BAI prepared this On-Site Soil Investigation and Second Quarter 2009 Ground-Water Monitoring Report for Station No.11266, located at 1541 Park Street, Alameda, California. Investigation activities were conducted in accordance with the BAI *Work Plan for Soil & Water Investigation* dated 5 January 2009 and the *Addendum Work Plan for Soil & Water Investigation* dated 5 May 2009, as approved with comments by the ACEH in their response letter dated 8 April 2009. Based on the information obtained and presented in this soil and water investigation and ground-water monitoring report, BAI concludes the following:

- No petroleum hydrocarbons, halogenated or non-halogenated volatile organic compounds were detected in the four soil samples collected from boring B-2.
- The absence of contaminants within the source area indicates that the residual hydrocarbons in on-site soils have significantly decreased since the operation of the remediation system between 1992 and 1995.
- Ground-water contaminant concentrations above laboratory reporting limits were observed in three of the six wells sampled during the one-time monitoring event conducted on 30 June 2009.
- GRO concentrations exceeded the Environmental Screening Level (ESL) of 210 µg/L established by the San Francisco Regional Water Quality Control Board for ground water that is not a current or potential drinking water resource in wells MW-1 (11,000 µg/L) and RW-1 (290 µg/L).
- Ethylbenzene (310 µg/L) and total xylene (1,200 µg/L) concentrations exceeded their respective ESLs of 43 µg/L and 100 µg/L in well MW-1.
- The ground-water plume appears to be isolated on-site and horizontally defined.

7.0 RECOMMENDATIONS

Based on the information obtained and presented in this soil and ground-water investigation report, BAI makes the following recommendation:

- Based on the analytical results obtained from the soil investigation, no further action relating to soil contamination should be required.

8.0 CLOSURE

This document has been prepared for the exclusive use of Atlantic Richfield Company. The findings presented in this report are based upon the observations of Stratus field personnel, points of investigation and results of laboratory tests performed by Calscience Environmental Laboratories, Inc. (Garden Grove, California). Services were performed in accordance with the generally accepted standard of practice at the time this report was written. No warranty, expressed or implied, is intended. It is possible that variations in the soil or ground-water conditions could exist beyond the points explored in this investigation. Also, changes in site conditions could occur at some time in the future due to variations in rainfall, temperature, regional water usage or other factors.

9.0 REFERENCES

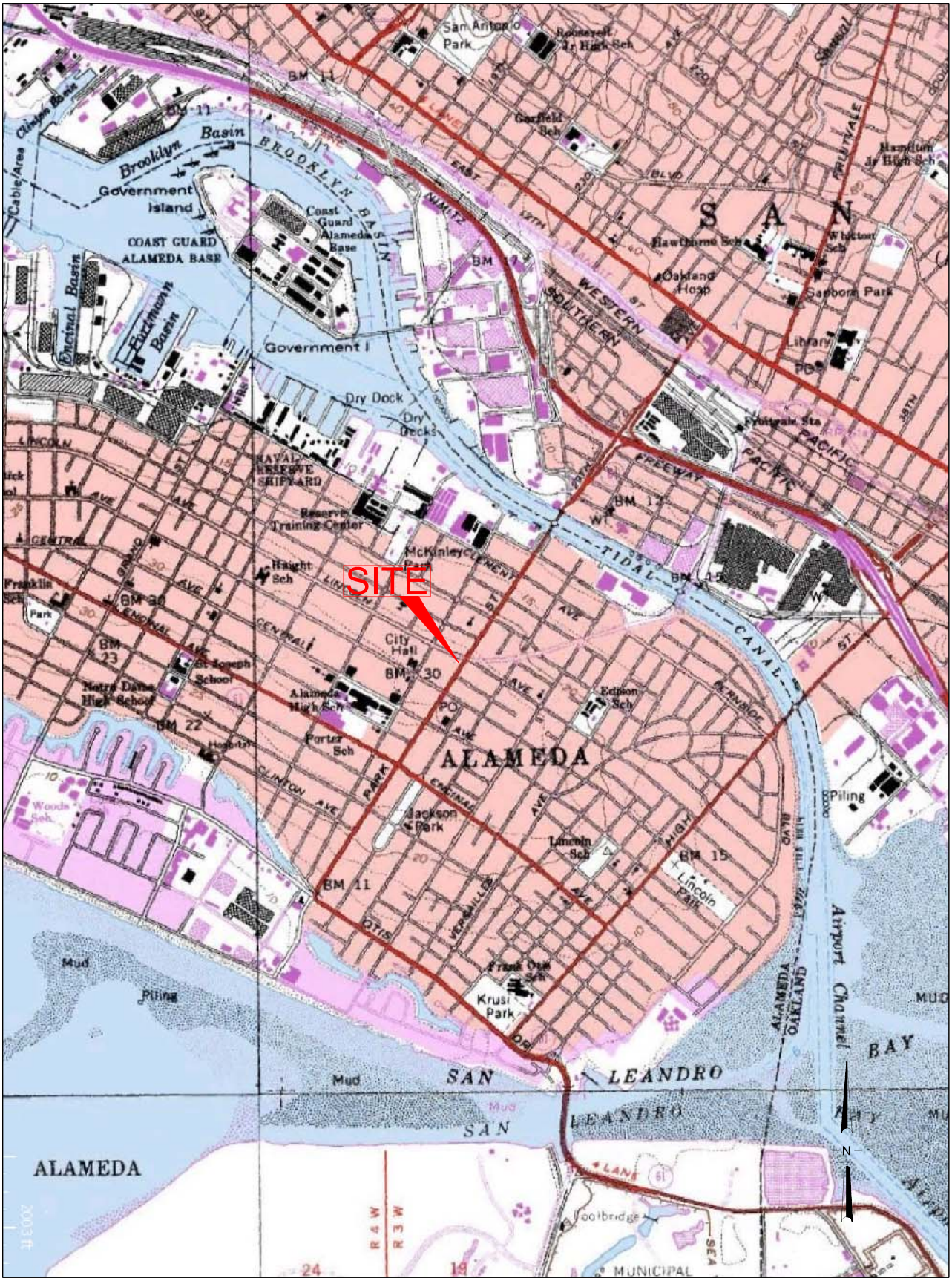
ACEH, 8 April 2009. *Fuel Leak Case No. RO 0000318 and GeoTracker Global ID T0600100207, BP #11266, 1541 Park Street, Alameda, CA 94501*. Letter from Mr. Paresh Khatri (ACEH) to Mr. Paul Supple (Atlantic Richfield Company) approving work plan with technical comments.

Broadbent & Associates, Inc., 15 December 2008. *Work Plan for Soil & Water Investigation, Former BP Service Station No. 11266, 1541 Park Street, Alameda, CA, ACEH Case No. RO0000318*.

Broadbent & Associates, Inc., 8 May 2009. *Addendum Work Plan for Soil & Water Investigation, Former BP Service Station No. 11266, 1541 Park Street, Alameda, CA, ACEH Case No. RO0000318.*

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.*

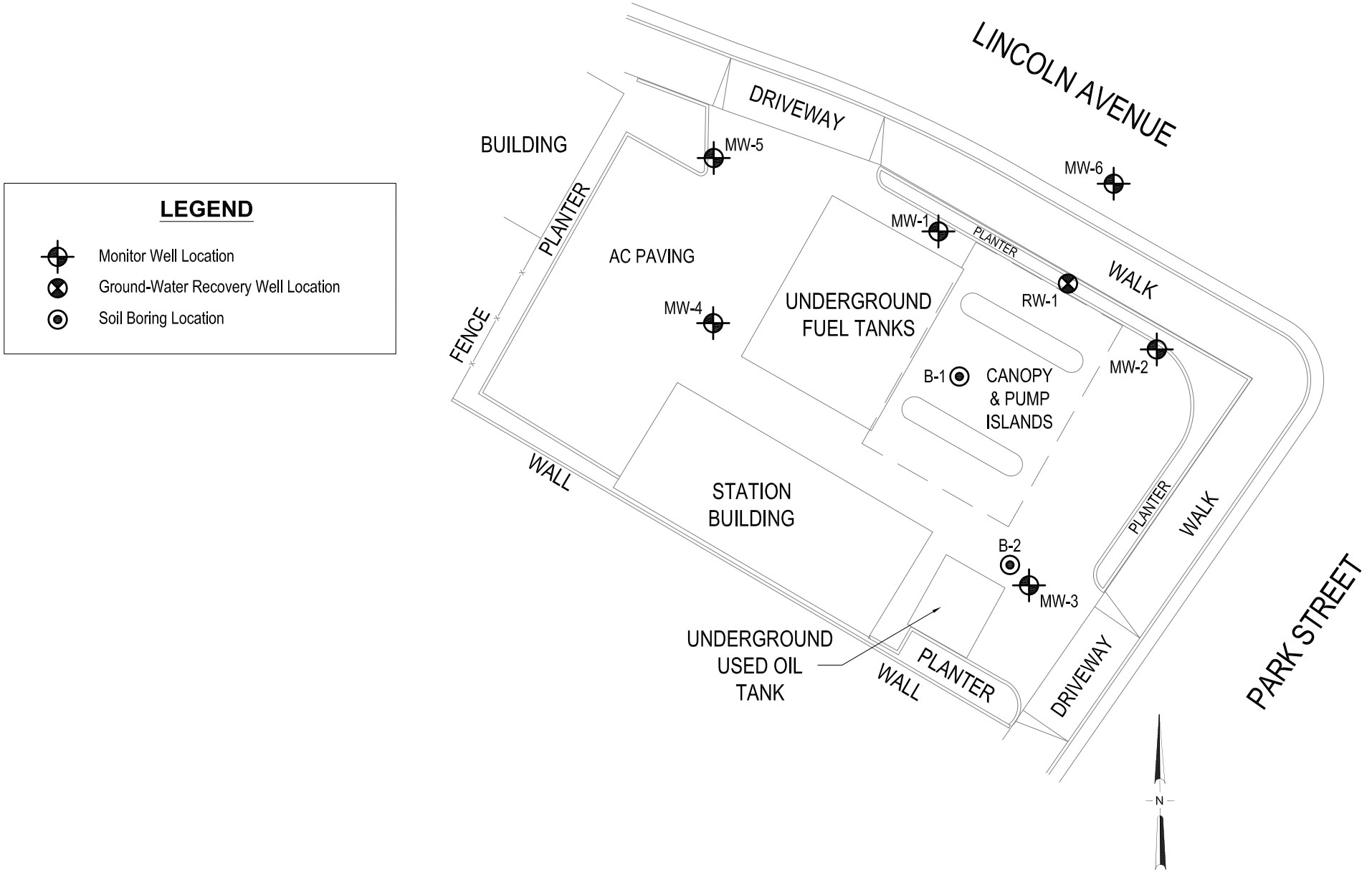
California Regional Water Quality Control Board, San Francisco Bay Region, May 2008. *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater.*



0 2,000 4,000

SCALE (feet)

BROADBENT & ASSOCIATES, INC. ENGINEERING, WATER RESOURCES & ENVIRONMENTAL 1324 Mangrove Ave. Suite 212, Chico, California Project No.: 06-08-658 Date: 12/10/08	Former BP Service Station #11266 1541 Park Street Alameda, California	Site Vicinity Map	Drawing 1



0 30 60

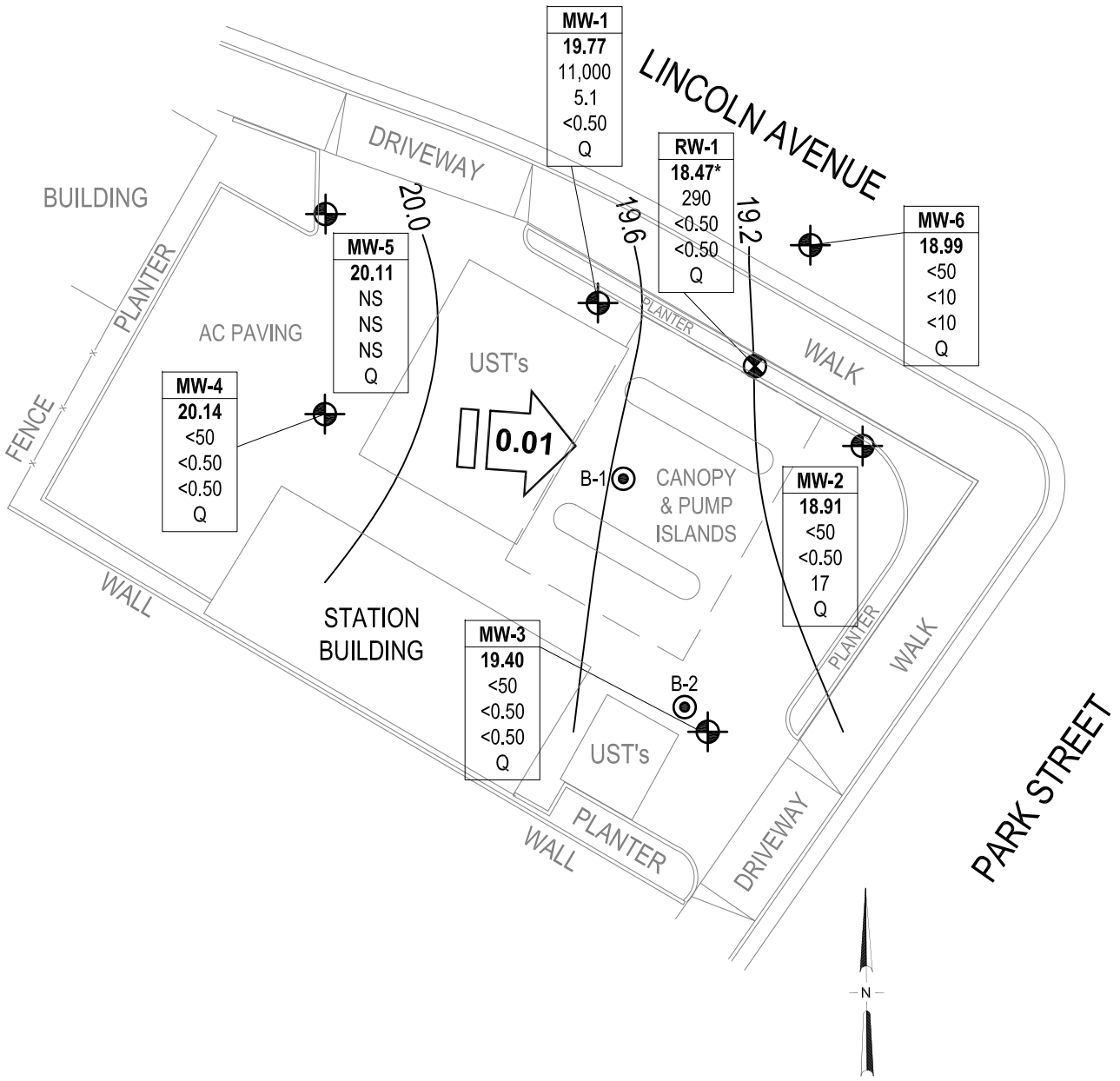
SCALE (ft)

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California 95926
Project No.: 06-88-658 Date: 8/14/09

Former BP Service Station #11266
1541 Park Street
Alameda, California

Site Map with
Soil Boring Locations

Drawing
2



LEGEND

- Monitoring well
- Recovering well
- Well designation
- Ground-water elevation (ft above MSL)
- Concentration of GRO, Benzene and MTBE in ground water (µg/L)
- Sampling frequency

Well	Well designation
ELEV	Ground-water elevation (ft above MSL)
GRO, Benzene, MTBE	Concentration of GRO, Benzene and MTBE in ground water (µg/L)
Q	Sampled quarterly
NS	Not sampled
NM	Not measured
<	Not detected at or above laboratory reporting limits
20.0	Ground-water elevation contour (ft/MSL)
0.01	Approximate ground-water flow direction and gradient (ft/ft)
*	Not used in contouring

0 30 60

SCALE (ft)

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California 95926

Project No.: 06-88-658 Date: 8/14/09

Former BP Service Station #11266
1541 Park Street
Alameda, California

Ground-Water Elevation Contour and Analytical Summary Map
30 June 2009

Drawing
3

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

Station #11266, 1541 Park Street, Alameda, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)								DO (mg/L)	Comments
					GRO/ TPHg	DRO/ TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	Lead		
MW-1														
8/24/2006	P	19.19	7.75	11.44	1,900	1,000	6.4	1.9	48	41	1.2	<100	--	
6/30/2009	**P**	**28.62**	**8.85**	**19.77**	**11,000**	**--**	**5.1**	**29**	**310**	**1,200**	**<0.50**	**54.2**	**2.98**	**b, c**
MW-2														
8/24/2006	P	19.32	8.25	11.07	55	<47	0.57	<0.50	<0.50	1.0	47	<100	--	
6/30/2009	**P**	**28.76**	**9.85**	**18.91**	**<50**	**--**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**17**	**7.44**	**3.13**	**b**
MW-3														
8/24/2006	P	19.99	9.61	10.38	96	130	<0.50	0.52	<0.50	<0.50	1.2	<100	--	
6/30/2009	**P**	**29.43**	**10.03**	**19.40**	**<50**	**--**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<5.0**	**2.40**	**b**
MW-4														
8/24/2006	P	20.17	8.98	11.19	<50	<47	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	
6/30/2009	**P**	**29.61**	**9.47**	**20.14**	**<50**	**--**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**35.7**	**3.53**	**b**
MW-5														
8/24/2006	P	19.41	8.12	11.29	<50	<47	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	
6/30/2009	--	**28.72**	**8.61**	**20.11**	--	--	--	--	--	--	--	--	--	**b, d**
MW-6														
8/24/2006	P	19.40	8.26	11.14	<50	<47	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	
6/30/2009	**P**	**28.82**	**9.83**	**18.99**	**<50**	**--**	**<10**	**<10**	**<10**	**<10**	**<10**	**9.95**	**2.56**	**a, b**
RW-1														
6/30/2009	**P**	**28.63**	**10.16**	**18.47**	**290**	**--**	**<0.50**	**15**	**9.6**	**51**	**<0.50**	**5.47**	**3.34**	**b**

NOTES:

a = Reporting limits raised due to high levels of non-target analytes.
b = Well surveyed 6/22/2009.
c = Sheen in well.
d = Insufficient water to sample.

GRO analysis was completed by EPA method 8260B (C4-C12) for samples collected from the time period April 2006 through February 4, 2008. The analysis for GRO was changed to EPA method 8015B (C6-C12) for samples collected from the time period February 5, 2008 through the present.

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

Table 2. Summary of Fuel Additives Analytical Data

Station #11266, 1541 Park Street, Alameda, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-1									
8/24/2006	<600	<40	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	
6/30/2009	**<50**	**10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-2									
8/24/2006	<300	<20	47	<0.50	<0.50	2.2	<0.50	<0.50	
6/30/2009	**<50**	**<10**	**17**	**<0.50**	**<0.50**	**1.0**	**<0.50**	**<0.50**	
MW-3									
8/24/2006	<300	<20	1.2	<0.50	<0.50	<0.50	<0.50	<0.50	
6/30/2009	**<50**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-4									
8/24/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
6/30/2009	**<50**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-5									
8/24/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-6									
8/24/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
6/30/2009	**<1,000**	**<200**	**<10**	**<10**	**<10**	**<10**	**<10**	**<10**	
RW-1									
6/30/2009	**<50**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

APPENDIX A

RECENT REGULATORY CORRESPONDENCE

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

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

October 16, 2008

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

Terry Grayson
Conoco Phillips
76 Broadway Street
Sacramento, CA 95818

Raymond Yeung
1541 Park Street
Alameda, CA 94501-2933

Subject: Fuel Leak Case No. RO0000318 and GeoTracker Global ID T0600100207, BP #11266, 1541 Park Street, Alameda, CA 94501

Dear Messrs. Supple, Grayson, and Yeung:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the document entitled, "Third Quarter 2006 Ground-Water Monitoring Report," dated October 26, 2006 and the recently submitted "Second Quarter 2008 Status Report," dated July 18, 2008, which were prepared by Broadbent & Associates, Inc. (BAI) for the subject site. Based on a review of the case file, it appears that four underground storage tanks (USTs) were excavated and removed from the site in September 1987. Soil sample analytical results detected total petroleum hydrocarbons (TPH) as gasoline (g) and benzene at concentrations of 3,200 mg/kg and 81 mg/kg, respectively in soil sample C1 collected at approximately 11.5 feet below the ground surface (bgs). A "grab" groundwater sample collected from the UST pit detected TPH-g and benzene at concentrations of 530,000 µg/L and 6,300 µg/L, respectively. In February 1988, Kaprealian Engineering installed three groundwater monitoring wells at the site. Groundwater sample analytical results detected TPH-g and benzene at concentrations of 95,000 µg/L and 2,000 µg/L, respectively, in a groundwater sample collected from monitoring well MW-1. From 1992 to 1995, Hydro Environmental Technologies installed and operated a groundwater extraction and treatment system at the site.

According to BAI, case closure was requested by BP on February 21, 2003. ACEH responded in our July 7, 2006 correspondence requesting more recent groundwater monitoring data with additional sampling parameters for fuel oxygenates, ethanol, and lead scavengers. According to BAI, concentrations of contaminants detected in groundwater are similar to those previously detected and requests case closure. Although groundwater sample analytical data is consistent with historical sampling results, confirmation soil samples do not appear to have been collected to verify remediation system effectiveness. Since data gaps have been identified, ACEH cannot consider case closure 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.

ACEH requests that you address the following technical comments and send us the technical reports requested below.

TECHNICAL COMMENTS

1. **Confirmation Soil Sampling & Contaminant Source Area Characterization** – As mentioned above, significantly elevated concentrations of TPH-g and benzene were detected in soil following the UST removals in 1987. Although a groundwater extraction system operated at the site, depth and screened interval of extraction well, estimated contaminant mass in the subsurface, and total contaminant mass removed were not available in our case file, and confirmation soil sampling to evaluate system effectiveness does not appear to have been conducted since Hydro Environmental Technologies stated "[n]o soil remediation has been undertaken." Also VOCs were previously detected in groundwater samples collected on August 1, 1991 from site groundwater monitoring wells. Therefore, VOC analysis to confirm or refute the presence of VOCs also appears warranted. Please propose a scope of work to address the above-mentioned concerns and submit a work plan by the date specified below.

REQUEST FOR INFORMATION

ACEH's case file for the subject site contains the following electronic reports as listed on our website (http://www.acgov.org/aceh/lop/ust.htm). You are requested to submit copies of all other reports related to environmental investigations for this property (including Remediation System Installation Reports, etc.) by **November 14, 2008**.

TECHNICAL REPORT REQUEST

Please submit technical reports to ACEH (Attention: Paresh Khatri), according to the following schedule:

- **December 15, 2008** – Soil and Water Investigation Work Plan

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

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to 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 Instructions." 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. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all 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 monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml.

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 Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Tom Venus, Broadbent & Associates, Inc., 1324 Mangrove Ave., Ste 212, Chico, CA 95926
Donna Drogos, ACEH
Paresh Khatri, ACEH
File

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

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

April 8, 2009

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

Terry Grayson
Conoco Phillips
76 Broadway Street
Sacramento, CA 95818

Raymond Yeung
1541 Park Street
Alameda, CA 94501-2933

Subject: Fuel Leak Case No. RO0000318 and GeoTracker Global ID T0600100207, BP #11266, 1541 Park Street, Alameda, CA 94501

Dear Messrs. Supple, Grayson, and Yeung:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the recently submitted document entitled, "Work Plan for Soil & Water Investigation," dated December 15, 2008, which was prepared by Broadbent & Associates, Inc. (BAI) for the subject site. In response to ACEH's concerns regarding treatment system effectiveness, BAI has proposed to install two borings to characterize residual contamination in the former source area(s) and initiate one round of groundwater sampling.

ACEH generally concurs with the proposed scope of work and the proposed scope of work may be implemented provided that the modifications requested in the technical comments below are addressed and incorporated during the field implementation. Submittal of a revised Work Plan is not required unless an alternate scope of work outside that described in the Work Plan and technical comments below is proposed.

