ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

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

June 22, 2012

Paul Supple
(*Sent via E-mail to:*
paul.supple@bp.com)
Atlantic Richfield Company
(A BP Affiliated Company)
P.O. Box 1257
San Ramon, CA 94583

Bill Borgh
(*Sent via E-mail to:*
Bill.Borgh@conocophillips.com)
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Ping Liu Chien
(*Sent via E-mail to:*
JamesLiu2000@aol.com)
Harbor Bay Landing, LLC.
P.O. Box 117610
Burlingame, CA 94011

Subject: Fuel Leak Case No. RO0000511 and GeoTracker Global ID T0600101198, BP #11270, 3255 Mecartney Road, Alameda, CA 94501

Dear Messrs. Supple, Borgh, and Chien:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Health (ACEH) is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site:

- Residual TPH-g (2,000 mg/kg), TPH-d (480 mg/kg), and benzene (18 mg/kg) in soil remain at the site.
- Residual TPH-d concentrations in groundwater at 1,000 µg/L, remain at the site.
- Also note that the required analysis for a waste oil UST removal was not performed.

If you have any questions, please call Paresh Khatri at (510) 777-2478. Thank you.

Sincerely,

Donna L. Drogos, P.E.
Division Chief

Enclosures: 1. Remedial Action Completion Certificate
2. Case Closure Summary

cc:

Ms. Cherie McCaulou (w/enc)
SF- Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
(Sent via E-mail to: CMccaulou@waterboards.ca.gov)

Closure Unit (w/enc)
State Water Resources Control Board
UST Cleanup Fund
P.O. Box 944212
Sacramento, CA 94244-2120 (*Upload to GeoTracker*)

Paresh Khatri (w/orig enc), D. Drogos (w/enc), T. Le-Khan (w/enc)

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
OFFICE OF THE DIRECTOR
1131 HARBOR BAY PARKWAY
ALAMEDA, CA 94502
(510) 567-6777
FAX (510) 337-9135

REMEDIAL ACTION COMPLETION CERTIFICATION

June 22, 2012

Paul Supple
(*Sent via E-mail to:*
paul.supple@bp.com)
Atlantic Richfield Company
(A BP Affiliated Company)
P.O. Box 1257
San Ramon, CA 94583

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(*Sent via E-mail to:*
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76 Broadway
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Ping Liu Chien
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P.O. Box 117610
Burlingame, CA 94011

Subject: Fuel Leak Case No. RO0000511 and GeoTracker Global ID T0600101198, BP #11270, 3255 Mecartney Road, Alameda, CA 94501

Dear Messrs. Supple, Borgh, and Chien:

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

Claims for reimbursement of corrective action costs submitted to the Underground Storage Tank Cleanup Fund more than 365 days after the date of this letter or issuance or activation of the Fund's Letter of Commitment, whichever occurs later, will not be reimbursed unless one of the following exceptions applies:

- Claims are submitted pursuant to Section 25299.57, subdivision (k) (reopened UST case); or
- Submission within the timeframe was beyond the claimant's reasonable control, ongoing work is required for closure that will result in the submission of claims beyond that time period, or that under the circumstances of the case, it would be unreasonable or inequitable to impose the 365-day time period.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code. Please contact our office if you have any questions regarding this matter.

Sincerely,

Ariu Levi
Director

Alameda County Environmental Health

CASE CLOSURE SUMMARY
LEAKING UNDERGROUND FUEL STORAGE TANK - LOCAL OVERSIGHT PROGRAM

I. AGENCY INFORMATION

Date: January 9, 2012

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 777-2478
Responsible Staff Person: Paresh Khatri	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: BP #11270		
Site Facility Address: 3255 Mecartney Road, Alameda, CA		
RB Case No.: 01-1302	Local Case No.: 1771	LOP Case No.: RO0000511
URF Filing Date:	Global ID No.: T0600101198	APN: 74-1045-10-1

Responsible Parties	Addresses	Phone Numbers
Shannon Couch Atlantic Richfield Company	P.O. Box 1257, San Ramon, CA 94583	(925) 275-3804
---	---	---

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	1,000-gallon	Waste oil	Removed	07/09/1998
---	---	---	---	---
---	---	---	---	---
---	---	---	---	---
Piping			Removed	07/09/1998

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Exact release source is unknown; upon excavation of the Waste Oil UST in 1998, the USTs did not have any obvious holes or evidence of leaks.	
Site characterization complete? Yes	Date Approved By Oversight Agency: ---

Monitoring wells installed? Yes	Number: 6	Proper screened interval? Yes
Highest GW Depth Below Ground Surface: 5.24 ft bgs	Lowest Depth:9.15 ft bgs	Flow Direction: Northwesterly
Most Sensitive Current Use: Potential drinking water source.		

Summary of Wells in Vicinity: A ½ mile well survey was conducted at the site. No production wells were identified within the survey radius or within 1,000 feet of the site. An irrigation well located less than a mile west of the site was identified. However, it does not appear to be a sensitive receptor due to its location and distance from the site.	
Are drinking water wells affected? No	Aquifer Name: Alameda East Plain Sub-basin
Is surface water affected? No	Nearest SW Name: Unnamed Surface Water Body located 500 feet north of the site.
Off-Site Beneficial Use Impacts (Addresses/Locations): None	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	One 1,000-gallon	Waste-oil tank was removed	July 9, 1998
Piping	Not Reported	Disposal, destination not reported	July 9, 1998
Free Product	---	---	---
Soil	195 Cubic Yards	Disposal, destination not reported	05/1990
Groundwater	---	---	---