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

TECHNICAL COMMENTS

1. **Verification Sampling** – BAI proposes to install two borings to characterize current soil conditions within the former source areas at the site. BAI states that "[b]oring B-1 is proposed in the general vicinity of sample C-1 and well MW-1, approximately five feet south-southwest of well MW-1 and five feet north of the northeast corner of the dispenser islands, near the former UST excavation pit." However, based on a review of Kaprealian Engineering's site figure, the proposed boring location B-1 appears to be over 10 feet away from the location of soil sample C-1 collected at 11.5 feet bgs, which detected TPH-g and benzene at concentrations of 3,200 mg/kg and 81 mg/kg, respectively. Therefore, please install an additional boring immediately adjacent to soil sample C-1. Should safety concerns prevent boring installation, please note that this boring may be hand-augered to the desired sampling depth or soil vapor sampling wells can be installed in the immediate vicinity to evaluate subsurface conditions.

NOTIFICATION OF FIELDWORK ACTIVITIES

Please schedule and complete the fieldwork activities by the date specified below and provide ACEH with at least three (3) business days notification prior to conducting the fieldwork.

TECHNICAL REPORT REQUEST

Please submit technical reports to ACEH (Attention: Paresh Khatri), according to the following schedule:

- **May 8, 2009** – Revised Figure (and Soil Vapor Sampling Scope of Work, if applicable)
- **July 7, 2009** – Soil and Water Investigation Report
- **Due within 45 days of Sample Collection** – Quarterly Monitoring Report (2nd Quarter 2009)

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

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to 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 Instructions." 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. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all 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 monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml.

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 Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Tom Venus, Broadbent & Associates, Inc., 1324 Mangrove Ave., Ste 212, Chico, CA 95926
Donna Drogos, ACEH
Paresh Khatri, ACEH
GeoTracker
File

APPENDIX B

STRATUS SOIL BORING DATA PACKAGE
(Includes Field Data Sheets, Boring Logs, Drilling Permit, Site Plan, and Certified Laboratory Analytical Report with Chain-of-Custody Documentation)

STRATUS
ENVIRONMENTAL, INC.

3330 Cameron Park Drive, Ste 550
Cameron Park, California 95682
(530) 676-6004 ~ Fax: (530) 676-6005

August 11, 2009

Mr. Tom Venus
Broadbent & Associates, Inc.
1324 Mangrove Avenue
Chico, California 95926

Re: Soil Boring Data Package, Former BP Service Station No. 11266, located at 1541 Park Street, Alameda, California (field activities performed between May 29, 2009 and June 10, 2009).

General Information

Data Submittal Prepared / Reviewed by: Collin Fischer and Scott Bittinger / Jay Johnson
Phone Number: (530) 676-2062 / (530) 676-6000

Date: May 29, 2009
On-Site Supplier Representative: Collin Fischer
Scope of Work Performed: Health and safety meeting with utility locating subcontractor (Cruz Brothers Locators). Locate all utilities onsite and sketch on site map per ground disturbance procedures. Clear 2 boring locations and mark site for USA.
Variations from Work Scope: Location of boring B-1 was adjusted, relative to site features, after discussions with scoping contractor. The B-1 location illustrated in the work plan was located beneath an underground storage tank (UST). The Stratus representative included the approximate location of the current facilities on the utility location map sketch.

Date: June 8, 2009
On-Site Supplier Representative: Collin Fischer
Scope of Work Performed: Fill out health and safety forms. Check USA markings, update USA tracking sheet, and update underground utility location sketch per ground disturbance procedures.
Variations from Work Scope: None noted

Date: June 10, 2009
On-Site Supplier Representative: Collin Fischer
Scope of Work Performed: Health and safety meeting with drilling subcontractor. Hand auger 1 boring (B-2) to 9.5 feet below ground surface (bgs). and collect soil samples.
Variations from Work Scope: Boring location (B-1) was attempted, but after coring through concrete, pea gravel and a metal object were found below the concrete surface.

After discussions with scoping contractor, the location was abandoned due to the presence of pea gravel and its close proximity to the dispenser islands, product lines, and utility lines.

This submittal presents the data collected in association with the completion of one soil boring. The attachments include field data sheets, a soil boring log for B-2, a drilling permit, an underground utility location map sketch, a surveyed site plan, a certified analytical report, and chain-of-custody documentation. The information is being provided to BP-ARCO's Scoping Supplier for use in preparing a report for regulatory submittal. This submittal is limited to presentation of collected data and does not include data interpretation or conclusions or recommendations.

Any questions concerning this submittal should be addressed to the Preparer/Reviewer identified above.

Sincerely,

STRATUS ENVIRONMENTAL, INC.

Scott G. Bittinger, P.G.
Project Geologist

REGISTERED GEOLOGIST
Scott G. Bittinger
No. 7477
STATE OF CALIFORNIA

Jay R. Johnson, P.G.
Project Manager

PROFESSIONAL GEOLOGIST
Jay R. Johnson
No. 5867
STATE OF CALIFORNIA

Attachments:

- Field Data Sheets
- Boring log
- Drilling permit
- Underground Utility Location Map Sketch
- Surveyed Site Plan
- Certified Analytical Reports
- Chain-of-Custody Documentation

cc: Paul Supple, BP/ARCO

5/29/2009

ARCO 11266 – Collin Fischer — Cloudy
Cruz Bros.

0745 -> ONSITE, FILL OUT SAFETY PAPERWORK, SITE ON AIR.

0820 -> CRUZ BROS ONSITE, SAFETY MEETING.

0840 -> BEGIN CLEARING SITE, TALK W/ STATION MANAGER ABOUT WORK SCHEDULE, ALSO ASK ABOUT HISTORICAL & CURRENT TANK SENSOR/ELECTRICAL LINES. HE SAYS NO RAISE/REBUILD ACTIVITIES HAVE OCCURRED, & CONTROL PANEL IS LOCATED. WILL USE PANEL TO LOCATE LINES & SKETCH ON MAP.

0910 -> CALL OFFICE TO DISCUSS (B-1) LOCATION & INNACCURACY OF MAP. SKETCH MAP OF SITE LAYOUT ON OLD MAP.

0945 -> NO GAS FOUND @ STATION, ASK MANAGER, HE CONFIRMS THAT THERE IS NO GAS LINE COMING INTO THE BUILDING. CONTINUE ON OTHER UTILITIES. SEWER, H2O, & ELECTRIC FOUND, 1 SEWER CLEANOUT IS RUSTED SHUT, MARK OTHER CLEANOUT.

1010 -> MARK OUT ALL ELECTRICAL & TANK SENSOR & PUMP SENSOR ELECTRIC LINES. METAL SCREET

1115 -> SKETCH MAP FINALIZE & MARK FOR USA

1130 -> OFFSITE

Collin Fischer

STANTEC ENV., INC.

Clean
060809

ARCO 11266 - Collin Fischer

0615 -> onsite, fill out safety paperwork.

0630 -> update USA tracking sheet & sketch in additional utilities onto site map.

0645 -> offsite

[signature]

Stratus Env. Inc.

Field Data Sheet

Site: ARCO 11266 Date: 6/10/2009

Personnel on site: Collin Fischer, RSI Drilling

Weather Conditions: Cloudy

Notes:

~~1345~~ -> ONSITE, SAFETY MEETING, SET UP @ (B-1) & START CONCRETE CORING.

1330 -> UPON CORING THROUGH CONCRETE, PEA GRAVEL SURROUNDING A PIECE OF METAL DEBRIS IS FOUND. (B-1) LOCATION IS COMPROMISED, CALL OFFICE & EXPLAIN SITUATION, WAIT FOR CALL BACK, MEAN WHILE MOVE TO (B-2).

1345 -> PUNCH ASPHALT SURFACE & CLEAN HOLE.

1355 -> START HAND AUGERING @ (B-2). H2O TAGGED IN (MW-3) @ 9'10" SO LAST SAMPLE WILL BE @ 9.5' BGS.

1430 -> DONE, GROUT TOOLS & PATCH SURFACE @ (B-2) & (B-1)

1500 -> CLEANED & SECURE AREA

1515 -> OFF SITE

Collin Fischer

STRATUS ENV., INC.

SOIL BORING LOG **Boring No. B-2** **Sheet: 1 of 1**

Client	Former BP Station 11266	Date	June 10, 2009
Address	1541 Park Street	Drilling Co.	RSI Drilling rig type: 6620 DT (pavement coring)
	Alameda, CA	Driller	Norman
Project No.	E11266	Method	Hand Auger Hole Diameter: 3"
Logged By:	Collin Fischer		

Sample Type	Sample No.	Date	Sample Time	Sample Recov.	Well Details	Depth Scale	Lithologic Column	Descriptions of Materials and Conditions	PID (PPM)
						1			
						2			
						3			
						4		Silty sand, SM, (0'-7'), dark brown, moist 85% medium grained sand, 15% silt	
S	B-2 5'	6/10/09	1405	100		5	SM		0
						6			
S	B-2 6.5'	6/10/09	1410	100		7			0
S	B-2 8'	6/10/09	1420	100		8		Silty sand with clay, SM, (7'-9'), dark brown, moist, 70% medium grained sand, 20% silt, 10% clay	0
						9			
S	B-2 9.5"	6/10/09	1425	100		10		Silty sand, SM, (9'-9.5'), dark yellowish brown, wet 85% medium grained sand, 15% silt	0
						11			
						12			
						13			
						14			
						15			
						16			
						17			
						18			
						19			
						20			

Recovery

Sample

Comments:

STRATUS ENVIRONMENTAL, INC.

Alameda County Public Works Agency - Water Resources Well Permit

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

Application Approved on: 06/03/2009 By jamesy

Permit Numbers: W2009-0446
Permits Valid from 06/10/2009 to 06/10/2009

Application Id:	1243641071787	**City of Project Site:**Alameda
Site Location:	1541 Park St, Alameda, CA	
Project Start Date:	06/10/2009	**Completion Date:**06/10/2009
Assigned Inspector:	Contact John Shouldice at (510) 670-5424 or johns@acpwa.org	
Applicant:	Stratus Envr. - Scott Bittinger 3330 Cameron Park Dr. Ste. 550, Cameron Park, CA 95602	**Phone:** 530-676-2062
Property Owner:	BPO ARCO 6 Centerpointe Dr., La Palma, CA 90623	**Phone:** 925-275-3801
Client:	** same as Property Owner **	

	Total Due:	$230.00
Receipt Number: WR2009-0199	**Total Amount Paid:**	$230.00
Payer Name : Stratus	Paid By: CHECK	**PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Investigation-Contamination Study - 2 Boreholes
Driller: RSI - Lic #: 802334 - Method: Hand

Work Total: $230.00

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2009-0446	06/03/2009	09/08/2009	2	4.00 in.	4.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.

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

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

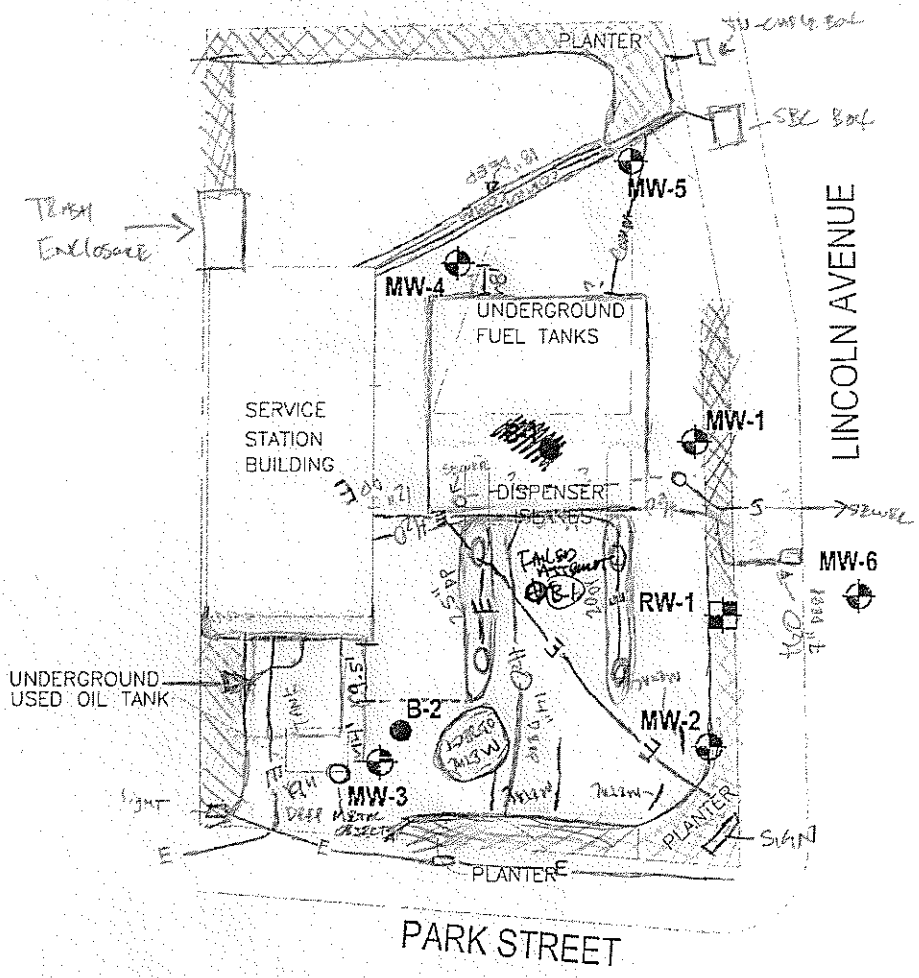
4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

5. Applicant shall contact John Shouldice for an inspection time at 510-670-5424 at least five (5) working days prior to

starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

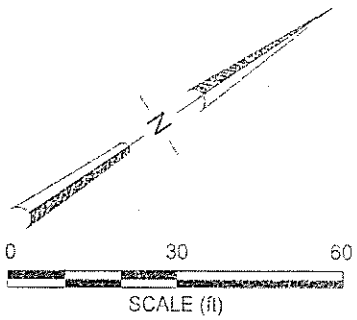
6. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

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



LEGEND

- Proposed Soil Boring Location
- Monitoring Well Location
- Ground-Water Recovery Well Location



NOTES: SITE MAP ADAPTED FROM OTHER CONSULTANTS
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

BROADBENT & ASSOCIATES, INC. ENGINEERING, WATER RESOURCES & ENVIRONMENTAL 1324 Mangrove Ave. Suite 212, Chico, California 95926 Project No. 06-08-658 Date: 5/7/09	Former BP Service Station #11266 1541 Park Street Alameda, California	Site Map with Proposed Soil Boring Locations	Drawing 1

Calscience
Environmental
Laboratories, Inc.

June 25, 2009

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

Subject: **Calscience Work Order No.: 09-06-1049**
Client Reference: ARCO 11266

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/11/2009 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,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/11/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1049
Cameron Park, CA 95682-8861	Preparation:	EPA 3050B
	Method:	EPA 6010B

Project: ARCO 11266

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2 5'	**09-06-1049-1-A**	**06/10/09 14:05**	**Solid**	**ICP 5300**	**06/12/09**	**06/13/09 13:38**	**090612L02**

Parameter	Result	RL	DF	Qual	Units
Lead	47.9	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2 6.5'	**09-06-1049-2-A**	**06/10/09 14:10**	**Solid**	**ICP 5300**	**06/12/09**	**06/13/09 13:40**	**090612L02**

Parameter	Result	RL	DF	Qual	Units
Lead	15.8	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2 8'	**09-06-1049-3-A**	**06/10/09 14:20**	**Solid**	**ICP 5300**	**06/12/09**	**06/13/09 13:43**	**090612L02**

Parameter	Result	RL	DF	Qual	Units
Lead	96.6	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2 9.5'	**09-06-1049-4-A**	**06/10/09 14:25**	**Solid**	**ICP 5300**	**06/12/09**	**06/13/09 13:45**	**090612L02**

Parameter	Result	RL	DF	Qual	Units
Lead	17.2	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-12,399**	**N/A**	**Solid**	**ICP 5300**	**06/12/09**	**06/13/09 13:04**	**090612L02**

Parameter	Result	RL	DF	Qual	Units
Lead	ND	0.500	1		mg/kg

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/11/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1049
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: ARCO 11266

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2 5'	**09-06-1049-1-A**	**06/10/09 14:05**	**Solid**	**GC 1**	**06/12/09**	**06/12/09 22:23**	**090612B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	84	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2 6.5'	**09-06-1049-2-A**	**06/10/09 14:10**	**Solid**	**GC 1**	**06/12/09**	**06/12/09 22:55**	**090612B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	84	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2 8'	**09-06-1049-3-A**	**06/10/09 14:20**	**Solid**	**GC 1**	**06/12/09**	**06/12/09 23:26**	**090612B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	83	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2 9.5'	**09-06-1049-4-A**	**06/10/09 14:25**	**Solid**	**GC 1**	**06/12/09**	**06/12/09 23:58**	**090612B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	84	42-126			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	06/11/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1049
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO 11266

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-697-118**	**N/A**	**Solid**	**GC 1**	**06/12/09**	**06/12/09 11:13**	**090612B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	83	42-126			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/11/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1049
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	mg/kg
Project: ARCO 11266		Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2 5'	**09-06-1049-1-A**	**06/10/09 14:05**	**Solid**	**GC/MS Z**	**06/12/09**	**06/13/09 06:50**	**090612L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		t-1,2-Dichloroethene	ND	0.0010	1	
Bromochloromethane	ND	0.0010	1		1,2-Dichloropropane	ND	0.0010	1	
Bromodichloromethane	ND	0.0010	1		c-1,3-Dichloropropene	ND	0.0010	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.010	1		t-1,3-Dichloropropene	ND	0.0010	1	
Bromoform	ND	0.0010	1		Ethylbenzene	ND	0.0010	1	
Bromomethane	ND	0.010	1		Methylene Chloride	ND	0.010	1	
Carbon Tetrachloride	ND	0.0010	1		1,1,2,2-Tetrachloroethane	ND	0.0010	1	
Chlorobenzene	ND	0.0010	1		Tetrachloroethene	ND	0.0010	1	
Chloroethane	ND	0.0010	1		Toluene	ND	0.0010	1	
Chloroform	ND	0.0010	1		1,1,1-Trichloroethane	ND	0.0010	1	
Chloromethane	ND	0.0010	1		1,1,2-Trichloroethane	ND	0.0010	1	
Dibromochloromethane	ND	0.0010	1		Trichloroethene	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Trichlorofluoromethane	ND	0.010	1	
1,2-Dichlorobenzene	ND	0.0010	1		Vinyl Chloride	ND	0.0010	1	
1,3-Dichlorobenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,4-Dichlorobenzene	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
Dichlorodifluoromethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
1,1-Dichloroethane	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
1,2-Dichloroethane	ND	0.0010	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
1,1-Dichloroethene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
c-1,2-Dichloroethene	ND	0.0010	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	100	75-141		1,2-Dichloroethane-d4	105	73-151	
Toluene-d8	99	87-111		1,4-Bromofluorobenzene	97	71-113	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/11/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1049
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	mg/kg
Project: ARCO 11266		Page 2 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2 6.5'	**09-06-1049-2-A**	**06/10/09 14:10**	**Solid**	**GC/MS Z**	**06/13/09**	**06/13/09 13:18**	**090613L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		t-1,2-Dichloroethene	ND	0.0010	1	
Bromochloromethane	ND	0.0010	1		1,2-Dichloropropane	ND	0.0010	1	
Bromodichloromethane	ND	0.0010	1		c-1,3-Dichloropropene	ND	0.0010	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.010	1		t-1,3-Dichloropropene	ND	0.0010	1	
Bromoform	ND	0.0010	1		Ethylbenzene	ND	0.0010	1	
Bromomethane	ND	0.010	1		Methylene Chloride	ND	0.010	1	
Carbon Tetrachloride	ND	0.0010	1		1,1,2,2-Tetrachloroethane	ND	0.0010	1	
Chlorobenzene	ND	0.0010	1		Tetrachloroethene	ND	0.0010	1	
Chloroethane	ND	0.0010	1		Toluene	ND	0.0010	1	
Chloroform	ND	0.0010	1		1,1,1-Trichloroethane	ND	0.0010	1	
Chloromethane	ND	0.0010	1		1,1,2-Trichloroethane	ND	0.0010	1	
Dibromochloromethane	ND	0.0010	1		Trichloroethene	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Trichlorofluoromethane	ND	0.010	1	
1,2-Dichlorobenzene	ND	0.0010	1		Vinyl Chloride	ND	0.0010	1	
1,3-Dichlorobenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,4-Dichlorobenzene	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
Dichlorodifluoromethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
1,1-Dichloroethane	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
1,2-Dichloroethane	ND	0.0010	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
1,1-Dichloroethene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
c-1,2-Dichloroethene	ND	0.0010	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	104	75-141		1,2-Dichloroethane-d4	108	73-151	
Toluene-d8	99	87-111		1,4-Bromofluorobenzene	97	71-113	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/11/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1049
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	mg/kg
Project: ARCO 11266		Page 3 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2 8'	**09-06-1049-3-A**	**06/10/09 14:20**	**Solid**	**GC/MS Z**	**06/12/09**	**06/13/09 07:19**	**090612L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		t-1,2-Dichloroethene	ND	0.0010	1	
Bromochloromethane	ND	0.0010	1		1,2-Dichloropropane	ND	0.0010	1	
Bromodichloromethane	ND	0.0010	1		c-1,3-Dichloropropene	ND	0.0010	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.010	1		t-1,3-Dichloropropene	ND	0.0010	1	
Bromoform	ND	0.0010	1		Ethylbenzene	ND	0.0010	1	
Bromomethane	ND	0.010	1		Methylene Chloride	ND	0.010	1	
Carbon Tetrachloride	ND	0.0010	1		1,1,2,2-Tetrachloroethane	ND	0.0010	1	
Chlorobenzene	ND	0.0010	1		Tetrachloroethene	ND	0.0010	1	
Chloroethane	ND	0.0010	1		Toluene	ND	0.0010	1	
Chloroform	ND	0.0010	1		1,1,1-Trichloroethane	ND	0.0010	1	
Chloromethane	ND	0.0010	1		1,1,2-Trichloroethane	ND	0.0010	1	
Dibromochloromethane	ND	0.0010	1		Trichloroethene	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Trichlorofluoromethane	ND	0.010	1	
1,2-Dichlorobenzene	ND	0.0010	1		Vinyl Chloride	ND	0.0010	1	
1,3-Dichlorobenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,4-Dichlorobenzene	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
Dichlorodifluoromethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
1,1-Dichloroethane	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
1,2-Dichloroethane	ND	0.0010	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
1,1-Dichloroethene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
c-1,2-Dichloroethene	ND	0.0010	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	103	75-141		1,2-Dichloroethane-d4	108	73-151	
Toluene-d8	101	87-111		1,4-Bromofluorobenzene	96	71-113	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/11/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1049
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	mg/kg
Project: ARCO 11266		Page 4 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2 9.5'	**09-06-1049-4-A**	**06/10/09 14:25**	**Solid**	**GC/MS Z**	**06/12/09**	**06/13/09 07:49**	**090612L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		t-1,2-Dichloroethene	ND	0.0010	1	
Bromochloromethane	ND	0.0010	1		1,2-Dichloropropane	ND	0.0010	1	
Bromodichloromethane	ND	0.0010	1		c-1,3-Dichloropropene	ND	0.0010	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.010	1		t-1,3-Dichloropropene	ND	0.0010	1	
Bromoform	ND	0.0010	1		Ethylbenzene	ND	0.0010	1	
Bromomethane	ND	0.010	1		Methylene Chloride	ND	0.010	1	
Carbon Tetrachloride	ND	0.0010	1		1,1,2,2-Tetrachloroethane	ND	0.0010	1	
Chlorobenzene	ND	0.0010	1		Tetrachloroethene	ND	0.0010	1	
Chloroethane	ND	0.0010	1		Toluene	ND	0.0010	1	
Chloroform	ND	0.0010	1		1,1,1-Trichloroethane	ND	0.0010	1	
Chloromethane	ND	0.0010	1		1,1,2-Trichloroethane	ND	0.0010	1	
Dibromochloromethane	ND	0.0010	1		Trichloroethene	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Trichlorofluoromethane	ND	0.010	1	
1,2-Dichlorobenzene	ND	0.0010	1		Vinyl Chloride	ND	0.0010	1	
1,3-Dichlorobenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,4-Dichlorobenzene	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
Dichlorodifluoromethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
1,1-Dichloroethane	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
1,2-Dichloroethane	ND	0.0010	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
1,1-Dichloroethene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
c-1,2-Dichloroethene	ND	0.0010	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	104	75-141		1,2-Dichloroethane-d4	110	73-151	
Toluene-d8	99	87-111		1,4-Bromofluorobenzene	96	71-113	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/11/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1049
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	mg/kg
Project: ARCO 11266		Page 5 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-709-149**	**N/A**	**Solid**	**GC/MS Z**	**06/12/09**	**06/13/09 02:24**	**090612L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		t-1,2-Dichloroethene	ND	0.0010	1	
Bromochloromethane	ND	0.0010	1		1,2-Dichloropropane	ND	0.0010	1	
Bromodichloromethane	ND	0.0010	1		c-1,3-Dichloropropene	ND	0.0010	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.010	1		t-1,3-Dichloropropene	ND	0.0010	1	
Bromoform	ND	0.0010	1		Ethylbenzene	ND	0.0010	1	
Bromomethane	ND	0.010	1		Methylene Chloride	ND	0.010	1	
Carbon Tetrachloride	ND	0.0010	1		1,1,2,2-Tetrachloroethane	ND	0.0010	1	
Chlorobenzene	ND	0.0010	1		Tetrachloroethene	ND	0.0010	1	
Chloroethane	ND	0.0010	1		Toluene	ND	0.0010	1	
Chloroform	ND	0.0010	1		1,1,1-Trichloroethane	ND	0.0010	1	
Chloromethane	ND	0.0010	1		1,1,2-Trichloroethane	ND	0.0010	1	
Dibromochloromethane	ND	0.0010	1		Trichloroethene	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Trichlorofluoromethane	ND	0.010	1	
1,2-Dichlorobenzene	ND	0.0010	1		Vinyl Chloride	ND	0.0010	1	
1,3-Dichlorobenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,4-Dichlorobenzene	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
Dichlorodifluoromethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
1,1-Dichloroethane	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
1,2-Dichloroethane	ND	0.0010	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
1,1-Dichloroethene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
c-1,2-Dichloroethene	ND	0.0010	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	98	75-141		1,2-Dichloroethane-d4	101	73-151	
Toluene-d8	97	87-111		1,4-Bromofluorobenzene	95	71-113	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/11/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1049
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	mg/kg
Project: ARCO 11266		Page 6 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-709-151**	**N/A**	**Solid**	**GC/MS Z**	**06/13/09**	**06/13/09 12:49**	**090613L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		t-1,2-Dichloroethene	ND	0.0010	1	
Bromochloromethane	ND	0.0010	1		1,2-Dichloropropane	ND	0.0010	1	
Bromodichloromethane	ND	0.0010	1		c-1,3-Dichloropropene	ND	0.0010	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.010	1		t-1,3-Dichloropropene	ND	0.0010	1	
Bromoform	ND	0.0010	1		Ethylbenzene	ND	0.0010	1	
Bromomethane	ND	0.010	1		Methylene Chloride	ND	0.010	1	
Carbon Tetrachloride	ND	0.0010	1		1,1,2,2-Tetrachloroethane	ND	0.0010	1	
Chlorobenzene	ND	0.0010	1		Tetrachloroethene	ND	0.0010	1	
Chloroethane	ND	0.0010	1		Toluene	ND	0.0010	1	
Chloroform	ND	0.0010	1		1,1,1-Trichloroethane	ND	0.0010	1	
Chloromethane	ND	0.0010	1		1,1,2-Trichloroethane	ND	0.0010	1	
Dibromochloromethane	ND	0.0010	1		Trichloroethene	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Trichlorofluoromethane	ND	0.010	1	
1,2-Dichlorobenzene	ND	0.0010	1		Vinyl Chloride	ND	0.0010	1	
1,3-Dichlorobenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,4-Dichlorobenzene	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
Dichlorodifluoromethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
1,1-Dichloroethane	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
1,2-Dichloroethane	ND	0.0010	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
1,1-Dichloroethene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
c-1,2-Dichloroethene	ND	0.0010	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	103	75-141		1,2-Dichloroethane-d4	104	73-151	
Toluene-d8	98	87-111		1,4-Bromofluorobenzene	96	71-113	

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

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	06/11/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1049
Cameron Park, CA 95682-8861	Preparation:	EPA 3050B
	Method:	EPA 6010B

Project ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-06-0361-1	**Solid**	**ICP 5300**	**06/12/09**	**06/13/09**	**090612S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	99	99	75-125	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

Stratus Environmental, inc.		Date Received	06/11/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1049
Cameron Park, CA 95682-8861		Preparation:	EPA 3050B
		Method:	EPA 6010B

Project: ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
09-06-0361-1	**Solid**	**ICP 5300**	**06/12/09**	**06/13/09**	**090612S02**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	97	96	75-125	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	06/11/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1049
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-06-1047-1	**Solid**	**GC 1**	**06/12/09**	**06/12/09**	**090612S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	86	87	42-126	1	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	06/11/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1049
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-06-1047-2	**Solid**	**GC/MS Z**	**06/12/09**	**06/13/09**	**090612S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	84	87	78-114	3	0-14	
Chloroform	89	81	80-120	10	0-20	
1,1-Dichloroethane	84	85	80-120	1	0-20	
1,2-Dichloroethane	90	93	80-120	3	0-20	
1,1-Dichloroethene	82	83	73-127	1	0-21	
Ethanol	91	89	45-135	2	0-29	
Tetrachloroethene	70	73	80-120	5	0-20	LN,AY
Toluene	83	85	74-116	2	0-16	
Trichloroethene	82	84	74-122	2	0-17	
Methyl-t-Butyl Ether (MTBE)	90	93	69-123	4	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	06/11/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1049
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
B-2 6.5'	**Solid**	**GC/MS Z**	**06/13/09**	**06/13/09**	**090613S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	82	83	78-114	1	0-14	
Chloroform	88	87	80-120	2	0-20	
1,1-Dichloroethane	84	84	80-120	0	0-20	
1,2-Dichloroethane	90	88	80-120	2	0-20	
1,1-Dichloroethene	79	80	73-127	1	0-21	
Ethanol	84	77	45-135	8	0-29	
Tetrachloroethene	60	60	80-120	0	0-20	LN,AY
Toluene	82	82	74-116	0	0-16	
Trichloroethene	78	78	74-122	1	0-17	
Methyl-t-Butyl Ether (MTBE)	90	89	69-123	0	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1049
Cameron Park, CA 95682-8861		Preparation:	EPA 3050B
		Method:	EPA 6010B

Project: ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-01-002-12,399	**Solid**	**ICP 5300**	**06/12/09**	**06/13/09**	**090612L02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	101	103	80-120	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1049
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-697-118	Solid	GC 1	06/12/09	06/12/09	090612B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	92	96	70-118	5	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1049
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-149	Solid	GC/MS Z	06/12/09	06/12/09	090612L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	102	102	84-114	79-119	0	0-7	
Bromobenzene	102	102	80-120	73-127	0	0-20	
Bromochloromethane	95	96	80-120	73-127	1	0-20	
Bromodichloromethane	102	102	80-120	73-127	1	0-20	
Bromoform	103	101	80-120	73-127	3	0-20	
Bromomethane	86	82	80-120	73-127	4	0-20	
n-Butylbenzene	106	110	77-123	69-131	4	0-25	
sec-Butylbenzene	105	110	80-120	73-127	4	0-20	
tert-Butylbenzene	105	108	80-120	73-127	3	0-20	
Carbon Disulfide	101	102	80-120	73-127	1	0-20	
Carbon Tetrachloride	100	101	69-135	58-146	0	0-13	
Chlorobenzene	100	100	85-109	81-113	0	0-8	
Chloroethane	100	101	80-120	73-127	1	0-20	
Chloroform	97	95	80-120	73-127	2	0-20	
Chloromethane	93	96	80-120	73-127	3	0-20	
2-Chlorotoluene	105	103	80-120	73-127	2	0-20	
4-Chlorotoluene	102	105	80-120	73-127	4	0-20	
Dibromochloromethane	101	100	80-120	73-127	1	0-20	
1,2-Dibromo-3-Chloropropane	95	101	80-120	73-127	6	0-20	
1,2-Dibromoethane	100	99	80-120	73-127	2	0-20	
Dibromomethane	102	102	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	101	105	80-110	75-115	3	0-10	
1,3-Dichlorobenzene	100	104	80-120	73-127	3	0-20	
1,4-Dichlorobenzene	97	103	80-120	73-127	6	0-20	
Dichlorodifluoromethane	101	100	80-120	73-127	1	0-20	
1,1-Dichloroethane	100	101	80-120	73-127	1	0-20	
1,2-Dichloroethane	103	103	80-120	73-127	0	0-20	
1,1-Dichloroethene	102	102	83-125	76-132	0	0-10	
c-1,2-Dichloroethene	98	98	80-120	73-127	0	0-20	
t-1,2-Dichloroethene	102	102	80-120	73-127	0	0-20	
1,2-Dichloropropane	98	100	79-115	73-121	2	0-25	
1,3-Dichloropropane	99	98	80-120	73-127	1	0-20	
2,2-Dichloropropane	94	96	80-120	73-127	2	0-20	
1,1-Dichloropropene	101	102	80-120	73-127	0	0-20	
c-1,3-Dichloropropene	105	105	80-120	73-127	0	0-20	
t-1,3-Dichloropropene	104	103	80-120	73-127	1	0-20	
Ethylbenzene	107	105	80-120	73-127	2	0-20	
Isopropylbenzene	109	107	80-120	73-127	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1049
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-149	**Solid**	**GC/MS Z**	**06/12/09**	**06/12/09**	**090612L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
p-Isopropyltoluene	104	108	80-120	73-127	4	0-20	
Methylene Chloride	99	99	80-120	73-127	0	0-20	
Naphthalene	95	102	80-120	73-127	7	0-20	
n-Propylbenzene	108	107	80-120	73-127	0	0-20	
Styrene	108	107	80-120	73-127	1	0-20	
Ethanol	98	94	50-134	36-148	4	0-23	
1,1,1,2-Tetrachloroethane	102	101	80-120	73-127	1	0-20	
1,1,2,2-Tetrachloroethane	92	92	80-120	73-127	0	0-20	
Tetrachloroethene	105	105	80-120	73-127	1	0-20	
Toluene	101	101	79-115	73-121	0	0-8	
1,2,3-Trichlorobenzene	93	100	80-120	73-127	7	0-20	
1,2,4-Trichlorobenzene	92	101	80-120	73-127	9	0-20	
1,1,1-Trichloroethane	100	102	80-120	73-127	2	0-20	
1,1,2-Trichloroethane	105	100	80-120	73-127	5	0-20	
Trichloroethene	105	108	87-111	83-115	2	0-7	
Trichlorofluoromethane	97	97	80-120	73-127	1	0-20	
1,2,3-Trichloropropane	97	99	80-120	73-127	3	0-20	
1,2,4-Trimethylbenzene	105	108	80-120	73-127	3	0-20	
1,3,5-Trimethylbenzene	104	104	80-120	73-127	0	0-20	
Vinyl Acetate	80	79	80-120	73-127	2	0-20	
Vinyl Chloride	95	99	72-126	63-135	4	0-10	
p/m-Xylene	107	105	80-120	73-127	1	0-20	
o-Xylene	110	106	80-120	73-127	4	0-20	
Methyl-t-Butyl Ether (MTBE)	95	98	75-129	66-138	3	0-13	
Tert-Butyl Alcohol (TBA)	100	96	66-126	56-136	4	0-24	
Diisopropyl Ether (DIPE)	96	98	77-125	69-133	2	0-13	
Ethyl-t-Butyl Ether (ETBE)	98	100	72-132	62-142	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	100	102	77-125	69-133	2	0-10	

Total number of LCS compounds : 66

Total number of ME compounds : 1

Total number of ME compounds allowed : 3

LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1049
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-151	**Solid**	**GC/MS Z**	**06/13/09**	**06/13/09**	**090613L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	91	94	84-114	79-119	3	0-7	
Bromobenzene	96	97	80-120	73-127	1	0-20	
Bromochloromethane	91	112	80-120	73-127	21	0-20	RB
Bromodichloromethane	96	99	80-120	73-127	4	0-20	
Bromoform	97	100	80-120	73-127	3	0-20	
Bromomethane	77	78	80-120	73-127	1	0-20	LR
n-Butylbenzene	96	99	77-123	69-131	3	0-25	
sec-Butylbenzene	93	95	80-120	73-127	2	0-20	
tert-Butylbenzene	96	98	80-120	73-127	2	0-20	
Carbon Disulfide	91	92	80-120	73-127	1	0-20	
Carbon Tetrachloride	89	91	69-135	58-146	2	0-13	
Chlorobenzene	91	92	85-109	81-113	1	0-8	
Chloroethane	91	93	80-120	73-127	2	0-20	
Chloroform	96	100	80-120	73-127	5	0-20	
Chloromethane	88	89	80-120	73-127	2	0-20	
2-Chlorotoluene	93	94	80-120	73-127	1	0-20	
4-Chlorotoluene	95	97	80-120	73-127	2	0-20	
Dibromochloromethane	98	98	80-120	73-127	0	0-20	
1,2-Dibromo-3-Chloropropane	85	89	80-120	73-127	5	0-20	
1,2-Dibromoethane	97	98	80-120	73-127	1	0-20	
Dibromomethane	98	101	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	99	103	80-110	75-115	4	0-10	
1,3-Dichlorobenzene	97	99	80-120	73-127	2	0-20	
1,4-Dichlorobenzene	95	96	80-120	73-127	1	0-20	
Dichlorodifluoromethane	84	86	80-120	73-127	2	0-20	
1,1-Dichloroethane	92	95	80-120	73-127	3	0-20	
1,2-Dichloroethane	97	99	80-120	73-127	2	0-20	
1,1-Dichloroethene	90	91	83-125	76-132	2	0-10	
c-1,2-Dichloroethene	91	111	80-120	73-127	21	0-20	RB
t-1,2-Dichloroethene	92	93	80-120	73-127	1	0-20	
1,2-Dichloropropane	95	97	79-115	73-121	2	0-25	
1,3-Dichloropropane	97	98	80-120	73-127	1	0-20	
2,2-Dichloropropane	93	90	80-120	73-127	3	0-20	
1,1-Dichloropropene	90	92	80-120	73-127	2	0-20	
c-1,3-Dichloropropene	105	108	80-120	73-127	2	0-20	
t-1,3-Dichloropropene	105	107	80-120	73-127	2	0-20	
Ethylbenzene	93	94	80-120	73-127	1	0-20	
Isopropylbenzene	94	95	80-120	73-127	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1049
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-151	**Solid**	**GC/MS Z**	**06/13/09**	**06/13/09**	**090613L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
p-Isopropyltoluene	94	96	80-120	73-127	2	0-20	
Methylene Chloride	96	98	80-120	73-127	2	0-20	
Naphthalene	97	101	80-120	73-127	4	0-20	
n-Propylbenzene	93	95	80-120	73-127	1	0-20	
Styrene	99	102	80-120	73-127	3	0-20	
Ethanol	90	88	50-134	36-148	2	0-23	
1,1,1,2-Tetrachloroethane	95	96	80-120	73-127	0	0-20	
1,1,2,2-Tetrachloroethane	99	98	80-120	73-127	1	0-20	
Tetrachloroethene	79	83	80-120	73-127	5	0-20	LR
Toluene	91	93	79-115	73-121	2	0-8	
1,2,3-Trichlorobenzene	98	101	80-120	73-127	3	0-20	
1,2,4-Trichlorobenzene	99	100	80-120	73-127	1	0-20	
1,1,1-Trichloroethane	88	91	80-120	73-127	3	0-20	
1,1,2-Trichloroethane	100	101	80-120	73-127	1	0-20	
Trichloroethene	87	92	87-111	83-115	5	0-7	
Trichlorofluoromethane	81	85	80-120	73-127	4	0-20	
1,2,3-Trichloropropane	92	93	80-120	73-127	2	0-20	
1,2,4-Trimethylbenzene	97	100	80-120	73-127	3	0-20	
1,3,5-Trimethylbenzene	93	93	80-120	73-127	0	0-20	
Vinyl Acetate	118	121	80-120	73-127	2	0-20	
Vinyl Chloride	85	89	72-126	63-135	5	0-10	
p/m-Xylene	94	95	80-120	73-127	1	0-20	
o-Xylene	97	98	80-120	73-127	1	0-20	
Methyl-t-Butyl Ether (MTBE)	100	102	75-129	66-138	2	0-13	
Tert-Butyl Alcohol (TBA)	97	101	66-126	56-136	3	0-24	
Diisopropyl Ether (DIPE)	98	101	77-125	69-133	3	0-13	
Ethyl-t-Butyl Ether (ETBE)	102	116	72-132	62-142	12	0-12	
Tert-Amyl-Methyl Ether (TAME)	103	105	77-125	69-133	2	0-10	

Total number of LCS compounds : 66
Total number of ME compounds : 3
Total number of ME compounds allowed : 3
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-06-1049

Qualifier	Definition
AX	Sample too dilute to quantify surrogate.
BA	Relative percent difference out of control.
BA,AY	BA = Relative percent difference out of control. AY = Matrix interference suspected.
BB	Sample > 4x spike concentration.
BF	Reporting limits raised due to high hydrocarbon background.
BH	Reporting limits raised due to high level of non-target analytes.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
BY	Sample received at improper temperature.
BZ	Sample preserved improperly.
CL	Initial analysis within holding time but required dilution.
CQ	Analyte concentration greater than 10 times the blank concentration.
CU	Surrogate concentration diluted to not detectable during analysis.
DF	Reporting limits elevated due to matrix interferences.
DU	Insufficient sample quantity for matrix spike/dup matrix spike.
ET	Sample was extracted past end of recommended max. holding time.
EY	Result exceeds normal dynamic range; reported as a min est.
GR	Internal standard recovery is outside method recovery limit.
IB	CCV recovery abovelimit; analyte not detected.
IH	Calibrtn. verif. recov. below method CL for this analyte.
IJ	Calibrtn. verif. recov. above method CL for this analyte.
J,DX	J=EPA Flag -Estimated value; DX= Value < lowest standard (MQL), but > than MDL.
LA	Confirmatory analysis was past holding time.
LG,AY	LG= Surrogate recovery below the acceptance limit. AY= Matrix interference suspected.
LH,AY	LH= Surrogate recovery above the acceptance limit. AY= Matrix interference suspected.
LM,AY	LM= MS and/or MSD above acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LN,AY	LN= MS and/or MSD below acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LQ	LCS recovery above method control limits.

Qualifier	Definition
LR	LCS recovery below method control limits.
LW	Quantitation of unknown hydrocarbon(s) in sample based on gasoline.
LX	Quantitation of unknown hydrocarbon(s) in sample based on diesel.
MB	Analyte present in the method blank.
PC	Sample taken from VOA vial with air bubble > 6mm diameter.
PI	Primary and confirm results varied by > than 40% RPD.
RB	RPD exceeded method control limit; % recoveries within limits.
SG	A silica gel cleanup procedure was performed.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name:

BP/ARC Facility No: 1126

Req Due Date (mm/dd/yy): 1049

Lab Work Order Number:

Rush TAT: Yes ___ No X

Lab Name: CALSCIENCE	BP/ARC Facility Address: 1541 PARK ST.	Consultant/Contractor: STRATUS
Lab Address: 7440 LINCOLN WAY, GARDEN GROVE	City, State, ZIP Code: ALAMEDA, CA.	Consultant/Contractor Project No: E1126
Lab PM: RICHARD V.	Lead Regulatory Agency: ACPWA	Address: 3330 CAMERON PARK DR. #550
Lab Phone: (714) 895-5494	California Global ID No.: T0600100207	Consultant/Contractor PM: JAY JOHNSON
Lab Shipping Accnt: 9255	Enfos Proposal No: 00ONC-0002	Phone: 530 676 6000
Lab Bottle Order No:	Accounting Mode: Provision X OOC-BU ___ OOC-RM ___	Email EDD To: CHUFF@STRATUSINC.NET
Other Info:	Stage: Activity:	Invoice To: BP/ARC X Contractor ___
BP/ARC EBM: PAUL SMITH		
EBM Phone:		
EBM Email:		

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analyses: GRO (8015B)	BTEX (8260)	* SOIL (8260)	EDB (8260)	1,2 DCA (8260)	TOTAL LEAD (200.7)	Halogenated VOC's (8260)
1	B-2 5'	6/10/09	1405	+			1	+					+	+	+	+	+	+	+
2	B-2 6.5'		1410	+			1	+					+	+	+	+	+	+	+
3	B-2 8'		1420	+			1	+					+	+	+	+	+	+	+
4	B-2 9.5'		1425	+			1	+					+	+	+	+	+	+	+

Report Type & QC Level: Standard ___ Full Data Package ___

Comments

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name: CF	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date / Time
Sampler's Company: STRATUS					
Shipment Method: GSO Ship Date: 6/10/09		6/10/09	1800	CFL	6/11/09 1030
Shipment Tracking No: 106160229					
Special Instructions:					

THIS LINE - LAB USE ONLY: 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

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-06-1049

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Stratus DATE: 06/11/09

TEMPERATURE: (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 3.8 °C - 0.2 °C (CF) = 3.6 °C ☐ Blank ☑ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Only Initial: YL

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A Initial: YL

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Initial: YL

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ COC not relinquished. ☐ No date relinquished. ☐ No time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☑Sleeve ☐EnCores® ☐TerraCores® ☐_____

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PB ☐100PB**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____ **Other:** ☐_____ Checked/Labeled by: YL

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar (Wide-mouth) B: Bottle (Narrow-mouth) Reviewed by: RM

Preservative: h: HCL n: HNO3 na$_2$: $Na_2S_2O_3$ Na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered Scanned by: YL

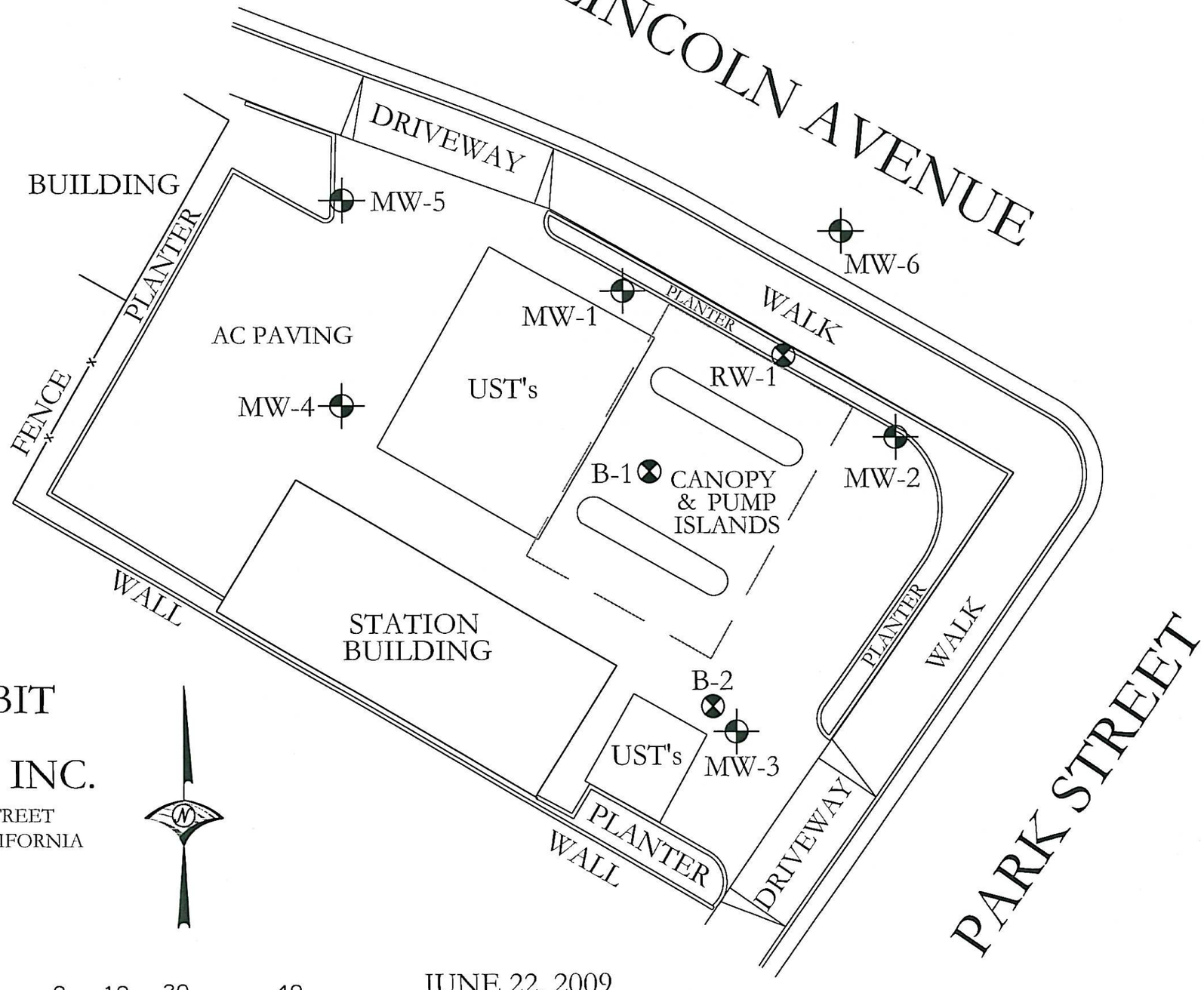
MONITORING WELL EXHIBIT

PREPARED FOR

STRATUS ENVIRONMENTAL, INC.

BP SERVICE STATION #11266, LOCATED AT 1541 PARK STREET
CITY OF ALAMEDA, COUNTY OF ALAMEDA, STATE OF CALIFORNIA

WOOD RODGERS
ENGINEERING • MAPPING • PLANNING • SURVEYING
3301 C St., Bldg. 100-B Tel 916.341.7760
Sacramento, CA 95816 Fax 916.341.7767



0 10 20 40
SCALE 1"=20'

JUNE 22, 2009

Sheet 1 of 1 #2479.028

GLOBAL_ID	FIELD_PT_NAME	FIELD_PT_	XY_SURVEY	LATITUDE	LONGITUDE	XY_METHOD	XY_DATUM	XY_ACC_VAL	XY_SURVEY_ORG	GPS_EQUIP_TY	XY_SURVEY_DES
T0600100207	MW-1	MW	6/22/2009	37.7666142	-122.2412812	CGPS	NAD83	30	WOOD RODGERS PLS 7944	TR	
T0600100207	MW-2	MW	6/22/2009	37.7665461	-122.2411150	CGPS	NAD83	30	WOOD RODGERS PLS 7944	TR	
T0600100207	MW-3	MW	6/22/2009	37.7664036	-122.2412079	CGPS	NAD83	30	WOOD RODGERS PLS 7944	TR	
T0600100207	MW-4	MW	6/22/2009	37.7665568	-122.2414497	CGPS	NAD83	30	WOOD RODGERS PLS 7944	TR	
T0600100207	MW-5	MW	6/22/2009	37.7666556	-122.2414517	CGPS	NAD83	30	WOOD RODGERS PLS 7944	TR	
T0600100207	MW-6	MW	6/22/2009	37.7666447	-122.2411498	CGPS	NAD83	30	WOOD RODGERS PLS 7944	TR	
T0600100207	B-1		6/22/2009	37.7665277	-122.2412634	CGPS	NAD83	30	WOOD RODGERS PLS 7944	TR	
T0600100207	B-2		6/22/2009	37.7664155	-122.2412226	CGPS	NAD83	30	WOOD RODGERS PLS 7944	TR	
T0600100207	RW-1		6/22/2009	37.7665845	-122.2411828	CGPS	NAD83	30	WOOD RODGERS PLS 7944	TR	

GLOBAL_ID	FIELD_PT_NAME	ELEV_SURVEY_	ELEVATION	ELEV_METHOD	ELEV_DATUM	ELEV_ACC_VAL	ELEV_SURVEY_ORG	RISER_HT	ELEV_DESC	EFF_DATE
T0600100207	MW-1	6/22/2009	28.62	DIG	NAVD88	0.01	WOOD RODGERS PLS 7944	-0.54		
T0600100207	MW-2	6/22/2009	28.76	DIG	NAVD88	0.01	WOOD RODGERS PLS 7944	-0.52		
T0600100207	MW-3	6/22/2009	29.43	DIG	NAVD88	0.01	WOOD RODGERS PLS 7944	-0.48		
T0600100207	MW-4	6/22/2009	29.61	DIG	NAVD88	0.01	WOOD RODGERS PLS 7944	-0.29		
T0600100207	MW-5	6/22/2009	28.72	DIG	NAVD88	0.01	WOOD RODGERS PLS 7944	-0.26		
T0600100207	MW-6	6/22/2009	28.82	DIG	NAVD88	0.01	WOOD RODGERS PLS 7944	-0.20		
T0600100207	B-1	6/22/2009	29.59	DIG	NAVD88	0.01	WOOD RODGERS PLS 7944			
T0600100207	B-2	6/22/2009	30.12	DIG	NAVD88	0.01	WOOD RODGERS PLS 7944			
T0600100207	RW-1	6/22/2009	28.63	DIG	NAVD88	0.01	WOOD RODGERS PLS 7944	-0.53		

APPENDIX C

GEOTRACKER UPLOAD CONFIRMATION REPORTS

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A EDF FILE

SUCCESS

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

Submittal Type:	**EDF - Site Investigation**
Submittal Title:	**Hand Auger Boring 0609**
Facility Global ID:	**T0600100207**
Facility Name:	**BP #11266**
File Name:	**09061049 fix.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**7/22/2009 9:36:51 AM**
Confirmation Number:	**5335898160**

VIEW QC REPORT

VIEW DETECTIONS REPORT

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_BORE FILE

SUCCESS

Your GEO_BORE file has been successfully submitted!

Submittal Type:	**GEO_BORE**
Facility Global ID:	**T0600100207**
Field Point:	**B-2**
Facility Name:	**BP #11266**
File Name:	**GEO_BORE B-2.pdf**
Username:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**7/30/2009 1:02:55 PM**
Confirmation Number:	**5645488917**

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_MAP FILE

SUCCESS

Your GEO_MAP file has been successfully submitted!

Submittal Type:	**GEO_MAP**
Facility Global ID:	**T0600100207**
Facility Name:	**BP #11266**
File Name:	**1541 Park St_2009-06-22.pdf**
Username:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**8/3/2009 1:38:55 PM**
Confirmation Number:	**3069307625**

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_XY FILE

SUCCESS

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

Submittal Type:	**GEO_XY**
Submittal Title:	**GEO_XY MW-1 to 6, B-1, B-2, RW-1**
Facility Global ID:	**T0600100207**
Facility Name:	**BP #11266**
File Name:	**GEO_XY.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**8/3/2009 1:44:05 PM**
Confirmation Number:	**1991161525**

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_Z FILE

SUCCESS

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

Submittal Type:	**GEO_Z**
Submittal Title:	**GEO_Z MW-1 to 6, B-1, B-2, RW-1**
Facility Global ID:	**T0600100207**
Facility Name:	**BP #11266**
File Name:	**GEO_Z.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**8/3/2009 1:46:41 PM**
Confirmation Number:	**4160086393**

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_WELL FILE

SUCCESS

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

Submittal Type:	**GEO_WELL**
Submittal Title:	**2Q09 GEO_WELL 11266**
Facility Global ID:	**T0600100207**
Facility Name:	**BP #11266**
File Name:	**GEO_WELL.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**7/22/2009 9:15:09 AM**
Confirmation Number:	**9546746373**

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A EDF FILE

SUCCESS

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

Submittal Type:	**EDF - Monitoring Report - Quarterly**
Submittal Title:	**2Q09 GW Monitoring**
Facility Global ID:	**T0600100207**
Facility Name:	**BP #11266**
File Name:	**09070019.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**7/22/2009 9:17:36 AM**
Confirmation Number:	**6792077481**

VIEW QC REPORT

VIEW DETECTIONS REPORT

APPENDIX D

STRATUS GROUND-WATER SAMPLING DATA PACKAGE
(Includes Field Data Sheets, Laboratory Analytical Report with Chain-of-Custody Documentation, and Field Procedures)

STRATUS
ENVIRONMENTAL, INC.

3330 Cameron Park Drive, Ste 550
Cameron Park, California 95682
(530) 676-6004 ~ Fax: (530) 676-6005

July 15, 2009

Mr. Rob Miller
Broadbent & Associates, Inc.
2000 Kirman Avenue
Reno, NV 89502

Re: Groundwater Sampling Data Package, BP Service Station No. 11266, located at 1541 Park Street, Alameda, California

General Information

Data Submittal Prepared / Reviewed by: Carol Huff / Jay Johnson
Phone Number: (530) 676-6000
On-Site Supplier Representative: Tony Hill

Sampling Date: June 30, 2009

Unusual Field Conditions: None

Scope of Work Performed: Quarterly monitoring and sampling

Variations from Work Scope: Well MW-5 was dry.

This submittal presents the data collected in association with routine groundwater monitoring. The attachments include field data sheets, non-hazardous waste data form, chain of custody documentation, certified analytical results, and field procedures for groundwater sampling. The information is being provided to BP-ARCO's Scoping Supplier for use in preparing a report for regulatory submittal. This submittal is limited to presentation of collected data and does not include data interpretation or conclusions or recommendations.

Any questions concerning this submittal should be addressed to the Preparer/Reviewer identified above.

Sincerely,
STRATUS ENVIRONMENTAL, INC.

Jay R. Johnson, P.G.
Project Manager

Attachments:

- Field Data Sheets
- Non-Hazardous Waste Data Form
- Chain of Custody Documentation
- Certified Analytical Results
- Field Procedures for Groundwater Sampling

CC: Mr. Paul Supple, BP/ARCO

STRATUS ENVIRONMENTAL, INC.

Site Address 1541 Park St
City Alameda, CA
Sampled by: TH
Signature

Site Number Arco 1266
Project Number E. 11266-04
Project PM Jay Johnson
DATE 6/30/09

Water Level Data					Purge Volume Calculations					Purge Method				Sample Record			Field Data
Well ID	Time	Depth to Product (feet)	Depth to Water (feet)	Total Depth (feet)	Water column (feet)	Diameter (inches)	Multiplier	3 casing volumes (gallons)	Actual water purged (gallons)	No Purge	Bailer	Pump	other	DTW at sample time (feet)	Sample I.D	Sample Time	DO (mg/L)
MW-1	1105		8.85	24.14	15.29	2	.5	7.65	7.5		X			9.46	MW-1	1205	0.98
2	1101		9.85	24.76	14.91	2	.5	7.46	7.5		X			10.82	2	1300	3.13
3	1053		10.03	19.32	9.29	2	.5	4.65	4.5		X			10.38	3	1320	0.40
4	1112		9.47	21.55	12.08	2	.5	6.04	6		X			9.67	4	1140	3.53
5	1109		8.61	8.84	Dry	2	.5	—	—	X				—	5	—	—
MW-6	1315		9.83	18.72	8.89	2	.5	4.45	4.5		X			9.83	MW-6	1340	2.56
RW-1	1057		10.16	28.10	17.94	6	4.4	78.93	79			X		13.66	RW-1	1250	3.34

MW-5 soft bottom. DRY - Wrong TD on GEM or Something down well.

Multiplier
2" = 0.5 3" = 1.0 4" = 2.0 6" = 4.4

RW-1 - Now Functioning pump in well
MW-1 - Socks in well

Please refer to groundwater sampling field procedures
HH/Conductivity/temperature Meter - Oakton Model PC-10
DO Meter - Oakton 300 Series (DO is always measured before purge)

CALIBRATION DATE
pH ATH 6/27/09
Conductivity
DO

T:\Forms

17.94
4.4
7176 78.936

STRATUS
ENVIRONMENTAL, INC.

Site Address 1541 Park St
City Alameda, CA
Site Sampled by TH

Site Number Arco 11266
Project No. E11266-04
Project PM Jay Johnson
Date Sampled 6/30/04

Well ID MW-4				1140
purge start time baler				No odor
	Temp C	pH	cond	gallons
time	21.1	7.10	557	0
time	20.1	7.02	564	3
time	20.1	7.00	553	6
time				
purge stop time				

Well ID MW-1				1205
purge start time baler				(Sheen) odor
	Temp C	pH	cond	gallons
time	19.8	6.97	630	0
time	20.2	7.02	605	4
time	19.9	7.16	630	7.5
time				
pugre stop time				

Well ID RW-1				1250
purge start time 1208				odor
	Temp C	pH	cond	gallons
time	19.6	7.35	557	0
time	20.0	7.65	554	40
time	19.2	7.55	550	79
time				
purge stop time 1248				

Well ID MW-2				1300
purge start time baler				No odor
	Temp C	pH	cond	gallons
time	19.9	7.61	528	0
time	19.6	7.42	554	4
time	19.2	7.57	564	7.5
time				
purge stop time				

Well ID MW-3				1320
purge start time baler				No odor
	Temp C	pH	cond	gallons
time	21.2	7.54	686	0
time	21.2	7.45	697	2.5
time	21.2	7.38	709	4.5
time				
purge stop time				

Well ID MW-6				1340
purge start time baler				No odor
	Temp C	pH	cond	gallons
time	22.1	7.18	561	0
time	21.6	7.10	575	2.5
time	21.4	7.11	565	4.5
time				
purge stop time				

Well ID				
purge start time				
	Temp C	pH	cond	gallons
time				
time				
time				
time				
purge stop time				

Well ID				
purge start time				
	Temp C	pH	cond	gallons
time				
time				
time				
time				
purge stop time				

WELLHEAD OBSERVATION FORM

STRATUS ENVIRONMENTAL, INC.

Site Name/Number: Arco 11266 Date: 6/30/09 Technician: A.H.

Well I.D.	Box in Good Condition? X = Yes Blank = No	Lock Missing? X = Yes (replaced) Blank = No	Water in Wellbox? X = Yes Blank = No	Water Level Relative to Cap? A = Above cap B = Below cap L = Level w/cap	Well Cap? I = Intact M = Missing or Compromised (replaced)	Bolts Missing? X = Yes Blank = No	Bolts Stripped? X = Yes Blank = No	Bolt Holes Stripped? X = Yes Blank = No	Cracked or Broken Lid? X = Yes Blank = No	Cracked or Broken Box? X = Yes Blank = No	Grout Level more than 1ft below TOC? X = Yes Blank = No	Additional Comments [illegible]
MW-1	X											
2			X	B								
3			X	B								
4	X											
5						X						Bolts Broke off in bolt holes
MW-6	X											
RW-1	X											

DRUM INVENTORY

Drums on site? Yes (No) (circle)

Type and #: Steel: ______ Plastic: ______

Note whether drums are full or empty, solids or liquids:

Drum label info (description, date, contact info):

GENERAL SITE CONDITIONS

Make notes on housekeeping conditions (such as trash around remediation system enclosure/compound, bent or missing bollards, signs missing from compound fences, grafitti on compound, etc.)

NO. 672151

NON-HAZARDOUS WASTE DATA FORM

TO BE COMPLETED BY GENERATOR

SITE:

EPA I.D. NO. NOT REQUIRED

NAME BP WEST COAST PRODUCTS LLC ARCO # 1036

ADDRESS P.O. BOX 80249

RANCHO SANTA MARGARITA

CITY, STATE, ZIP CA 92688

PROFILE NO.

PHONE NO. ( )

CONTAINERS: No. VOLUME 1 drum WEIGHT

TYPE: ☐ TANK TRUCK ☐ DUMP TRUCK ☐ DRUMS ☐ CARTONS ☐ OTHER

WASTE DESCRIPTION NON-HAZARDOUS WATER

GENERATING PROCESS WELL PURGING/DECON WATER

COMPONENTS OF WASTE	PPM	%	COMPONENTS OF WASTE	PPM	%
1. WATER		99-100%	5.		
2. TBH		<1%	6.		
3.			7. BESI#		
4.			8.		

PROPERTIES: 7-10 pH ☐ SOLID ☐ LIQUID ☐ SLUDGE ☐ SLURRY ☐ OTHER

HANDLING INSTRUCTIONS: WEAR ALL APPROPRIATE PROTECTIVE CLOTHING

THE GENERATOR CERTIFIES THAT THE WASTE AS DESCRIBED IS 100% NON-HAZARDOUS.

Larry Meathart BESI for BP — TYPED OR PRINTED FULL NAME & SIGNATURE — 6/26/11 DATE

TRANSPORTER

Transporter #1 Transporter #2

NAME STRATUS ENVIRONMENTAL

EPA I.D. NO.

ADDRESS 3330 CAMERON PARK DR

SERVICE ORDER NO.

CITY, STATE, ZIP CAMERON PARK, CA 95682

PICK UP DATE

PHONE NO. 530-676-2031

TRUCK, UNIT, I.D. NO.

TYPED OR PRINTED FULL NAME & SIGNATURE — 6/26/11 DATE

TSD FACILITY

NAME INSTRAT, INC

EPA I.D. NO.

DISPOSAL METHOD

ADDRESS 1105 AIRPORT RD #C

☐ LANDFILL ☐ OTHER

CITY, STATE, ZIP RIO VISTA, CA 94571

PHONE NO. 530-753-1825

TYPED OR PRINTED FULL NAME & SIGNATURE — DATE

GEN	OLD/NEW	L A	TONS
TRANS		S B	
C/Q		RT/CD	HWDF NONE

DISCREPANCY

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name: ARCO 11266 ORIGINAL
BP/ARC Facility No: 11266
Req Due Date (mm/dd/yy): STD - TAT
Rush TAT: Yes ___ No X
Page 1 of 1
Lab Work Order Number:

Lab Name:	Cal Science
Lab Address:	7440 Lincoln Way
Lab PM:	Richard Villafania
Lab Phone:	714-895-5494 / 714-895-7501 (fax)
Lab Shipping Accnt:	
Lab Bottle Order No:	
Other Info:	
BP/ARC EBM:	Paul Supple
EBM Phone:	925-275-3506
EBM Email:	paul.supple@bp.com

BP/ARC Facility Address:	1541 Park Street
City, State, ZIP Code:	Alameda, CA
Lead Regulatory Agency:	Alameda County
California Global ID No.:	T0600100207
Enfos Proposal No:	000NC-0002
Accounting Mode:	Provision X OOC-BU ___ OOC-RM ___
Stage: Operate	Activity: Field Characterization

Consultant/Contractor:	Stratus Environmental
Consultant/Contractor Project No:	E11266-QM/O&M
Address:	3330 Cameron Park Dr., Cameron Park, CA 95682
Consultant/Contractor PM:	Jay Johnson
Phone:	530-676-6000 / 530-676-6005 (fax)
Email EDD To:	chuff@stratusinc.net
Invoice To:	BP/ARC ___ Contractor ___

Lab No.	Sample Description	Date 2009	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analyses: GRO by 8015 M	BTEX / 5 OXY's *	EDB / 1,2DCA *	Ethanol *	Halogenated VOC's *	TOT lead by 200.7
	MW-1	6/30	1205		X		6			X	X		X	X	X	X	X	X
	2		1300															
	3		1320															
	4		1140															
	MW-6		1340															
	RW-1	″	1250		″		1			″	″		″	″	″	″	″	″
	TB-11266-06302009						2											

Report Type & QC Level
Standard X
Full Data Package ___

Comments
Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

* by 8260
-7 total containers per well
ON Hold

Sampler's Name:	A. Hill
Sampler's Company:	Stratus
Shipment Method:	GSO
Ship Date:	6/30/09
Shipment Tracking No:	

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
	6/30/09	1440	Tim O'Malley CCL	6/30/09	1445

Special Instructions: Please cc results to bpedf@broadbentinc.com

THIS LINE - LAB USE ONLY: 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

Calscience
Environmental
Laboratories, Inc.

July 14, 2009

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

Subject: **Calscience Work Order No.: 09-07-0019**
Client Reference: ARCO 11266

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 7/1/2009 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,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0019
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA 200.7

Project: ARCO 11266

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**09-07-0019-1-G**	**06/30/09 12:05**	**Aqueous**	**ICP 5300**	**07/10/09**	**07/10/09 17:52**	**090710LA1**

Parameter	Result	RL	DF	Qual	Units
Lead	54.2	5.00	1		ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	**09-07-0019-2-G**	**06/30/09 13:00**	**Aqueous**	**ICP 5300**	**07/10/09**	**07/10/09 18:03**	**090710LA1**

Parameter	Result	RL	DF	Qual	Units
Lead	7.44	5.00	1		ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**09-07-0019-3-G**	**06/30/09 13:20**	**Aqueous**	**ICP 5300**	**07/10/09**	**07/10/09 18:05**	**090710LA1**

Parameter	Result	RL	DF	Qual	Units
Lead	ND	5.00	1		ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	**09-07-0019-4-G**	**06/30/09 11:40**	**Aqueous**	**ICP 5300**	**07/10/09**	**07/10/09 18:06**	**090710LA1**

Parameter	Result	RL	DF	Qual	Units
Lead	35.7	5.00	1		ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**09-07-0019-5-G**	**06/30/09 13:40**	**Aqueous**	**ICP 5300**	**07/10/09**	**07/10/09 18:08**	**090710LA1**

Parameter	Result	RL	DF	Qual	Units
Lead	9.95	5.00	1		ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RW-1	**09-07-0019-6-G**	**06/30/09 12:50**	**Aqueous**	**ICP 5300**	**07/10/09**	**07/10/09 18:09**	**090710LA1**

Parameter	Result	RL	DF	Qual	Units
Lead	5.47	5.00	1		ug/L

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0019
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA 200.7

Project: ARCO 11266

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-012-3,874**	**N/A**	**Aqueous**	**ICP 5300**	**07/10/09**	**07/10/09 17:46**	**090710LA1**

Parameter	Result	RL	DF	Qual	Units
Lead	ND	5.00	1		ug/L

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0019
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO 11266

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**09-07-0019-1-E**	**06/30/09 12:05**	**Aqueous**	**GC 4**	**07/01/09**	**07/01/09 21:17**	**090701B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	11000	1000	20		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	104	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	**09-07-0019-2-E**	**06/30/09 13:00**	**Aqueous**	**GC 4**	**07/01/09**	**07/01/09 18:32**	**090701B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	109	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**09-07-0019-3-E**	**06/30/09 13:20**	**Aqueous**	**GC 4**	**07/01/09**	**07/01/09 21:50**	**090701B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	103	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	**09-07-0019-4-D**	**06/30/09 11:40**	**Aqueous**	**GC 4**	**07/03/09**	**07/03/09 15:42**	**090703B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	104	38-134			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0019
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO 11266

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**09-07-0019-5-F**	**06/30/09 13:40**	**Aqueous**	**GC 4**	**07/06/09**	**07/06/09 22:22**	**090706B01**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RW-1	**09-07-0019-6-D**	**06/30/09 12:50**	**Aqueous**	**GC 4**	**07/02/09**	**07/03/09 12:25**	**090702B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	290	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	109	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-594**	**N/A**	**Aqueous**	**GC 4**	**07/01/09**	**07/01/09 16:53**	**090701B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	90	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-595**	**N/A**	**Aqueous**	**GC 4**	**07/02/09**	**07/02/09 15:58**	**090702B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	102	38-134			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0019
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO 11266

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-596**	**N/A**	**Aqueous**	**GC 4**	**07/03/09**	**07/03/09 14:04**	**090703B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	86	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-597**	**N/A**	**Aqueous**	**GC 4**	**07/06/09**	**07/06/09 17:59**	**090706B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	103	38-134			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0019
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO 11266		Page 1 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**09-07-0019-1-A**	**06/30/09 12:05**	**Aqueous**	**GC/MS BB**	**07/07/09**	**07/08/09 04:58**	**090707L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	5.1	0.50	1		1,2-Dichloropropane	ND	0.50	1	
Bromochloromethane	ND	0.50	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	0.50	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	0.50	1		Ethylbenzene	310	20	40	
Bromomethane	ND	0.50	1		Methylene Chloride	ND	0.50	1	
Carbon Tetrachloride	ND	0.50	1		1,1,2,2-Tetrachloroethane	ND	0.50	1	
Chlorobenzene	1.9	0.50	1		Tetrachloroethene	ND	0.50	1	
Chloroethane	ND	0.50	1		Toluene	29	0.50	1	
Chloroform	ND	0.50	1		1,1,1-Trichloroethane	ND	0.50	1	
Chloromethane	ND	0.50	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.50	1	
Dibromochloromethane	ND	0.50	1		1,1,2-Trichloroethane	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Trichloroethene	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1		Trichlorofluoromethane	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1		Vinyl Chloride	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1		Xylenes (total)	1200	20	40	
Dichlorodifluoromethane	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,1-Dichloroethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	10	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
1,1-Dichloroethene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
c-1,2-Dichloroethene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
t-1,2-Dichloroethene	ND	0.50	1		Ethanol	ND	50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	104	80-128			Dibromofluoromethane	112	80-127		
Toluene-d8	97	80-120			1,4-Bromofluorobenzene	93	68-120		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0019
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L

Project: ARCO 11266

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	**09-07-0019-2-B**	**06/30/09 13:00**	**Aqueous**	**GC/MS BB**	**07/10/09**	**07/10/09 17:37**	**090710L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		1,2-Dichloropropane	ND	0.50	1	
Bromochloromethane	ND	0.50	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	0.50	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	0.50	1		Ethylbenzene	ND	0.50	1	
Bromomethane	ND	0.50	1		Methylene Chloride	ND	0.50	1	
Carbon Tetrachloride	ND	0.50	1		1,1,2,2-Tetrachloroethane	ND	0.50	1	
Chlorobenzene	ND	0.50	1		Tetrachloroethene	ND	0.50	1	
Chloroethane	ND	0.50	1		Toluene	ND	0.50	1	
Chloroform	ND	0.50	1		1,1,1-Trichloroethane	ND	0.50	1	
Chloromethane	ND	0.50	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.50	1	
Dibromochloromethane	ND	0.50	1		1,1,2-Trichloroethane	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Trichloroethene	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1		Trichlorofluoromethane	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1		Vinyl Chloride	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1		Xylenes (total)	ND	0.50	1	
Dichlorodifluoromethane	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	17	0.50	1	
1,1-Dichloroethane	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	
1,1-Dichloroethene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
c-1,2-Dichloroethene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	1.0	0.50	1	
t-1,2-Dichloroethene	ND	0.50	1		Ethanol	ND	50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	91	80-128			Dibromofluoromethane	95	80-127		
Toluene-d8	99	80-120			1,4-Bromofluorobenzene	103	68-120		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0019
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO 11266		Page 3 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**09-07-0019-3-B**	**06/30/09 13:20**	**Aqueous**	**GC/MS BB**	**07/07/09**	**07/08/09 04:26**	**090707L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		1,2-Dichloropropane	ND	0.50	1	
Bromochloromethane	ND	0.50	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	0.50	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	0.50	1		Ethylbenzene	ND	0.50	1	
Bromomethane	ND	0.50	1		Methylene Chloride	ND	0.50	1	
Carbon Tetrachloride	ND	0.50	1		1,1,2,2-Tetrachloroethane	ND	0.50	1	
Chlorobenzene	0.81	0.50	1		Tetrachloroethene	ND	0.50	1	
Chloroethane	ND	0.50	1		Toluene	ND	0.50	1	
Chloroform	ND	0.50	1		1,1,1-Trichloroethane	ND	0.50	1	
Chloromethane	ND	0.50	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.50	1	
Dibromochloromethane	ND	0.50	1		1,1,2-Trichloroethane	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Trichloroethene	ND	0.50	1	
1,2-Dichlorobenzene	1.5	0.50	1		Trichlorofluoromethane	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1		Vinyl Chloride	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1		Xylenes (total)	ND	0.50	1	
Dichlorodifluoromethane	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,1-Dichloroethane	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	
1,1-Dichloroethene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
c-1,2-Dichloroethene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
t-1,2-Dichloroethene	ND	0.50	1		Ethanol	ND	50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	102	80-128			Dibromofluoromethane	106	80-127		
Toluene-d8	95	80-120			1,4-Bromofluorobenzene	95	68-120		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0019
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO 11266		Page 4 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	**09-07-0019-4-B**	**06/30/09 11:40**	**Aqueous**	**GC/MS BB**	**07/10/09**	**07/10/09 14:24**	**090710L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		1,2-Dichloropropane	ND	0.50	1	
Bromochloromethane	ND	0.50	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	0.50	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	0.50	1		Ethylbenzene	ND	0.50	1	
Bromomethane	ND	0.50	1		Methylene Chloride	ND	0.50	1	
Carbon Tetrachloride	ND	0.50	1		1,1,2,2-Tetrachloroethane	ND	0.50	1	
Chlorobenzene	ND	0.50	1		Tetrachloroethene	ND	0.50	1	
Chloroethane	ND	0.50	1		Toluene	ND	0.50	1	
Chloroform	ND	0.50	1		1,1,1-Trichloroethane	ND	0.50	1	
Chloromethane	ND	0.50	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.50	1	
Dibromochloromethane	ND	0.50	1		1,1,2-Trichloroethane	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Trichloroethene	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1		Trichlorofluoromethane	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1		Vinyl Chloride	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1		Xylenes (total)	ND	0.50	1	
Dichlorodifluoromethane	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,1-Dichloroethane	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	
1,1-Dichloroethene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
c-1,2-Dichloroethene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
t-1,2-Dichloroethene	ND	0.50	1		Ethanol	ND	50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	93	80-128			Dibromofluoromethane	97	80-127		
Toluene-d8	98	80-120			1,4-Bromofluorobenzene	104	68-120		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0019
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO 11266		Page 5 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**09-07-0019-5-B**	**06/30/09 13:40**	**Aqueous**	**GC/MS BB**	**07/10/09**	**07/10/09 18:09**	**090710L01**

Comment(s): BH - Reporting limits raised due to high levels of non-target analytes.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	10	20		1,2-Dichloropropane	ND	10	20	
Bromochloromethane	ND	10	20		c-1,3-Dichloropropene	ND	10	20	
Bromodichloromethane	ND	10	20		t-1,3-Dichloropropene	ND	10	20	
Bromoform	ND	10	20		Ethylbenzene	ND	10	20	
Bromomethane	ND	10	20		Methylene Chloride	ND	10	20	
Carbon Tetrachloride	ND	10	20		1,1,2,2-Tetrachloroethane	ND	10	20	
Chlorobenzene	ND	10	20		Tetrachloroethene	ND	10	20	
Chloroethane	ND	10	20		Toluene	ND	10	20	
Chloroform	ND	10	20		1,1,1-Trichloroethane	ND	10	20	
Chloromethane	ND	10	20		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	20	
Dibromochloromethane	ND	10	20		1,1,2-Trichloroethane	ND	10	20	
1,2-Dibromoethane	ND	10	20		Trichloroethene	ND	10	20	
1,2-Dichlorobenzene	ND	10	20		Trichlorofluoromethane	ND	10	20	
1,3-Dichlorobenzene	ND	10	20		Vinyl Chloride	ND	10	20	
1,4-Dichlorobenzene	ND	10	20		Xylenes (total)	ND	10	20	
Dichlorodifluoromethane	ND	10	20		Methyl-t-Butyl Ether (MTBE)	ND	10	20	
1,1-Dichloroethane	ND	10	20		Tert-Butyl Alcohol (TBA)	ND	200	20	
1,2-Dichloroethane	ND	10	20		Diisopropyl Ether (DIPE)	ND	10	20	
1,1-Dichloroethene	ND	10	20		Ethyl-t-Butyl Ether (ETBE)	ND	10	20	
c-1,2-Dichloroethene	ND	10	20		Tert-Amyl-Methyl Ether (TAME)	ND	10	20	
t-1,2-Dichloroethene	ND	10	20		Ethanol	ND	1000	20	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	97	80-128			Dibromofluoromethane	100	80-127		
Toluene-d8	99	80-120			1,4-Bromofluorobenzene	103	68-120		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0019
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	ug/L
Project: ARCO 11266			Page 6 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RW-1	**09-07-0019-6-B**	**06/30/09 12:50**	**Aqueous**	**GC/MS BB**	**07/10/09**	**07/10/09 18:41**	**090710L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		1,2-Dichloropropane	ND	0.50	1	
Bromochloromethane	ND	0.50	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	0.50	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	0.50	1		Ethylbenzene	9.6	0.50	1	
Bromomethane	ND	0.50	1		Methylene Chloride	ND	0.50	1	
Carbon Tetrachloride	ND	0.50	1		1,1,2,2-Tetrachloroethane	ND	0.50	1	
Chlorobenzene	ND	0.50	1		Tetrachloroethene	ND	0.50	1	
Chloroethane	ND	0.50	1		Toluene	15	0.50	1	
Chloroform	ND	0.50	1		1,1,1-Trichloroethane	ND	0.50	1	
Chloromethane	ND	0.50	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.50	1	
Dibromochloromethane	ND	0.50	1		1,1,2-Trichloroethane	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Trichloroethene	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1		Trichlorofluoromethane	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1		Vinyl Chloride	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1		Xylenes (total)	51	0.50	1	
Dichlorodifluoromethane	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,1-Dichloroethane	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	
1,1-Dichloroethene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
c-1,2-Dichloroethene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
t-1,2-Dichloroethene	ND	0.50	1		Ethanol	ND	50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	94	80-128			Dibromofluoromethane	100	80-127		
Toluene-d8	97	80-120			1,4-Bromofluorobenzene	96	68-120		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0019
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L

Project: ARCO 11266

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-10-025-1,096**	**N/A**	**Aqueous**	**GC/MS BB**	**07/07/09**	**07/08/09 00:11**	**090707L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		1,2-Dichloropropane	ND	0.50	1	
Bromochloromethane	ND	0.50	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	0.50	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	0.50	1		Ethylbenzene	ND	0.50	1	
Bromomethane	ND	0.50	1		Methylene Chloride	ND	0.50	1	
Carbon Tetrachloride	ND	0.50	1		1,1,2,2-Tetrachloroethane	ND	0.50	1	
Chlorobenzene	ND	0.50	1		Tetrachloroethene	ND	0.50	1	
Chloroethane	ND	0.50	1		Toluene	ND	0.50	1	
Chloroform	ND	0.50	1		1,1,1-Trichloroethane	ND	0.50	1	
Chloromethane	ND	0.50	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.50	1	
Dibromochloromethane	ND	0.50	1		1,1,2-Trichloroethane	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Trichloroethene	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1		Trichlorofluoromethane	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1		Vinyl Chloride	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1		Xylenes (total)	ND	0.50	1	
Dichlorodifluoromethane	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,1-Dichloroethane	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	
1,1-Dichloroethene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
c-1,2-Dichloroethene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
t-1,2-Dichloroethene	ND	0.50	1		Ethanol	ND	50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	97	80-128			Dibromofluoromethane	96	80-127		
Toluene-d8	96	80-120			1,4-Bromofluorobenzene	95	68-120		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0019
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO 11266		Page 8 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-10-025-1,103**	**N/A**	**Aqueous**	**GC/MS BB**	**07/10/09**	**07/10/09 13:19**	**090710L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		1,2-Dichloropropane	ND	0.50	1	
Bromochloromethane	ND	0.50	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	0.50	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	0.50	1		Ethylbenzene	ND	0.50	1	
Bromomethane	ND	0.50	1		Methylene Chloride	ND	0.50	1	
Carbon Tetrachloride	ND	0.50	1		1,1,2,2-Tetrachloroethane	ND	0.50	1	
Chlorobenzene	ND	0.50	1		Tetrachloroethene	ND	0.50	1	
Chloroethane	ND	0.50	1		Toluene	ND	0.50	1	
Chloroform	ND	0.50	1		1,1,1-Trichloroethane	ND	0.50	1	
Chloromethane	ND	0.50	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.50	1	
Dibromochloromethane	ND	0.50	1		1,1,2-Trichloroethane	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Trichloroethene	ND	0.50	1	
1,2-Dichlorobenzene	ND	0.50	1		Trichlorofluoromethane	ND	0.50	1	
1,3-Dichlorobenzene	ND	0.50	1		Vinyl Chloride	ND	0.50	1	
1,4-Dichlorobenzene	ND	0.50	1		Xylenes (total)	ND	0.50	1	
Dichlorodifluoromethane	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,1-Dichloroethane	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	
1,1-Dichloroethene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
c-1,2-Dichloroethene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
t-1,2-Dichloroethene	ND	0.50	1		Ethanol	ND	50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	93	80-128			Dibromofluoromethane	99	80-127		
Toluene-d8	96	80-120			1,4-Bromofluorobenzene	97	68-120		

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

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0019
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA 200.7

Project ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-1	**Aqueous**	**ICP 5300**	**07/10/09**	**07/10/09**	**090710SA1**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	99	103	80-120	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

Stratus Environmental, inc.		Date Received	07/01/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0019
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA 200.7

Project: ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
MW-1	**Aqueous**	**ICP 5300**	**07/10/09**	**07/10/09**	**090710SA1**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	102	103	75-125	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0019
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-2	**Aqueous**	**GC 4**	**07/01/09**	**07/01/09**	**090701S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	101	101	38-134	1	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0019
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-07-0136-5	**Aqueous**	**GC 4**	**07/02/09**	**07/02/09**	**090702S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	98	93	38-134	4	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0019
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-4	**Aqueous**	**GC 4**	**07/03/09**	**07/03/09**	**090703S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	99	99	38-134	0	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0019
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-07-0125-5	**Aqueous**	**GC 4**	**07/06/09**	**07/06/09**	**090706S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	96	95	38-134	1	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0019
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-07-0139-3	**Aqueous**	**GC/MS BB**	**07/07/09**	**07/08/09**	**090707S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	106	106	76-124	1	0-20	
Carbon Tetrachloride	95	94	74-134	1	0-20	
Chlorobenzene	103	104	80-120	1	0-20	
1,2-Dibromoethane	101	102	80-120	0	0-20	
1,2-Dichlorobenzene	105	108	80-120	2	0-20	
1,1-Dichloroethene	108	107	73-127	1	0-20	
Ethylbenzene	98	99	78-126	2	0-20	
Toluene	100	103	80-120	4	0-20	
Trichloroethene	96	96	77-120	0	0-20	
Vinyl Chloride	77	95	72-126	21	0-20	BA,AY
Methyl-t-Butyl Ether (MTBE)	104	107	67-121	2	0-49	
Tert-Butyl Alcohol (TBA)	117	112	36-162	1	0-30	
Diisopropyl Ether (DIPE)	106	109	60-138	3	0-45	
Ethyl-t-Butyl Ether (ETBE)	105	107	69-123	2	0-30	
Tert-Amyl-Methyl Ether (TAME)	97	101	65-120	3	0-20	
Ethanol	105	95	30-180	10	0-72	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0019
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-4	**Aqueous**	**GC/MS BB**	**07/10/09**	**07/10/09**	**090710S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	97	96	76-124	1	0-20	
Carbon Tetrachloride	79	79	74-134	1	0-20	
Chlorobenzene	99	96	80-120	3	0-20	
1,2-Dibromoethane	98	97	80-120	1	0-20	
1,2-Dichlorobenzene	99	96	80-120	3	0-20	
1,1-Dichloroethene	91	86	73-127	5	0-20	
Ethylbenzene	93	87	78-126	6	0-20	
Toluene	98	94	80-120	4	0-20	
Trichloroethene	91	89	77-120	2	0-20	
Vinyl Chloride	95	79	72-126	18	0-20	
Methyl-t-Butyl Ether (MTBE)	95	94	67-121	1	0-49	
Tert-Butyl Alcohol (TBA)	98	101	36-162	3	0-30	
Diisopropyl Ether (DIPE)	88	88	60-138	0	0-45	
Ethyl-t-Butyl Ether (ETBE)	90	90	69-123	0	0-30	
Tert-Amyl-Methyl Ether (TAME)	95	92	65-120	3	0-20	
Ethanol	97	102	30-180	5	0-72	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0019
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA 200.7

Project: ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-01-012-3,874	Aqueous	ICP 5300	07/10/09	07/10/09	090710LA1

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	101	104	85-115	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0019
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-594	**Aqueous**	**GC 4**	**07/01/09**	**07/01/09**	**090701B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	96	103	78-120	7	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0019
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-595	**Aqueous**	**GC 4**	**07/02/09**	**07/02/09**	**090702B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	98	101	78-120	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0019
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-596	**Aqueous**	**GC 4**	**07/03/09**	**07/03/09**	**090703B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	108	106	78-120	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0019
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-597	**Aqueous**	**GC 4**	**07/06/09**	**07/06/09**	**090706B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	99	99	78-120	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0019
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-025-1,096	**Aqueous**	**GC/MS BB**	**07/07/09**	**07/07/09**	**090707L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	100	101	80-120	73-127	1	0-20	
Carbon Tetrachloride	98	99	74-134	64-144	1	0-20	
Chlorobenzene	98	99	80-120	73-127	2	0-20	
1,2-Dibromoethane	101	101	79-121	72-128	1	0-20	
1,2-Dichlorobenzene	99	99	80-120	73-127	1	0-20	
1,1-Dichloroethene	105	107	78-126	70-134	2	0-28	
Ethylbenzene	96	97	80-120	73-127	1	0-20	
Toluene	96	97	80-120	73-127	1	0-20	
Trichloroethene	101	104	79-127	71-135	3	0-20	
Vinyl Chloride	79	77	72-132	62-142	2	0-20	
Methyl-t-Butyl Ether (MTBE)	99	98	69-123	60-132	0	0-20	
Tert-Butyl Alcohol (TBA)	97	101	63-123	53-133	4	0-20	
Diisopropyl Ether (DIPE)	97	98	59-137	46-150	0	0-37	
Ethyl-t-Butyl Ether (ETBE)	97	98	69-123	60-132	0	0-20	
Tert-Amyl-Methyl Ether (TAME)	95	93	70-120	62-128	2	0-20	
Ethanol	90	94	28-160	6-182	4	0-57	

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.	Date Received:	N/A
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0019
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project: ARCO 11266

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-025-1,103	**Aqueous**	**GC/MS BB**	**07/10/09**	**07/10/09**	**090710L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	97	101	80-120	73-127	4	0-20	
Carbon Tetrachloride	85	89	74-134	64-144	5	0-20	
Chlorobenzene	98	102	80-120	73-127	4	0-20	
1,2-Dibromoethane	99	104	79-121	72-128	5	0-20	
1,2-Dichlorobenzene	98	102	80-120	73-127	3	0-20	
1,1-Dichloroethene	96	101	78-126	70-134	5	0-28	
Ethylbenzene	95	97	80-120	73-127	2	0-20	
Toluene	97	103	80-120	73-127	6	0-20	
Trichloroethene	92	99	79-127	71-135	7	0-20	
Vinyl Chloride	95	102	72-132	62-142	7	0-20	
Methyl-t-Butyl Ether (MTBE)	94	101	69-123	60-132	7	0-20	
Tert-Butyl Alcohol (TBA)	96	92	63-123	53-133	4	0-20	
Diisopropyl Ether (DIPE)	86	92	59-137	46-150	7	0-37	
Ethyl-t-Butyl Ether (ETBE)	88	95	69-123	60-132	8	0-20	
Tert-Amyl-Methyl Ether (TAME)	92	98	70-120	62-128	6	0-20	
Ethanol	99	107	28-160	6-182	7	0-57	

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-07-0019

Qualifier	Definition
AX	Sample too dilute to quantify surrogate.
BA	Relative percent difference out of control.
BA,AY	BA = Relative percent difference out of control. AY = Matrix interference suspected.
BB	Sample > 4x spike concentration.
BF	Reporting limits raised due to high hydrocarbon background.
BH	Reporting limits raised due to high level of non-target analytes.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
BY	Sample received at improper temperature.
BZ	Sample preserved improperly.
CL	Initial analysis within holding time but required dilution.
CQ	Analyte concentration greater than 10 times the blank concentration.
CU	Surrogate concentration diluted to not detectable during analysis.
DF	Reporting limits elevated due to matrix interferences.
DU	Insufficient sample quantity for matrix spike/dup matrix spike.
ET	Sample was extracted past end of recommended max. holding time.
EY	Result exceeds normal dynamic range; reported as a min est.
GR	Internal standard recovery is outside method recovery limit.
IB	CCV recovery abovelimit; analyte not detected.
IH	Calibrtn. verif. recov. below method CL for this analyte.
IJ	Calibrtn. verif. recov. above method CL for this analyte.
J,DX	J=EPA Flag -Estimated value; DX= Value < lowest standard (MQL), but > than MDL.
LA	Confirmatory analysis was past holding time.
LG,AY	LG= Surrogate recovery below the acceptance limit. AY= Matrix interference suspected.
LH,AY	LH= Surrogate recovery above the acceptance limit. AY= Matrix interference suspected.
LM,AY	LM= MS and/or MSD above acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LN,AY	LN= MS and/or MSD below acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LQ	LCS recovery above method control limits.

Work Order Number: 09-07-0019

Qualifier	Definition
LR	LCS recovery below method control limits.
LW	Quantitation of unknown hydrocarbon(s) in sample based on gasoline.
LX	Quantitation of unknown hydrocarbon(s) in sample based on diesel.
MB	Analyte present in the method blank.
PC	Sample taken from VOA vial with air bubble > 6mm diameter.
PI	Primary and confirm results varied by > than 40% RPD.
RB	RPD exceeded method control limit; % recoveries within limits.
SG	A silica gel cleanup procedure was performed.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

0019 Page 1 of 1

BP/ARC Project Name: ARCO 11266
BP/ARC Facility No: 11266
Req Due Date (mm/dd/yy): STD - TAT
Rush TAT: Yes ___ No X
Lab Work Order Number:

Lab Name: Cal Science	BP/ARC Facility Address: 1541 Park Street	Consultant/Contractor: Stratus Environmental
Lab Address: 7440 Lincoln Way	City, State, ZIP Code: Alameda, CA	Consultant/Contractor Project No: E11266-QM/O&M
Lab PM: Richard Villafania	Lead Regulatory Agency: Alameda County	Address: 3330 Cameron Park Dr., Cameron Park, CA 95682
Lab Phone: 714-895-5494 / 714-895-7501 (fax)	California Global ID No.: T0600100207	Consultant/Contractor PM: Jay Johnson
Lab Shipping Accnt:	Enfos Proposal No: 000NC-0002	Phone: 530-676-6000 / 530-676-6005 (fax)
Lab Bottle Order No:	Accounting Mode: Provision X OOC-BU ___ OOC-RM ___	Email EDD To: chuff@stratusinc.net
Other Info:	Stage: Operate Activity: Field Characterization	Invoice To: BP/ARC ___ Contractor ___
BP/ARC EBM: Paul Supple		
EBM Phone: 925-275-3506		
EBM Email: paul.supple@bp.com		

Lab No.	Sample Description	Date 2009	Time	Soil / Solid	Water / Liquid	Air / Vapor	Total Number of Containers 7	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	GRO by 8015 M	BTEX / 5 oxy's *	EDB / 1,2DCA *	Ethanol *	Halogenated Vol's *	TOT lead by 200.7	Report Type & QC Level / Comments
1	MW-1	6/30	1205		X		7				X		X	X	X	X	X	X	* by 8260
2	2		1300																
3	3		1320																
4	4		1140																
5	MW-6		1340																
6	RW-1		1250																-7 total containers per well
7	TB-11266-06302009						2												ON Hold

Standard X
Full Data Package ___

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name: A. Hill	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Stratus		6/30/09	1440	Tom O'Malley CCL	6/30/09	1445
Shipment Method: GSO Ship Date: 6/30/09	Tom O'Malley TO GSO	6/30/09	1730	Woodcreek	7/1/09	1030
Shipment Tracking No: 512163789						

Special Instructions: Please cc results to bpedf@broadbentinc.com

THIS LINE - LAB USE ONLY: 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

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-07-0[illegible]

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: STRATUS ENV'L.

DATE: 7/01/09

TEMPERATURE: (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 2.1 °C - 0.2 °C (CF) = 1.9 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Only Initial: WB

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A Initial: WB

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Initial: T.N

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ COC not relinquished. ☐ No date relinquished. ☐ No time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☑	☐	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve ☐EnCores® ☐TerraCores® ☐_____

Water: ☐VOA ☑6 VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☑250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____ **Other:** ☐_____ Checked/Labeled by: T.N

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar (Wide-mouth) **B:** Bottle (Narrow-mouth) Reviewed by: W.SC

Preservative: **h:** HCL **n:** HNO3 **na$_2$:** $Na_2S_2O_3$ **Na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **znna:** $ZnAc_2$+NaOH **f:** Field-filtered Scanned by: T.N

ATTACHMENT

FIELD PROCEDURES FOR GROUNDWATER SAMPLING

The sampling procedures for groundwater monitoring events are contained in this appendix.

Groundwater and Liquid-Phase Petroleum Hydrocarbon Depth Assessment

Prior to measuring the depth to liquid in the well, the well caps are removed and the liquid level allowed to stabilize. A water/hydrocarbon interface probe is used to assess the liquid-phase petroleum hydrocarbon (LPH) thickness, if present, and a water level indicator is used to measure the groundwater depth in monitoring wells that do not contain LPH. Depth to groundwater or LPH is measured from a datum point at the top of each monitoring well casing. The datum point is typically a notch cut in the north side of the casing edge. If a water level indicator is used, the tip is subjectively analyzed for hydrocarbon sheen.

Subjective Analysis of Groundwater

Prior to purging, a water sample is collected from the monitoring well for subjective assessment. The sample is retrieved by gently lowering a clean, disposable bailer to approximately one-half the bailer length past the air/liquid interface. The bailer is then retrieved, and the sample contained within the bailer is examined for floating LPH and the appearance of a LPH sheen.

Monitoring Well Sampling

In many cases, determining whether to purge or not to purge wells prior to sample collection is made in the field and is often based on depth to water relative to the screen interval of the well. Site-specific field data sheets present details associated with the purge method and equipment used.

Monitoring wells, when purged, use a pump or bailer until pH, temperature, and conductivity of the purge water has stabilized and a minimum of three well volumes of water has been removed. Field measuring equipment is calibrated and maintained according to the manufacturer's instructions. If three well volumes cannot be removed in one half hour's time the well is allowed to recharge to 80% of original level. After recharging, a groundwater sample is then collected from each of the wells using disposable bailers.

A Teflon bailer, electric submersible or bladder pump will be the only equipment used for well sampling. When samples for volatile organic analysis are being collected, the pump flow will be regulated at approximately 100 milliliters per minute to minimize pump effluent turbulence and aeration. Glass bottles of at least 40-milliliters volume and fitted with Teflon-lined septa will be used in sampling for volatile organics. These

bottles will be filled completely to prevent air accumulation in the bottle. A positive meniscus forms when the bottle is completely full. A convex Teflon septum will be placed over the positive meniscus to eliminate air. After the bottle is capped, it is inverted and tapped to verify that it contains no air bubbles. The sample containers for other parameters will be filled, filtered as required, and capped. Glass and plastic bottles used by Stratus to collect groundwater samples are supplied by the laboratory.

Groundwater Sample Labeling and Preservation

Samples are collected in appropriate containers supplied by the laboratory. All required chemical preservation is added to the bottles prior to delivery to Stratus. Sample label information includes a unique sample identification number, job identification number, date, and time. After labeling, all groundwater samples are placed in a Ziploc® type bag and placed in an ice chest cooled to approximately 4° Celsius. Upon arriving at Stratus' office the samples are transferred to a locked refrigerator cooled to approximately 4° Celsius. Chemical preservation is controlled by the required analysis and is noted on the chain-of-custody form. Trip and temperature blanks supplied by the laboratory accompany the groundwater sample containers and groundwater samples.

Sample Identification and Chain-of-Custody Procedures

Sample identification and chain-of-custody procedures document sample possession from the time of collection to ultimate disposal. Each sample container submitted for analysis has a label affixed to identify the job number, sampler, date and time of sample collection, and a sample number unique to that sample. This information, in addition to a description of the sample, field measurements made, sampling methodology, names of on-site personnel, and any other pertinent field observations, is recorded in the field records. The samples are analyzed by a California-certified laboratory.

A chain-of-custody form is used to record possession of the sample from time of collection to its arrival at the laboratory. When the samples are shipped, the person in custody of them relinquishes the samples by signing the chain-of-custody form and noting the time. The sample-control officer at the laboratory verifies sample integrity and confirms that the samples are collected in the proper containers, preserved correctly, and contain adequate volumes for analysis. These conditions are noted on a Laboratory Sample Receipt Checklist that becomes part of the laboratory report upon request.

If these conditions are met, each sample is assigned a unique log number for identification throughout analysis and reporting. The log number is recorded on the chain-of-custody form and in the legally-required log book maintained by the laboratory. The sample description, date received, client's name, and other relevant information is also recorded.

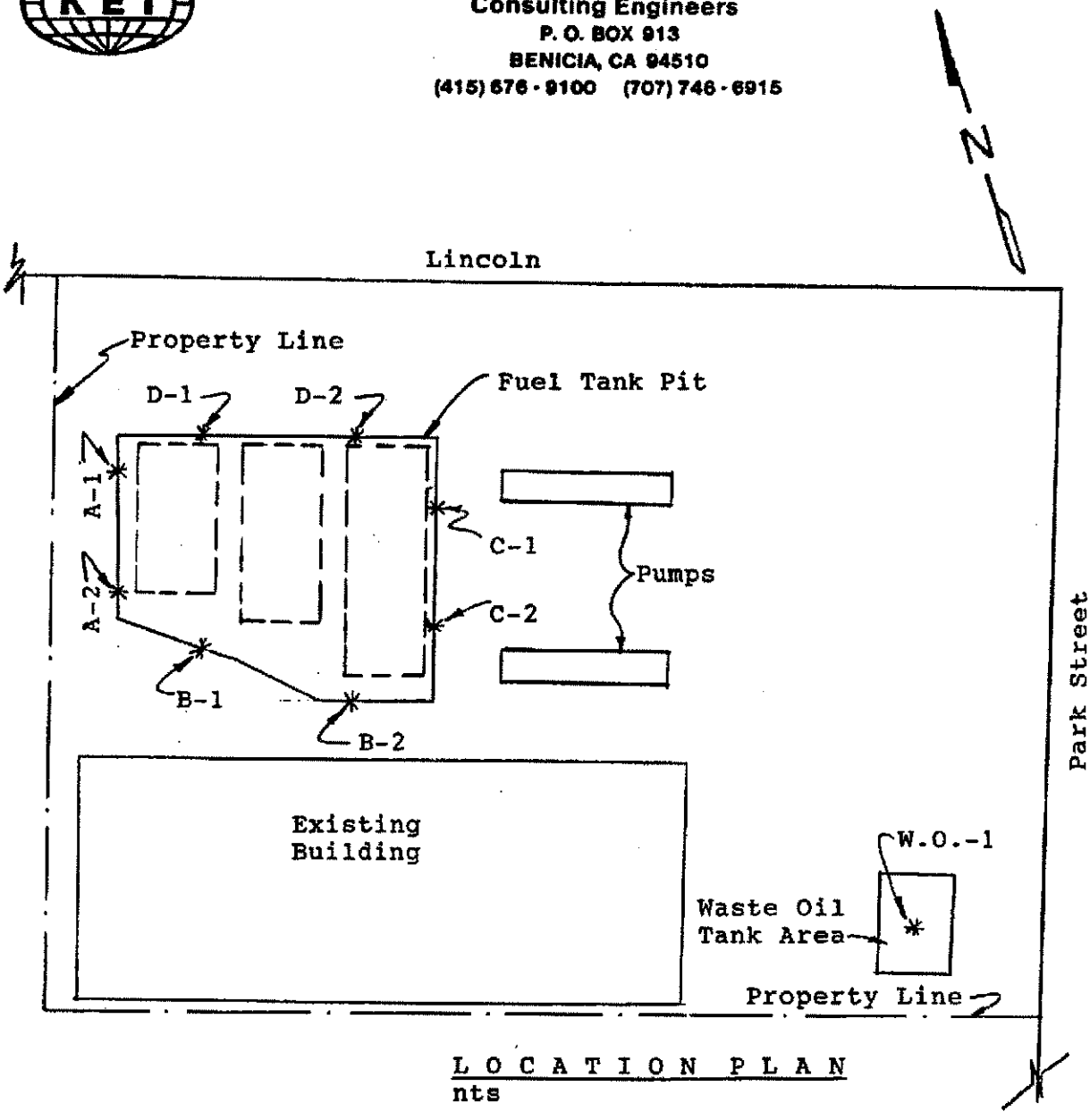
Equipment Cleaning

All reusable sampling equipments are cleaned using phosphate-free detergents and rinsed with de-ionized water.

APPENDIX E

HISTORIC SOIL AND GROUND-WATER DATA

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P. O. BOX 913
BENICIA, CA 94510
(415) 676 - 9100 (707) 746 - 6915



L O C A T I O N P L A N
nts

* Sample Location

MOBIL Service Station
1541 Park Street
Alameda, California

COPY TO BP

TABLE 1

SUMMARY OF LABORATORY ANALYSES

(all analyses in parts per million)

Sample #	Type	Depth	Total Hydrocarbon	Benzene	Toluene	Xylene
A1	soil	11.5'	<1.0	<0.1	<0.1	<0.1
A2	Soil	11.5'	<1.0	<0.1	<0.1	<0.1
B1	soil	11.5'	<1.0	<0.1	<0.1	<0.1
B2	soil	11.5'	340	<0.1	<0.1	8.6
C1	soil	11.5'	3200	81	42	450
C2	soil	11.5'	490	2.6	13	180
D1	soil	11.5'	<1.0	<0.1	<0.1	<0.1
D2	soil	11.5'	75	0.3	6.1	40
W.O-1*	soil	7.5'	<10	----	----	----
W-1	water	12'	530	6.3	66	200

* TOG = 150 ppm

COPY TO BP

HAZCAT Mobile Organics Lab

733 Dartmouth Avenue
San Carlos, CA 94070 • (415) 591-5820

Kaprealian Engineering Inc.
P.O. BOX 913
Benicia, CA 94510
Attn: Mardo Kaprealian, P.E.
President

Date Sampled: 09-15-87
Date Received: 09-16-87
Date Reported: 10-04-87

Sample Number	Sample Description
097036	Mobil Alameda Park & Lincoln WO-1

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS

results in ppb

Benzene	<50	trans-1,2-Dichloroethane	<50
Bromomethane	<100	1,2-Dichloropropane	<50
Bromodichloromethane	<50	1,3-Dichloropropene	<50
Bromoform	<50	Ethylbenzene	<50
Carbon tetrachloride	<50	Methylene chloride	<50
Chlorobenzene	<50	1,1,2,2-Tetrachloroethane	<50
Chloroethane	<100	Tetrachloroethane	<50
2-Chloroethylvinyl ether	<50	1,1,1-Trichloroethane	<50
Chloroform	<50	1,1,2-Trichloroethane	<50
Chloromethane	<100	Trichloroethene	<50
Dibromochloromethane	<50	Toluene	<50
1,1-Dichloroethane	<50	Vinyl chloride	<100
1,2-Dichloroethane	<50	1,2-Dichlorobenzene	<100
1,1-Dichloroethene	<50	1,3-Dichlorobenzene	<100
		1,4-Dichlorobenzene	<100

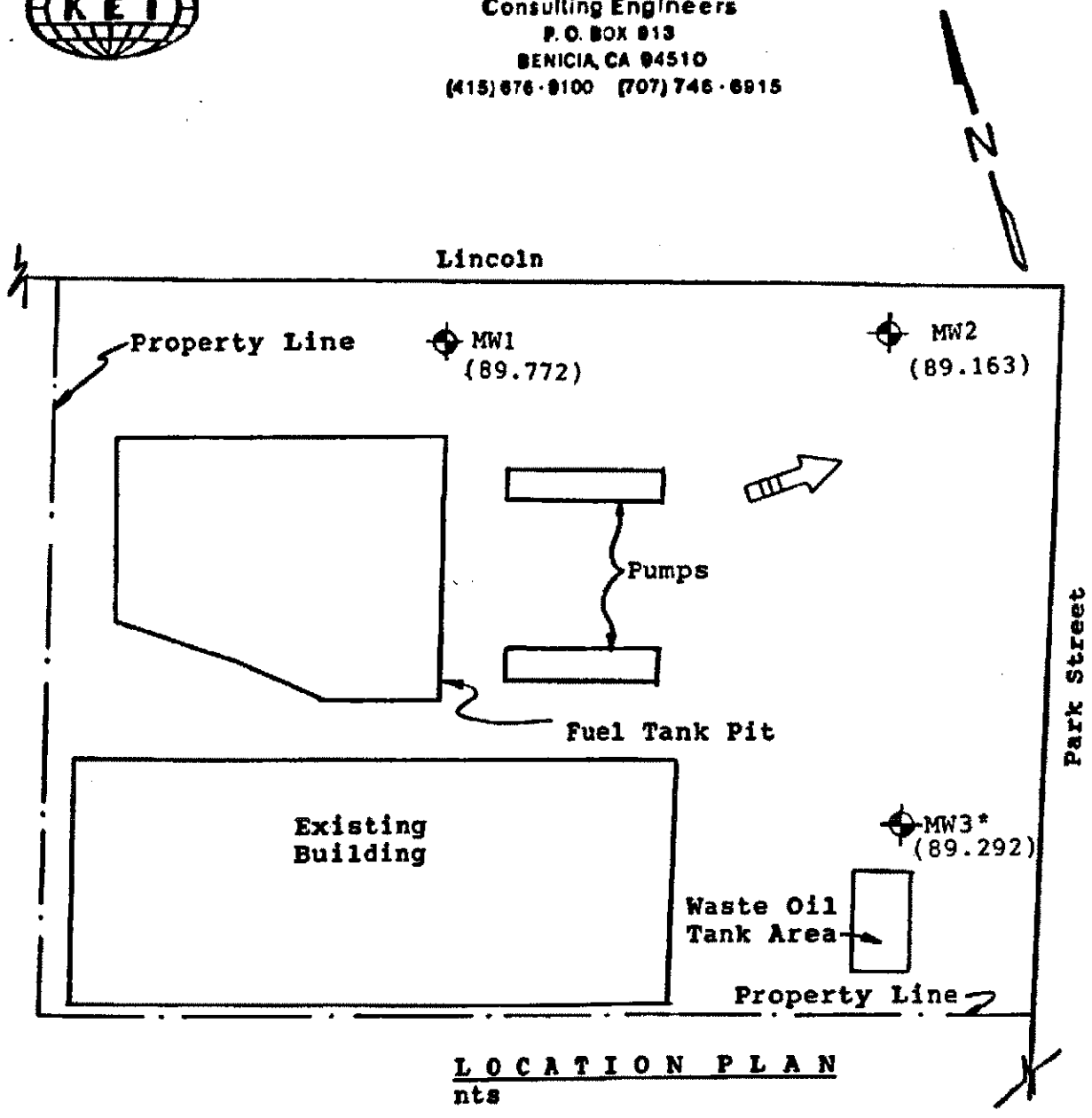
HAZCAT

Ronald G. Evans
Lab Director

NOTE: Analysis was performed using methods 8010 and 8020

COPY TO BP

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P. O. BOX 913
BENICIA, CA 94510
(415) 676-9100 (707) 746-6915



LOCATION PLAN
nts

Monitoring Well

Direction of groundwater flow (2-11-88)

( ) Groundwater elevation (feet)

* Surface elevation at top of MW3 assumed 100' as datum

MOBIL Service Station
1541 Park Street
Alameda, California

TABLE - 1

Results of Soil Analyses - Parts Per Million (ppm)

Sample Number	Depth (feet)	TPH	Benzene	Toluene	Xylene	Ethylbenzene
MW-1	10	2.4	0.1	0.2	0.7	<0.1
MW-2	10	<1.0	<0.1	<0.1	<0.1	<0.1
MW-3	10	<1.0	<0.1	<0.1	<0.1	<0.1

Results of Water Analyses - parts per billion (ppb)

Sample Number	Depth (feet)	TPH	Benzene	Toluene	Xylene	Ethylbenzene
MW-1	9.50	95,000	2000	5900	10,000	1100
MW-2	10.208	<50	<0.5	<0.5	<0.5	<0.5
MW-3+	10.667	<50	<0.5	<0.5	<0.5	<0.5

* TPH = Total Petroleum Hydrocarbon

\+ MW-3 (water) had TPH diesel <50 ppb; TOG <50 ppb; EPA 601 and 602 constituents all non-dedectable.

HAZCAT Mobile Organics Lab

733 Dartmouth Avenue
San Carlos, CA 94070 • (415) 591-5820

Kaprealian Engineering Inc.
P.O. BOX 913
Benicia, CA 94010
Attn: Mardo Kaprealian
President

Date Sampled:02-17-88
Date Received:02-17-88
Date Reported:02-28-88

Sample Number	Sample Description
028093	Mobil-Alameda Park & Lincoln MW-3 WATER

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS

results in ppb

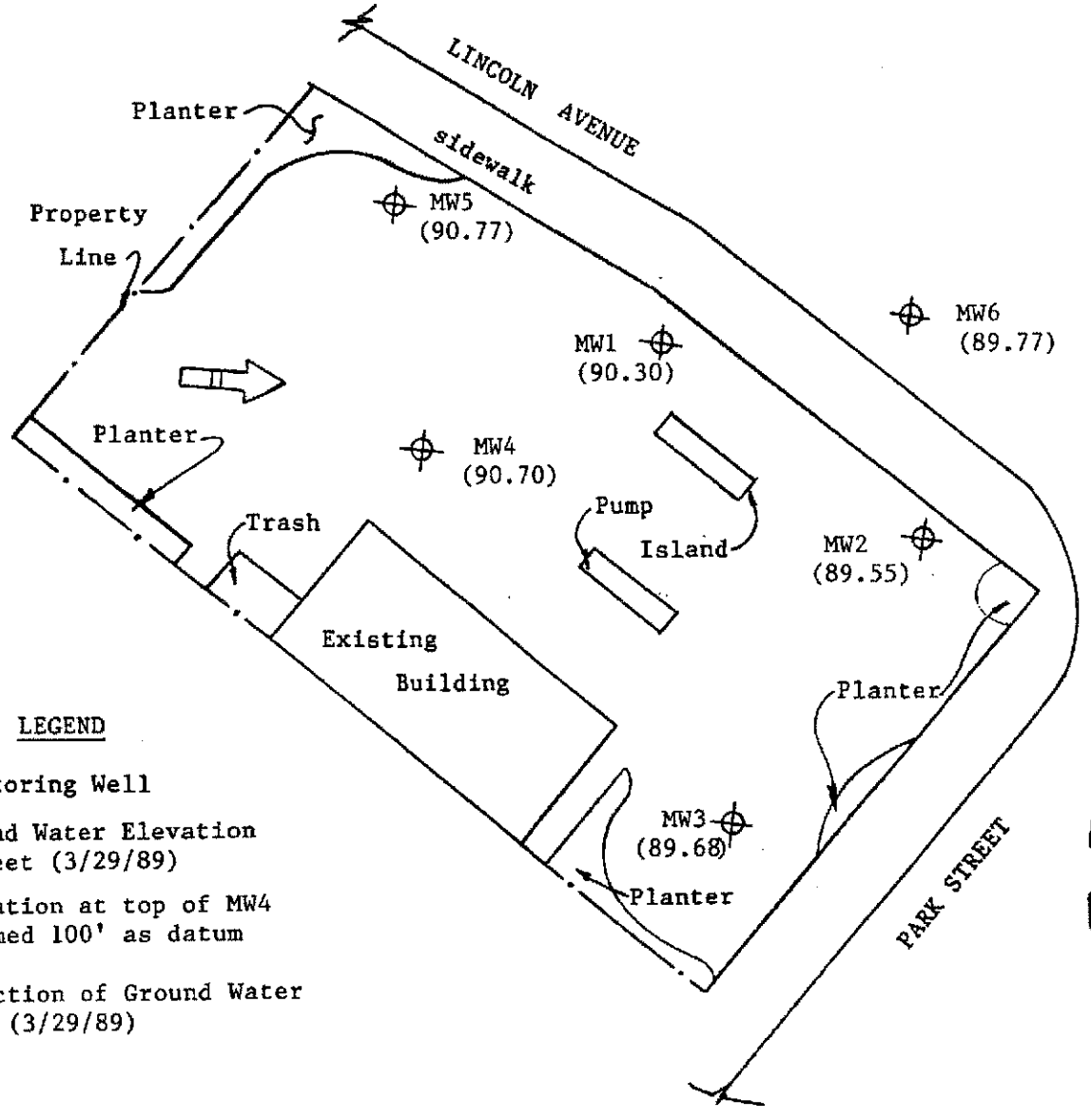
Benzene	<0.5	trans-1,2-Dichloroethane	<0.5
Bromomethane	<0.5	1,2-Dichloropropane	<0.5
Bromodichloromethane	<0.5	1,3-Dichloropropene	<0.5
Bromoform	<0.5	Ethylbenzene	<0.5
Carbon tetrachloride	<0.5	Methylene chloride	<0.5
Chlorobenzene	<0.5	1,1,2,2-Tetrachloroethane	<0.5
Cloroethane	<0.5	Tetrachloroethane	<0.5
2-Chloroethylvinyl ether	<0.5	1,1,1-Trichloroethane	<0.5
Chloroform	<0.5	1,1,2-Trichloroethane	<0.5
Chloromethane	<0.5	Trichloroethene	<0.5
Dibromochloromethane	<0.5	Toluene	<0.5
1,1-Dichloroethane	<0.5	Vinyl chloride	<0.5
1,2-Dichloroethane	<0.5	1,2-Dichlorobenzene	<0.5
1,1-Dichloroethene	<0.2	1,3-Dichlorobenzene	<0.5
		1,4-Dichlorobenzene	<0.5

HAZCAT

Ronald G. Evans
Lab Director

NOTE: Analysis was performed using EPA methods 601 and 602

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P. O. BOX 913
BENICIA, CA 94510
(415) 676 - 9100 (707) 746 - 6915



LEGEND

⊕ Monitoring Well

( ) Ground Water Elevation in feet (3/29/89)

Elevation at top of MW4 assumed 100' as datum

Direction of Ground Water Flow (3/29/89)

SITE PLAN

30 0 30 60
scale feet

Mobil Service Station #10-EYD
1541 Park Street
Alameda, California

KEI-P87-0907.R4
April 19, 1989

TABLE 2

SUMMARY OF LABORATORY ANALYSES
SOIL

(Results in ppm)
(Collected on March 22, 1989)

Sample Number	Depth (feet)	TPH	Benzene	Toluene	Xylenes	Ethylbenzene
MW4	5	ND	ND	ND	ND	ND
MW4	10	ND	ND	ND	ND	ND
MW5	6	ND	ND	ND	ND	ND
MW5	10	ND	ND	ND	ND	ND
MW6	5	ND	ND	ND	ND	ND
MW6	10	ND	ND	ND	ND	ND
Detection Limits		1.0	0.05	0.1	0.1	0.1

SUMMARY OF LABORATORY ANALYSES
WATER

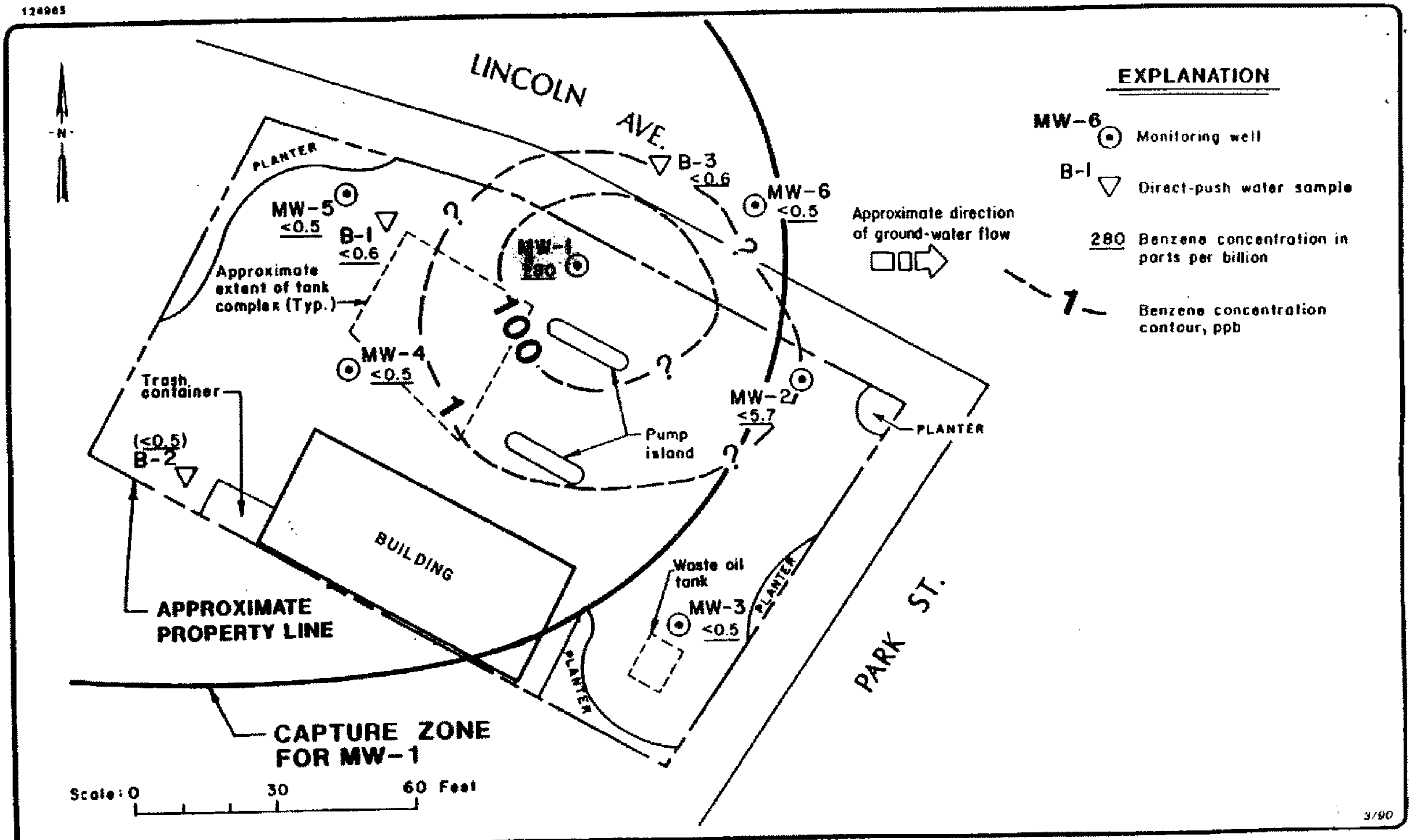
(Results in ppb)
(Collected on March 29, 1989)

Sample Number	Depth (feet)	TPH	Benzene	Toluene	Xylenes	Ethylbenzene
MW1	8.93	25,000	930	2,600	3,100	24
MW2	9.77	ND	1.1	0.78	1.7	ND
MW3	10.28	ND	ND	ND	ND	ND
MW4	9.30	ND	ND	ND	ND	ND
MW5	8.33	ND	ND	ND	ND	ND
MW6	9.28	ND	ND	ND	ND	ND
Detection Limits		50.0	0.5	0.5	0.5	0.5

TPH = total petroleum hydrocarbon as gasoline.

ND = Non-detectable.

124985



3/90

EMCON Associates

BP OIL CORPORATION
SERVICE STATION No. 11266
SITE ASSESSMENT
ALAMEDA, CALIFORNIA

DISSOLVED BENZENE CONCENTRATION CONTOURS AND CAPTURE ZONE

FIGURE 6

PROJECT NO. G90-04.06

Table 1

SUMMARY OF GROUND-WATER ELEVATION AND CHEMISTRY DATA (µg/l, ppb)

Well	Sample Date	Depth to Ground Water (ft)	Top-of-Casing Elevation (ft-msl)	Ground-Water Elevation (ft-msl)	TPH Gas	Benzene	Toluene	Xylenes	Ethylbenzene
MW-1	11/28/89	9.77	22.63	12.86	15,000	280	880	1,200	340
MW-2	11/28/89	10.25	22.75	12.50	170[1]	<5.7[2]	<1	<3	<1
MW-3	11/28/89	10.72	23.45	12.73	<50	<0.5	<1	<3	<1
MW-4	11/28/89	10.41	23.63	13.22	<50[1]	<0.5	<1	<3	<1
MW-5	11/28/89	9.83	22.87	13.04	<50	<0.5	<1	<3	<1
MW-6	11/28/89	10.30	22.85	12.55	<50	<0.5	<1	<3	<1
B-1*	11/15/89	NM	--	--	3	<0.6	2	<0.8	0.6
B-2*	11/15/89	NM	--	--	3	<0.6	2	<0.8	1
B-3*	11/15/89	NM	--	--	14	<0.6	1	<0.8	13
B-4	11/15/89	NM	--	--	12	<0.6	5	<0.8	<0.6
B-5	11/15/89	NM	--	--	4	<0.6	2	<0.8	<0.6

1. An unknown, discrete, volatile, non-fuel hydrocarbon was observed.

2. Raised detection limit due to unknown volatile component.

* Direct push ground-water samples

NM = Not measured

EMCON ASSOCIATES/BP GAS/ALAMEDA, CALIFORNIA JOB#K-257-89-5G
11/15/89
CONDENSED DATA

SAMPLE	BENZENE ug/l	TOLUENE ug/l	ETHYL BENZENE ug/l	XYLENES ug/l	TPH C1-C7 ug/l	TPH C8-C14 ug/l
Air	0.7	3	<0.3	<0.4	6	<0.3
B1-10.5'	<0.6	2	0.6	<0.8	2	<0.6
B2-13'	<0.6	2	1	<0.8	3	76
B3-12'	<0.6	1	12	<0.8	14	<0.6
B4-10'	<0.6	5	<0.6	<0.8	12	<0.6
B5-10'	<0.6	2	<0.6	<0.8	4	<0.6

Analyzed by: S. Evans
Checked by: G. Santo
Proofed by: D. Layfander

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

CLIENT: EMCON Associates
SUBMITTED BY: Client
PROJECT: C90-04.03
SAMPLE DESCRIPTION: Water

DATE RECEIVED: 11/30/89
DATE EXTRACTED: N/A
DATE ANALYZED: 12/07/89
WORK ORDER #: E89-1667

BTEX Analyses
DHS LUFT Method
EPA Method 602/8020
ug/L(ppb)

Sample Name:	MRL	MW-1	MW-2	MW-3
Benzene	0.5	280	<5.7*	<0.5
Toluene	1	880	<1	<1
Ethyl Benzene	1	340	<1	<1
Total Xylenes	3	1200	<3	<3
Gasoline	50	15000	170**	<50

Sample Name:	MW-4	MW-5	MW-6
Benzene	<0.5	<0.5	<0.5
Toluene	<1	<1	<1
Ethyl Benzene	<1	<1	<1
Total Xylenes	<3	<3	<3
Gasoline	<50**	<50	<50

MRL - Method Reporting Limit
* Raised reporting limit due to presence of unknown, volatile component.
**An unknown discrete, volatile, non-fuel hydrocarbon was observed in this sample.

Approved by Timothy P. Dunn Date 12/19/89

TABLE 1
Cumulative Analytical Results of Soil Samples
BP Oil Facility No. 11266
Alameda, California

TANK EXCAVATION

Date	Sample	Depth	TPH	B	T	X
10/87	A1	11.5	<1.0	<0.1	<0.1	<0.1
	A2	11.5	<1.0	<0.1	<0.1	<0.1
	B1	11.5	<1.0	<0.1	<0.1	<0.1
	B2	11.5	340	<0.1	<0.1	8.6
	C1	11.5	3200	81	42	450
	C2	11.5	490	2.6	13	180
	D1	11.5	<1.0	<0.1	<0.1	<0.1
	D2	11.5	75	0.3	6.1	4.0
	W.0-1	11.5	<10	NA	NA	NA

WELL INSTALLATION

Date	Sample	Depth	TPH	B	T	E	X
3/88	MW-1	10.0	2.1	0.1	0.2	<0.1	0.7
	MW-2	10.0	<0.1	<0.1	<0.1	<0.1	<0.1
	MW-3	10.0	<0.1	<0.1	<0.1	<0.1	<0.1
	MW-4	5.0	ND	ND	ND	ND	ND
	MW-4	10.0	ND	ND	ND	ND	ND
	MW-5	5.0	ND	ND	ND	ND	ND
	MW-5	10.0	ND	ND	ND	ND	ND
	MW-6	5.0	ND	ND	ND	ND	ND
	MW-6	10.0	ND	ND	ND	ND	ND

PIPING REPLACEMENT

Date	Sample	TPH	B	T	E	X
9/90	Composite A	ND	ND	ND	ND	ND
	D1	ND	ND	ND	ND	ND
	D2	ND	ND	ND	ND	ND
	D3	ND	ND	ND	ND	ND
	D4	ND	ND	ND	ND	ND

All results are reported in mg/kg by KEI
TPH=Total Petroleum Hydrocarbons (no distinction given)
B=benzene T=toluene E=ethylbenzene X=xylene
ND=not detected in concentrations exceeding the laboratory detection limit
NA=not analyzed
KEI=Kaprealian Engineering, Inc.

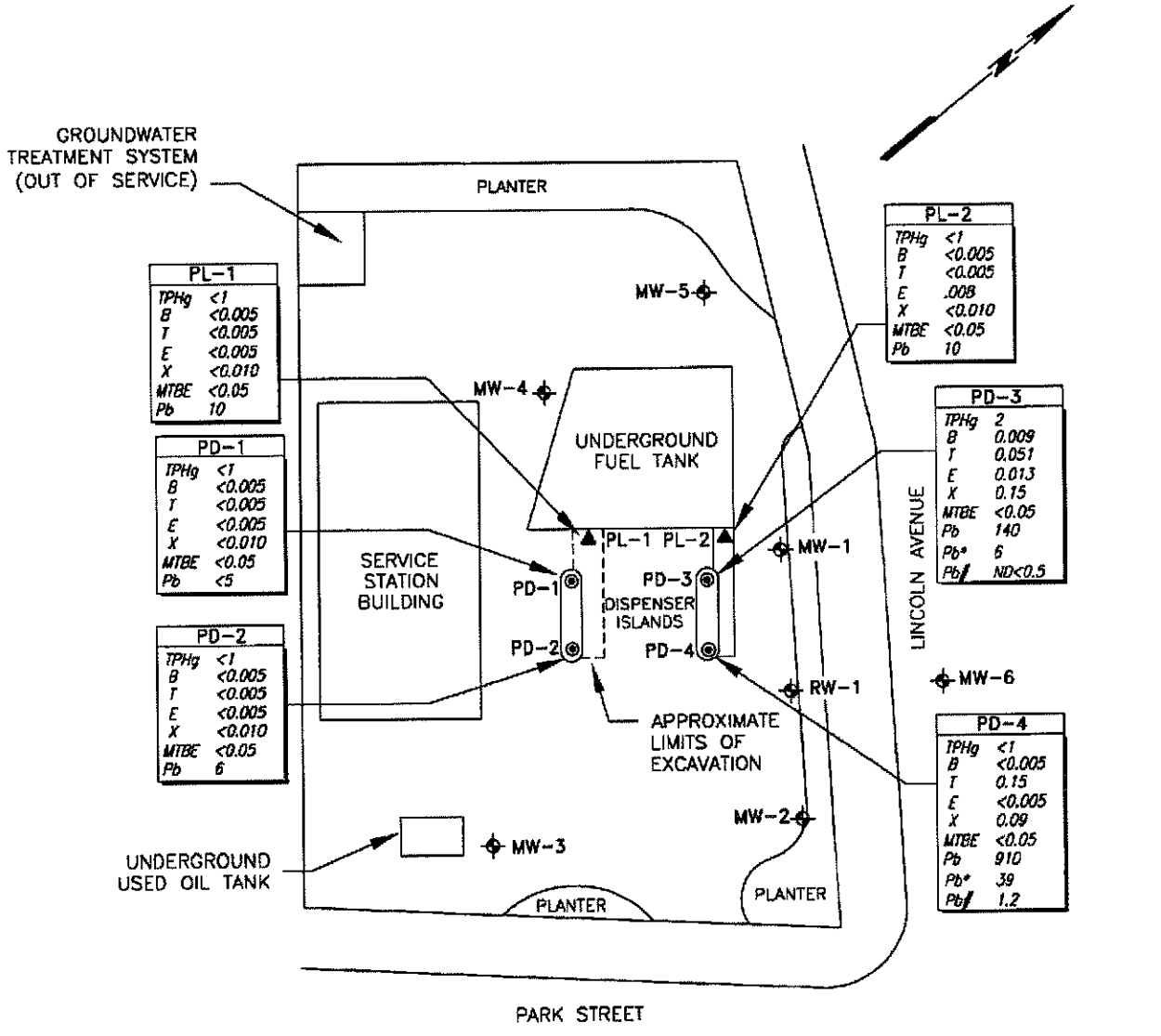
TABLE 2
Cumulative Analytical Results of Water Samples
BP Oil Facility No. 11266
Alameda, California

Well No.	Sample Date	Collector	TPHg	B	T	E	X
*	10/87	KEI	530	6.3	66	NA	200
MW-1	3/4/88	KEI	95,000	2,000	5,900	1,100	10,000
	3/29/89	KEI	25,000	930	2,600	24	3,100
	11/28/89	EMCON	15,000	280	880	340	1,200
	2/13/91	EMCON	25,000	680	2,700	1,100	3,200
	1/8/92	HETI	10,000	260	1,100	570	2,000
MW-2	3/4/88	KEI	ND	ND	ND	ND	ND
	3/29/89	KEI	ND	1.1	0.78	ND	1.7
	11/28/89	EMCON	170	ND	ND	ND	ND
	2/13/91	EMCON	150	1.4	ND	ND	0.9
	1/8/92	HETI	ND	1.4	ND	ND	1.1
MW-3**	3/28/88	KEI	ND	ND	ND	ND	ND
	3/29/89	KEI	ND	ND	ND	ND	ND
	11/28/89	EMCON	ND	ND	ND	ND	ND
	2/13/91	EMCON	ND	ND	ND	ND	ND
	1/8/92	HETI	ND	ND	ND	ND	ND
MW-4	3/29/89	KEI	ND	ND	ND	ND	ND
	11/28/89	EMCON	ND	ND	ND	ND	ND
	2/13/91	EMCON	430	6.2	0.6	12	3.3
	1/8/92	HETI	ND	ND	ND	ND	ND
MW-5	3/29/89	KEI	ND	ND	ND	ND	ND
	11/28/89	EMCON	ND	ND	ND	ND	ND
	2/13/91	EMCON	ND	ND	ND	ND	ND
	1/8/92	HETI	ND	ND	ND	ND	ND
MW-6	4/19/89	KEI	ND	ND	ND	ND	ND
	11/28/89	EMCON	ND	ND	ND	ND	ND
	2/13/91	EMCON	ND	ND	ND	ND	ND
	1/8/92	HETI	ND	ND	ND	ND	ND

All concentrations in µg/l (ppb)
TPHg = Total petroleum hydrocarbons as gasoline.
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes

ND = Not detected in concentrations exceeding the laboratory method detection limit
KEI = Kaprealian Engineering, Inc.
EMCON= EMCON Associates

*Sample was obtained from the tank excavation in 1987
**In March of 1988, KEI reported less than 50 ppb as diesel in MW-3



LEGEND

- MW-3 MONITORING WELL LOCATION
- PD-1 PRODUCT DISPENSER SOIL SAMPLE
- PL-1 PRODUCT LINE SOIL SAMPLE

TPHg <1
B <0.005
T <0.005
E <0.005
X <0.10
MTBE <0.05
Pb <5
— CONCENTRATION (Mg/Kg)

- *ND* — NOT DETECTED ABOVE THE STATED DETECTION LIMITS
- *TPHg* — TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
- *B* — BENZENE
- *T* — TOLUENE
- *E* — ETHYLBENZENE
- *X* — XYLENES
- *MTBE* — METHYL TERTIARY BUTYL ETHER
- *Pb* — TOTAL LEAD
- *Pb** — LEAD BY STLC (Mg/L)
- *Pb#* — LEAD BY TCLP (Mg/L)

0 30 60
APPROXIMATE SCALE IN FEET

SECOR International Incorporated

DRAWN	GEL
APPR	RP
DATE	28DEC99
JOB NO.	006.03425.602

FIGURE 2
TOSCO (FORMER BP)SERVICE STATION #11266
1541 PARK STREET
ALAMEDA, CALIFORNIA
SITE PLAN

199812.271039 R:\OAKLAND\ACAD\TOSCO\TOSCO-006.03425.602-001.DWG 12.28.99

Table 1

Soil Analytical Data

Product Lines and Dispeners

Tosco (Former BP) Service Station # 11266

1541 Park Street

Alameda, California

Sample Name	Sample Depth (feet bgs)	Date Sampled	TPH as Gasoline (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethly-benzene (mg/kg)	Xylenes (mg/kg)	MTBE 8020/8260 (mg/kg)	Total Lead (mg/kg)	Lead By STLC (mg/L)	Lead By TCLP (mg/L)
PD-1	2.0'	12/06/99	ND<1.00	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.05/NA	ND<5	NA	NA
PD-2	2.0'	12/06/99	ND<1.00	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.05/NA	**6**	NA	NA
PD-3	2.0'	12/06/99	**2.00**	**0.009**	**0.051**	**0.013**	**0.15**	ND<0.05/NA	**140**	**6**	ND<0.5
PD-4	2.0'	12/06/99	ND<1.00	ND<0.005	**0.15**	ND<0.005	**0.09**	ND<0.05/NA	**910**	**39**	**1.2**
PL-1	2.0'	12/06/99	ND<1.00	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.05/NA	**10**	NA	NA
PL-2	2.0'	12/06/99	ND<1.00	ND<0.005	ND<0.005	**0.008**	ND<0.010	ND<0.05/NA	**10**	NA	NA

TPH = Total petroleum hydrocarbons

MTBE = Methyl tertiary butyl ether

ND = Not detected above specified laboratory reporting limits

NA = Not analyzed

mg/kg = milligrams per kilogram

STLC = Soluble Limit Threshold Concentration

TCLP = Toxicity Characteristic Leaching Procedure

mg/L = milligrams per liter

Table 3
Ground-Water Analyses
Microgram Per Liter (parts per billion)
BP Service Station 11266, Alameda, California

Well	Date Sampled	2-Butanone (MEK)	Chlorobenzene (CB)	Tetrachloroethene (PCE)	Styrene
MW-1	11/29/89	-- [1]	--	--	--
	02/13/91	14	2.8	<1	<1
	05/10/91	<10	3.0	<1	1.7
	08/01/91	<10	2	<1	<1
MW-2	11/29/89	-- [1]	--	--	--
	02/13/91	<10	<1	<1	<1
	05/10/91	<10	<1	<1	<1
	08/10/91	<10	<1	<1	<1
MW-3	11/29/89	-- [1]	--	--	--
	02/13/91	<10	<1	<1	<1
	05/10/91	<10	<1	<1	<1
	08/01/91	<10	<1	<1	<1
MW-4	11/29/89	-- [1]	--	--	--
	02/13/91	<10	1.9	2.5	<1
	05/10/91	<10	1.4	2.8	<1
	08/01/91	<10	<1	<1	<1
MW-5	11/29/89	-- [1]	--	--	--
	02/13/91	<10	<1	<1	<1
	05/10/91	<10	<1	<1	<1
	08/01/91	<10	<1	<1	<1
MW-6	11/29/89	-- [1]	--	--	--
	02/13/91	<10	<1	<1	<1
	05/10/91	<10	<1	<1	<1
	08/01/91	<10	2	2	<1

1. Ground-water samples were not analyzed for EPA method 8240 during the November 1989 monitoring event.

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	(a)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	(b)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)		DO (ppm)	LAB
MW-1	03/04/88	19.19		---	---		95000	2000	5900	1100	10000	---		---	---
MW-1	03/29/89	19.19		---	---		25000	930	2600	24	3100	---		---	---
MW-1	11/28/89	19.19		---	---		15000	280	880	340	1200	---		---	---
MW-1	02/13/91	19.19		---	---		25000	680	2700	1100	3200	---		---	---
MW-1	01/08/92	19.19		---	---		10000	260	1100	570	2000	---		---	---
MW-1	03/30/92	19.19		8.15	11.04		5800	290	570	500	1100	---	(h)	---	PACE
MW-1	07/02/92	19.19		9.38	9.81		2500	170	60	310	300	---		---	ANA
MW-1	07/22/92	19.19		9.62	9.57		---	---	---	---	---	---		---	---
MW-1	10/02/92	19.19		9.98	9.21		4000	86	190	270	350	---		---	ANA
QC-1	(c) 10/02/92	---		---	---		3600	89	180	270	340	---		---	ANA
MW-1	12/14/92	19.19		9.90	9.29		6800	75	540	200	670	---		---	ANA
QC-1	(c) 12/14/92	---		---	---		5900	68	480	190	600	---		---	ANA
MW-1	03/24/93	19.19		8.52	10.67		6400	150	310	370	710	1400	(d)	---	PACE
MW-1	06/17/93	19.19		9.37	9.82		3800	110	160	310	480	220	(d)	---	PACE
MW-1	09/29/93	19.19		10.80	8.39		1100	22	16	54	110	320	(d)	---	PACE
MW-1	12/28/93	19.19		9.27	9.92		1800	26	110	77	300	220	(d)	---	PACE
MW-1	03/29/94	19.19		8.77	10.42		22000	990	560	970	2000	68412	(h)	3.1	PACE
MW-1	07/07/94	19.19		9.18	10.01		18000	67	32	250	140	30000	(d)	---	PACE
MW-1	10/18/94	19.19		9.85	9.34		270	1.9	0.6	ND<0.5	3.2	---	(h)	3.6	PACE
MW-1	02/01/95	19.19		7.04	12.15		5400	260	350	1100	980	---		6.5	ATI
MW-1	04/12/95	19.19		7.74	11.45		13000	260	620	960	2600	---		5.0	ATI
MW-1	09/13/95	19.19		9.58	9.61		5800	110	110	510	830	4300		5.2	ATI
QC-1	(c) 09/13/95	---		---	---		5800	110	100	490	800	4500		---	ATI
MW-1	01/11/96	19.19		8.95	10.24		5400	91	130	510	1000	1700		5.2	ATI
QC-1	(c) 01/11/96	---		---	---		5100	89	120	490	950	2000		---	ATI
MW-1	04/18/96	19.19		8.40	10.79		12000	190	420	1100	1560	2100		4.5	SPL
QC-1	(c) 04/18/96	---		---	---		12000	190	390	1100	1440	2000		---	SPL
MW-1	06/28/96	19.19		9.08	10.11		11000	100	130	670	1180	4600		---	SPL
QC-1	(c) 06/28/96	---		---	---		11000	100	140	690	1290	4600		---	SPL
MW-1	11/05/96	19.19		9.81	9.38		8800	55	28	520	430	5700		5.5	SPL
QC-1	(c) 11/05/96	---		---	---		8800	48	ND<25	490	413	5600		---	SPL
MW-1	01/17/97	19.19		7.81	11.38		12000	180	160	1200	1650	3200		8.0	SPL
QC-1	(c) 01/17/97	---		---	---		13000	190	160	1200	1770	3200		---	SPL
MW-1	05/01/97	19.19		9.13	10.06		8600	160	49	950	850	3200		7.0	SPL
QC-1	(c) 05/01/97	---		---	---		9000	160	39	940	820	3100		---	SPL
MW-1	07/09/97	19.19		9.55	9.64		10000	93	27	720	476	4500		6.3	SPL
QC-1	(c) 07/09/97	---		---	---		7600	42	13	340	175	4300		---	SPL
MW-1	10/16/97	19.19		9.77	9.42		2100	71	14	420	194	500		6.8	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	(a)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	(b)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)		DO (ppm)	LAB
QC-1	(c) 10/16/97	---		---	---		2600	80	17	500	276	510		---	SPL
MW-1	01/08/98	19.19		8.36	10.83		2500	33	21	180	183	1200		6.1	SPL
QC-1	(c) 01/08/98	---		---	---		2400	32	20	170	154	1300		---	SPL
MW-1	04/17/98	19.19		7.48	11.71		14000	140	410	730	1980	2400		3.7	SPL
QC-1	(c) 04/17/98	---		---	---		14000	140	460	770	2220	2500		---	SPL
MW-1	09/11/98	19.19		9.30	9.89		7700	65	38	580	880	1700		5.6	SPL
QC-1	(c) 09/11/98	---		---	---		10000	81	59	710	1410	1800		---	SPL
MW-1	03/09/99	19.19		6.80	12.39		6300	93	99	510	790	780/700	(f)	---	SPL
MW-1	09/23/99	19.19		8.31	10.88		8500	93	88	910	1900	640		---	SPL
MW-1	03/27/00	19.19		6.82	12.37		2100	35	6.2	240	120	160		---	PACE
MW-1	09/27/00	19.19		8.58	10.61		810	13	0.62	43	12	46		---	PACE
MW-1	03/21/01	19.19		7.47	11.72		1500	28.2	1.68	107	90.5	15.2		---	PACE
MW-1	09/18/01	19.19		8.95	10.24		990	24	9.57	44.6	62.6	31.2		---	PACE

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	(a)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	(b)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)		DO (ppm)	LAB
MW-2	03/04/88	19.32		---	---		ND	ND	ND	ND	ND	---		---	---
MW-2	03/29/89	19.32		---	---		ND	1.1	0.78	ND	1.7	---		---	---
MW-2	11/28/89	19.32		---	---		170	ND	ND	ND	ND	---		---	---
MW-2	02/13/91	19.32		---	---		150	1.4	ND	ND	0.9	---		---	---
MW-2	01/08/92	19.32		---	---		ND	1.4	ND	ND	1.1	---		---	---
MW-2	03/30/92	19.32		9.03	10.29		91	0.7	ND	ND	ND	---	(h)	---	PACE
MW-2	07/02/92	19.32		9.96	9.36		150	3.1	0.6	0.6	1.1	---		---	ANA
MW-2	07/22/92	19.32		10.12	9.20		---	---	---	---	---	---		---	---
MW-2	10/02/92	19.32		10.42	8.90		56	ND<0.5	0.8	0.6	1.2	---		---	ANA
MW-2	12/14/92	19.32		10.77	8.55		210	1.5	ND<0.5	0.9	2.7	---		---	ANA
MW-2	03/24/93	19.32		9.33	9.99		94	0.8	ND<0.5	ND<0.5	0.9	---		---	PACE
QC-1	(c) 03/24/93	---		---	---		150	1.8	0.6	1.3	1.3	---		---	PACE
MW-2	06/17/93	19.32		9.91	9.41		ND<50	ND<0.5	ND<0.5	ND<0.5	0.7	23	(d)	---	PACE
MW-2	09/29/93	19.32		11.39	7.93		68	ND<0.5	0.9	0.7	1.9	59	(d)	---	PACE
MW-2	12/28/93	19.32		9.75	9.57		260	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1300	(d)	---	PACE
QC-1	(c) 12/28/93	---		---	---		240	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1100	(d)	---	PACE
MW-2	03/29/94	19.32		9.39	9.93		150	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1622	(d),(h)	4.9	PACE
QC-1	(c) 03/29/94	---		---	---		140	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1600	(d)	---	PACE
MW-2	07/07/94	19.32		9.68	9.64		1100	0.6	1.7	0.6	3.2	2000	(d)	---	PACE
MW-2	10/18/94	19.32		10.22	9.10		290	3.1	0.8	ND<0.5	5.1	---	(h)	3.3	PACE
MW-2	02/01/95	19.32		8.03	11.29		100	ND<0.5	ND<0.5	ND<0.5	ND<1	---		6.0	ATI
MW-2	04/12/95	19.32		8.71	10.61		1200	ND<1.0	ND<1.0	ND<1.0	ND<2.0	---		8.3	ATI
MW-2	09/13/95	19.32		10.19	9.13		480	ND<2.5	ND<2.5	ND<2.5	ND<5.0	2300		7.8	ATI
MW-2	01/11/96	19.32		9.59	9.73		3400	ND<25	ND<25	ND<25	ND<50	11000		5.4	ATI
MW-2	04/18/96	19.32		9.04	10.28		130	ND<0.5	ND<1	ND<1	ND<1	170		5.5	SPL
MW-2	06/28/96	19.32		9.72	9.60		300	ND<0.5	ND<1	ND<1	ND<1	430		4.9	SPL
MW-2	11/05/96	19.32		10.43	8.89		710	ND<2.5	ND<5.0	ND<5.0	ND<5.0	960		5.3	SPL
MW-2	01/17/97	19.32		8.80	10.52		ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	24		5.3	SPL
MW-2	05/01/97	19.32		10.06	9.26		80	ND<0.5	ND<1.0	ND<1.0	ND<1.0	100		5.2	SPL
MW-2	07/09/97	19.32		10.50	8.82		150	ND<0.5	ND<1.0	ND<1.0	ND<1.0	170		4.3	SPL
MW-2	10/16/97	19.32		10.18	9.14		ND<50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	260		5.0	SPL
MW-2	01/08/98	19.32		9.04	10.28		ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	18		4.4	SPL
MW-2	04/17/98	19.32		8.56	10.76		ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10		3.9	SPL
MW-2	09/11/98	19.32		9.79	9.53		ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10		6.1	SPL
MW-2	03/09/99	19.32		7.93	11.39		200	ND<1.0	ND<1.0	ND<1.0	ND<1.0	190		---	SPL
MW-2	09/23/99	19.32		8.52	10.80		<250	ND<5.0	ND<5.0	ND<5.0	ND<5.0	84		---	SPL
MW-2	03/27/00	19.32		7.98	11.34		200	ND<0.5	ND<0.5	ND<0.5	ND<0.5	490		---	PACE
MW-2	09/27/00	19.32		8.84	10.48		180	ND<0.5	ND<0.5	ND<0.5	ND<0.5	730		---	PACE

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	(a)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	(b)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
MW-2	03/21/01	19.32		8.34	10.98		270	1.02	ND<0.5	ND<0.5	ND<1.5	341	—	PACE
MW-2	09/18/01	19.32		9.29	10.03		100	ND<0.5	ND<0.5	ND<0.5	ND<1.5	178	—	PACE

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet) (a)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet) (b)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)		DO (ppm)	LAB
MW-3	03/04/88	19.99	---	---	ND	ND	ND	ND	ND	---		---	---
MW-3	03/29/89	19.99	---	---	ND	ND	ND	ND	ND	---		---	---
MW-3	11/28/89	19.99	---	---	ND	ND	ND	ND	ND	---		---	---
MW-3	02/13/91	19.99	---	---	ND	ND	ND	ND	ND	---		---	---
MW-3	01/08/92	19.99	---	---	ND	ND	ND	ND	ND	---		---	---
MW-3	03/30/92	19.99	9.71	10.28	ND	ND	ND	ND	ND	---	(h)	---	PACE
MW-3	07/02/92	19.99	10.52	9.47	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	ANA
MW-3	07/22/92	19.99	10.62	9.37	---	---	---	---	---	---		---	---
MW-3	10/02/92	19.99	10.86	9.13	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	ANA
MW-3	12/14/92	19.99	10.53	9.46	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	ANA
MW-3	03/24/93	19.99	9.06	10.93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	PACE
MW-3	06/17/93	19.99	10.44	9.55	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	PACE
MW-3	09/29/93	19.99	11.06	8.93	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	PACE
MW-3	12/28/93	19.99	9.43	10.56	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	PACE
MW-3	03/29/94	19.99	10.01	9.98	---	---	---	---	---	---		---	---
MW-3	07/07/94	19.99	10.14	9.85	ND<50	ND<0.5	0.7	ND<0.5	ND<0.5	---		---	PACE
QC-1 (c)	07/07/94	---	---	---	ND<50	ND<0.5	0.7	ND<0.5	ND<0.5	---		---	PACE
MW-3	10/18/94	19.99	10.56	9.43	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	(h)	3.2	PACE
MW-3	02/01/95	19.99	8.98	11.01	ND<50	ND<0.5	1.0	0.5	1.9	---		5.9	ATI
MW-3	04/12/95	19.99	9.70	10.29	---	---	---	---	---	---		---	---
MW-3	09/13/95	19.99	10.70	9.29	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0		5.7	ATI
MW-3	01/11/96	19.99	10.18	9.81	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0		5.5	ATI
MW-3	04/18/96	19.99	9.53	10.46	---	---	---	---	---	---		---	---
MW-3	06/28/96	19.99	9.21	10.78	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10		4.3	SPL
MW-3	11/05/96	19.99	9.94	10.05	---	---	---	---	---	---		---	---
MW-3	01/17/97	19.99	9.29	10.70	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10		5.0	SPL
MW-3	05/01/97	19.99	10.53	9.46	---	---	---	---	---	---		---	---
MW-3	07/09/97	19.99	10.92	9.07	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10		4.0	SPL
MW-3	10/16/97	19.99	11.24	8.75	---	---	---	---	---	---		---	---
MW-3	01/08/98	19.99	10.12	9.87	---	---	---	---	---	---		---	---
MW-3	04/17/98	19.99	9.62	10.37	---	---	---	---	---	---		---	---
MW-3	09/11/98	19.99	10.83	9.16	---	---	---	---	---	---		---	---
MW-3	03/09/99	19.99	9.00	10.99	17000	8.2	ND<1.0	ND<1.0	5.90	17000		---	SPL
MW-3	09/23/99	19.99	9.20	10.79	---	---	---	---	---	---		---	---
MW-3	03/27/00	19.99	9.10	10.89	1200	4.5	1.2	3.0	3.1	2800		---	PACE
MW-3	09/27/00	19.99	9.96	10.03	---	---	---	---	---	---		---	---
MW-3	03/21/01	19.99	9.46	10.53	610	2.97	ND<2.5	8.66	7.85	572		---	PACE
MW-3	09/18/01	19.99	10.13	9.86	---	---	---	---	---	---		---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	(a)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	(b)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)		DO (ppm)	LAB
MW-4	03/04/88	20.17		---	---		ND	ND	ND	ND	ND	---		---	---
MW-4	03/29/89	20.17		---	---		ND	ND	ND	ND	ND	---		---	---
MW-4	11/28/89	20.17		---	---		430	6.2	0.6	12	3.3	---		---	---
MW-4	02/13/91	20.17		---	---		ND	ND	ND	ND	ND	---		---	---
MW-4	01/08/92	20.17		---	---		ND	ND	ND	ND	ND	---		---	---
MW-4	03/30/92	20.17		8.73	11.44		ND	ND	ND	ND	ND	---	(h)	---	PACE
MW-4	07/02/92	20.17		10.04	10.13		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	ANA
MW-4	07/22/92	20.17		10.26	9.91		---	---	---	---	---	---		---	---
MW-4	10/02/92	20.17		10.63	9.54		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	ANA
MW-4	12/14/92	20.17		10.02	10.15		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	ANA
MW-4	03/24/93	20.17		9.08	11.09		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	PACE
MW-4	06/17/93	20.17		10.03	10.14		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	PACE
MW-4	09/29/93	20.17		10.96	9.21		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	PACE
MW-4	12/28/93	20.17		9.33	10.84		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	PACE
MW-4	03/29/94	20.17		9.42	10.75		---	---	---	---	---	---		---	---
MW-4	07/07/94	20.17		9.82	10.35		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	PACE
MW-4	10/18/94	20.17		10.36	9.81		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	(h)	3.1	PACE
MW-4	02/01/95	20.17		7.50	12.67		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	---		9.3	ATI
MW-4	04/12/95	20.17		8.21	11.96		---	---	---	---	---	---		---	---
MW-4	09/13/95	20.17		10.20	9.97		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0		4.3	ATI
MW-4	01/11/96	20.17		9.57	10.60		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0		5.1	ATI
MW-4	04/18/96	20.17		9.03	11.14		---	---	---	---	---	---		---	---
MW-4	06/28/96	20.17		8.73	11.44		ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10		4.6	SPL
MW-4	11/05/96	20.17		9.47	10.70		---	---	---	---	---	---		---	---
MW-4	01/17/97	20.17		8.79	11.38		ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10		5.4	SPL
MW-4	05/01/97	20.17		10.08	10.09		---	---	---	---	---	---		---	---
MW-4	07/09/97	20.17		10.52	9.65		ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10		4.1	SPL
MW-4	10/16/97	20.17		10.85	9.32		---	---	---	---	---	---		---	---
MW-4	01/08/98	20.17		9.60	10.57		---	---	---	---	---	---		---	---
MW-4	04/17/98	20.17		9.11	11.06		---	---	---	---	---	---		---	---
MW-4	09/11/98	20.17		10.32	9.85		---	---	---	---	---	---		---	---
MW-4	03/09/99	20.17		7.30	12.87		ND<50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		---	SPL
MW-4	09/23/99	20.17		7.86	12.31		---	---	---	---	---	---		---	---
MW-4	03/27/00	20.17		7.57	12.60		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5		---	PACE
MW-4	09/27/00	20.17		9.59	10.58		---	---	---	---	---	---		---	---
MW-4	03/21/01	20.17		8.14	12.03		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.5	ND<0.5		---	PACE
MW-4	09/18/01	20.17		9.74	10.43		---	---	---	---	---	---		---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	(a)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	(b)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)		DO (ppm)	LAB
MW-5	03/04/88	19.41		---	---		ND	ND	ND	ND	ND	---		---	---
MW-5	03/29/89	19.41		---	---		ND	ND	ND	ND	ND	---		---	---
MW-5	11/28/89	19.41		---	---		ND	ND	ND	ND	ND	---		---	---
MW-5	02/13/91	19.41		---	---		ND	ND	ND	ND	ND	---		---	---
MW-5	01/08/92	19.41		---	---		ND	ND	ND	ND	ND	---		---	---
MW-5	03/30/92	19.41		7.85	11.56		ND	ND	ND	ND	ND	---	(h)	---	PACE
MW-5	07/02/92	19.41		9.27	10.14		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	ANA
MW-5	07/22/92	19.41		9.55	9.86		---	---	---	---	---	---		---	---
MW-5	10/02/92	19.41		9.97	9.44		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	ANA
MW-5	12/14/92	19.41		9.14	10.27		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	ANA
MW-5	03/24/93	19.41		8.17	11.24		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	PACE
MW-5	06/17/93	19.41		8.29	11.12		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	PACE
QC-1 (c)	06/17/93	---		---	---		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	PACE
MW-5	09/29/93	19.41		10.31	9.10		ND<50	ND<0.5	ND<0.5	ND<0.5	0.6	---		---	PACE
MW-5	12/28/93	19.41		8.91	10.50		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	PACE
MW-5	03/29/94	19.41		8.50	10.91		---	---	---	---	---	---		---	---
MW-5	07/07/94	19.41		8.99	10.42		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	PACE
MW-5	10/18/94	19.41		9.61	9.80		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	(h)	3.5	PACE
MW-5	02/01/95	19.41		6.55	12.86		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	---		7.6	ATI
MW-5	04/12/95	19.41		7.27	12.14		---	---	---	---	---	---		---	---
MW-5	09/13/95	19.41		9.49	9.92		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0		4.9	ATI
MW-5	01/11/96	19.41		8.82	10.59		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0		4.9	ATI
MW-5	04/18/96	19.41		8.30	11.11		---	---	---	---	---	---		---	---
MW-5	06/28/96	19.41		8.96	10.45		ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10		4.2	SPL
MW-5	11/05/96	19.41		9.69	9.72		---	---	---	---	---	---		---	---
MW-5	01/17/97	19.41		9.02	10.39		ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10		5.2	SPL
MW-5	05/01/97	19.41		10.29	9.12		---	---	---	---	---	---		---	---
MW-5	07/09/97	19.41		10.71	8.70		ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10		4.2	SPL
MW-5	10/16/97	19.41		11.03	8.38		---	---	---	---	---	---		---	---
MW-5	01/08/98	19.41		10.00	9.41		---	---	---	---	---	---		---	---
MW-5	04/17/98	19.41		8.73	10.68		---	---	---	---	---	---		---	---
MW-5	09/11/98	19.41		9.91	9.50		---	---	---	---	---	---		---	---
MW-5	03/09/99	19.41		6.24	13.17		ND<50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		---	SPL
MW-5	09/23/99	19.41		6.74	12.67		---	---	---	---	---	---		---	---
MW-5	03/27/00	19.41		6.64	12.77		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5		---	PACE
MW-5	09/27/00	19.41		8.76	10.65		---	---	---	---	---	---		---	---
MW-5	03/21/01	19.30	(g)	7.15	12.15		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.5	ND<0.5		---	PACE
MW-5	09/18/01	19.30		8.85	10.45		---	---	---	---	---	---		---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	(a)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	(b)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)		DO (ppm)	LAB
MW-6	03/04/88	19.40		---	---		ND	ND	ND	ND	ND	---		---	---
MW-6	03/29/89	19.40		---	---		ND	ND	ND	ND	ND	---		---	---
MW-6	11/28/89	19.40		---	---		ND	ND	ND	ND	ND	---		---	---
MW-6	02/13/91	19.40		---	---		ND	ND	ND	ND	ND	---		---	---
MW-6	01/08/92	19.40		---	---		ND	ND	ND	ND	ND	---		---	---
MW-6	03/30/92	19.40		8.86	10.54		ND	ND	ND	ND	ND	---	(h)	---	PACE
MW-6	07/02/92	19.40		9.94	9.46		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	ANA
MW-6	07/22/92	19.40		10.10	9.30		---	---	---	---	---	---		---	---
MW-6	10/02/92	19.40		10.48	8.92		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	ANA
MW-6	12/14/92	19.40		10.76	8.64		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	ANA
MW-6	03/24/93	19.40		9.19	10.21		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	PACE
MW-6	06/17/93	19.40		9.91	9.49		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	PACE
MW-6	09/29/93	19.40		11.49	7.91		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	PACE
MW-6	12/28/93	19.40		9.88	9.52		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---		---	PACE
MW-6	03/29/94	19.40		9.36	10.04		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	66.3	(h)	5.0	PACE
MW-6	07/07/94	19.40		9.75	9.65		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	38	(d)	---	PACE
MW-6	10/18/94	19.40		10.30	9.10		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	(h)	3.3	PACE
MW-6	02/01/95	19.40		7.92	11.48		ND<50	ND<0.5	0.9	ND<0.5	1.1	---		5.4	ATI
MW-6	04/12/95	19.40		8.41	10.99		220	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---		4.7	ATI
MW-6	09/13/95	19.40		10.05	9.35		180	ND<1.0	ND<1.0	ND<1.0	ND<2.0	770		4.9	ATI
MW-6	01/11/96	19.40		9.52	9.88		670	ND<2.5	ND<2.5	ND<2.5	ND<5.0	2400		4.6	ATI
MW-6	04/18/96	19.40		9.03	10.37		560	ND<0.5	ND<1	ND<1	ND<1	860		5.1	SPL
MW-6	06/28/96	19.40		8.76	10.64		620	ND<0.5	ND<1	ND<1	ND<1	540		4.9	SPL
MW-6	11/05/96	19.40		9.48	9.92		810	ND<5	ND<10	ND<10	ND<10	970		4.8	SPL
MW-6	01/17/97	19.40		8.58	10.82		830	ND<0.5	ND<1.0	ND<1.0	ND<1.0	960		8.9	SPL
MW-6	05/01/97	19.40		9.92	9.48		780	ND<5	ND<10	ND<10	ND<10	970		7.7	SPL
MW-6	07/09/97	19.40		10.33	9.07		990	ND<0.5	ND<1.0	ND<1.0	ND<1.0	1100		6.0	SPL
MW-6	10/16/97	19.40		10.66	8.74		ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	750		6.7	SPL
MW-6	01/08/98	19.40		8.92	10.48		120	ND<0.5	ND<1.0	ND<1.0	ND<1.0	120		5.6	SPL
MW-6	04/17/98	19.40		8.12	11.28		ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	62		3.9	SPL
MW-6	09/11/98	19.40		9.31	10.09		ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	59		5.5	SPL
MW-6	03/09/99	19.40		7.25	12.15		ND<50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	2.9/ND<10	(f)	---	SPL
MW-6	09/23/99	19.40		7.79	11.61		ND<250	ND<5.0	ND<5.0	ND<5.0	ND<5.0	20		---	SPL
MW-6	03/27/00	19.40		7.03	12.37		ND<50	ND<0.5	ND<0.5	ND<0.5	2.4	ND<0.5		---	PACE
MW-6	09/27/00	19.40		8.57	10.83		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5		---	PACE
MW-6	03/21/01	19.40		7.47	11.93		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.5	ND<0.5		---	PACE
MW-6	09/18/01	19.40		9.12	10.28		ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.5	ND<0.5		---	PACE

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID		DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	(a)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	(b)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)		DO (ppm)	LAB
RW-1		07/22/92	—		9.66	—		13000	1000	3400	380	2800	—		—	ANA
RW-1		10/02/92	—		10.28	—		—	—	—	—	—	—		—	—
RW-1		12/14/92	—		23.28	—		—	—	—	—	—	—		—	—
RW-1		03/24/93	—		8.93	—		660	21	25	8.3	100	315	(d)	—	PACE
RW-1		06/17/93	—		9.66	—		850	13	1.0	15	100	390	(d)	—	PACE
RW-1		09/29/93	19.27		23.40	-4.13		1200	26	27	11	150	1800	(d)	—	PACE
QC-1	(c)	09/29/93	—		—	—		1200	26	28	11	160	1900	(d)	—	PACE
RW-1		12/28/93	19.27		9.76	9.51		3500	300	220	180	480	1900	(d)	—	PACE
RW-1		03/29/94	19.27		8.93	10.34		12000	640	1700	450	2200	899	(h)	6.3	PACE
RW-1		07/07/94	19.27		9.45	9.82		7600	530	1100	380	1800	410	(d)	—	PACE
RW-1		10/18/94	19.27		10.11	9.16		5300	47	100	150	280	—	(d),(h)	3.4	PACE
QC-1	(c)	10/18/94	—		—	—		430	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—		—	PACE
RW-1		02/01/95	19.27		8.54	10.73		27000	2400	6100	1800	5300	—		4.5	ATI
QC-1	(c)	02/01/95	—		—	—		15000	1300	3300	970	2900	—		—	ATI
RW-1		04/12/95	19.27		8.21	11.06		6200	330	910	350	1500	—		5.2	ATI
QC-1	(c)	04/12/95	—		—	—		7600	400	1100	440	1900	—		—	ATI
RW-1		09/13/95	19.27		9.84	9.43		920	140	60	34	110	1200		5.1	ATI
RW-1		01/11/96	19.27		9.25	10.02		ND<50	0.95	0.61	ND<0.50	2.1	43		5.4	ATI
RW-1		04/18/96	19.27		8.73	10.54		ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10		4.7	SPL
RW-1		06/28/96	19.27		9.40	9.87		ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10		4.5	SPL
RW-1		11/05/96	19.27		10.12	9.15		ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10		4.9	SPL
RW-1		01/17/97	19.27		8.10	11.17		ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10		4.8	SPL
RW-1		05/01/97	19.27		9.43	9.84		ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10		4.6	SPL
RW-1		07/09/97	19.27		10.83	8.44		ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10		4.1	SPL
RW-1		10/16/97	19.27		11.17	8.10		—	—	—	—	—	—		—	—
RW-1		01/08/98	19.27		10.03	9.24		—	—	—	—	—	—		—	—
RW-1		04/17/98	19.27		8.79	10.48		—	—	—	—	—	—		—	—
RW-1		09/11/98	19.27		9.98	9.29		—	—	—	—	—	—		—	—
RW-1		03/09/99	19.27		7.19	12.08		—	—	—	—	—	—		—	—
RW-1		09/23/99	19.27		7.63	11.64		—	—	—	—	—	—		—	—
RW-1		03/27/00	19.27		7.04	12.23		—	—	—	—	—	—		—	—
RW-1		09/27/00	19.27		8.55	10.72		—	—	—	—	—	—		—	—
RW-1		03/21/01	19.27		7.48	11.79		—	—	—	—	—	—		—	—
RW-1		09/18/01	19.27		9.13	10.14		—	—	—	—	—	—		—	—

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet) (a)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet) (b)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
QC-2 (e)	10/02/92	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
QC-2 (e)	12/14/92	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	ANA
QC-2 (e)	03/24/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (e)	06/17/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (e)	09/29/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (e)	12/28/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (e)	03/29/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (e)	07/07/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (e)	10/18/94	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (e)	02/01/95	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	ATI
QC-2 (e)	04/12/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	ATI
QC-2 (e)	09/13/95	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	ATI
QC-2 (e)	01/11/96	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	ATI
QC-2 (e)	04/18/96	---	---	---	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	SPL
QC-2 (e)	06/28/96	---	---	---	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	SPL

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

ADDITIONAL ANALYSES

Well ID	DATE OF SAMPLING/ MONITORING	Dissolved Lead (ug/l)	LAB
RW-1	03/21/01	ND<50	PACE
RW-1	09/18/01	ND<50	PACE

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
MTBE	Methyl tert butyl ether
DO	Dissolved oxygen
ug/l	Micrograms per liter
ppm	Parts per million
—	Not measured/applicable/analyzed
ND	Not detected above reported detection limit
PACE	Pace, Inc.
ANA	Anametrix, Inc.
ATI	Analytical Technologies, Inc.
SPL	Southern Petroleum Laboratories

NOTES:

(a) Casing elevations surveyed to nearest 0.01 foot above mean sea level, with an assigned elevation of 22.82 feet (City datum).

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

(c) Blind duplicate.

(d) A copy of the documentation for this data is included in Appendix C of Alisto report 10-050-07-004.

(e) Travel blank.

(f) EPA Methods 8020/8260 used.

(g) Elevation changed due to well maintenance.

(h) A copy of the documentation for this data is included in Blaine Tech Services report 010918-R-1. No chromatograms could be located for all samples taken on October 18, 1994. The data for sampling events taken on March 30, 1992 have been destroyed.