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP
(Please see Attachments for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	2,000 (SW-1@ 4.5', 5/22/1990)	2,000 (SW-1@ 4.5', 5/22/1990)	47,000 (MW-6, 1/27/1998)	83 (MW-6, 09/19/2008)
TPH (Diesel)	480 (MW-6 @ 5', 1/19/1995)	480 (MW-6 @ 5', 1/19/1995)	4,300 (MW-4, 4/5/1994)	1,000 (MW-6, 2/5/1995)
TPH (Motor Oil)	NA	NA	NA	<50
Benzene	18 (SW-1@ 4.5', 5/22/1990)	18 (SW-1@ 4.5', 5/22/1990)	350 (MW-6, 1/27/1998)	1.5 (XW-2, 7/22/2009)
Toluene	56 (SW-1@ 4.5', 5/22/1990)	56 (SW-1@ 4.5', 5/22/1990)	510 (MW-6, 4/19/1998)	11 (XW-2, 7/22/2009)
Ethylbenzene	39 (SW-1@ 4.5', 5/22/1990)	39 (SW-1@ 4.5', 5/22/1990)	360 (MW-6, 1/27/1998)	1.9 (XW-2, 7/22/2009)
Xylenes	270 (SW-1@ 4.5', 5/22/1990)	270 (SW-1@ 4.5', 5/22/1990)	10,500 (MW-6, 4/19/1998)	12 (XW-2, 7/22/2009)
MTBE	0.0582[4] (PD-4@ 1.5', 8/7/2000)	0.0582[3] (PD-4@ 1.5', 8/7/2000)	38,000[2] (MW-6, 1/27/1998)	2.6[1] (MW-6, 7/22/2009)
Heavy Metals (Cd, Cr, Pb, Ni, Zn)	36[5] (SW-7@4.5', 5/30/1990)	36[5] (SW-7@4.5', 5/30/1990)	NA	NA
Other (8240/8260)	NA	NA	NA	NA

[1] 2.6 µg/L MTBE, <10 µg/L TBA, <0.50 µg/L DIPE, <0.50 µg/L ETBE, <0.50 µg/L TAME, <0.50 µg/L 1.2-DCA, <0.50 µg/L EDB, <250 µg/L ethanol
[2] 38,000 µg/L MTBE; TBA, DIPE, ETBE, TAME, 1.2-DCA, EDB, ethanol all not analyzed.
[3] 0.0582 mg/lg MTBE, 0.032 mg/kg TBA, <0.0029 mg/kg DIPE, <0.0029 mg/kg ETBE, <0.0029 mg/kg TAME, <0.0029 mg/kg EDB, <0.0029 mg/kg 1.2-DCA, <0.39 mg/kg ethanol
[4] MtBE, TBA, DIPE, ETBE, TAME, EDB, 1.2-DCA, EtOH all not analyzed.
[5] Pb detected at 36 mg/kg; Cd, Cr, Ni, Zn all not analyzed.
NA - Not Analyzed

Site History and Description of Corrective Actions:
The site is an operational 76 service station located within a shopping center located on the northwest corner of the intersection of Mecartney Road and Island Drive in Alameda, California. The site is located in a mixed commercial and residential neighborhood. Site features include three gasoline underground storage tanks (USTs), two fuel dispenser islands, and a station building with a service bay containing two hoists. The capacity of the three fiberglass fuel USTs are 12,000-gallon, 10,000-gallon, and 6,000-gallons. Currently, there are two onsite (MW-5, MW-6) and four offsite active groundwater monitoring wells (MW-7, XW-1 through XW-3), and five onsite soil vapor monitoring wells (SV-1 through SV-5).

During a routine dispenser modification in May 1990, hydrocarbon contaminated soils were reported in samples P-1 and P-2 from a depth of 4.5 feet below ground surface (bgs). The dispenser area, including sample locations, was subsequently over-excavated to 4.5 feet bgs and confirmation soil samples SW1 through SW9 were collected at sample points illustrated on **Figure 3**. Total petroleum hydrocarbons as gasoline (TPH-g) and benzene were reported at maximum concentrations in sidewall samples SW1 and SW3 at concentrations of 2,000 milligrams per kilogram (mg/kg) and 18 mg/kg in SW1, and 860 mg/kg and 5 mg/kg in SW3, respectively at a depth of 8 feet bgs. SW3 could not be over-excavated to the southwest due to proximity to fuel USTs according to KEI. Additional excavation to 8.5 feet bgs was reported to have taken place to the south of SW-1, but it appears that additional excavation to the north of the sample was not conducted. Soil south of SW1 was excavated to 8.5 feet bgs, and soil to the north was excavated to 4.5 feet bgs, the same depth as SW1. Approximately 195 cubic yards of soil were excavated and disposed of at Class I and Class III facilities. Historical soil analytical results are presented in **Table 1**. Soil sample locations and excavation limits are shown on **Figure 3**.

In a correspondence letter from the BP Oil Company, the installation of three monitoring wells (XW-1 through XW-3) surrounding the site on Harbor Bay Landing shopping center property was acknowledged on May 4, 1993. No information to the wells installation, ownership or purpose was known. The wells were included into the site's quarterly monitoring program in June of 1993. Well locations are shown on **Figures 2** and **3**.

One 4-inch diameter groundwater monitoring well, MW-5, was installed June 1993 in the western corner of the property to a depth of 15 feet bgs (**Figure 2, 3**). TPH-d was reported at a concentration of 11,000 mg/kg at a depth of 5 feet bgs. The first groundwater sample collected from the well was reported to only contain TPH-d above the laboratory reporting limit (LRL), at a concentration of 100 ppb.

In October 1994, two exploratory borings (TB-1 and TB-2) were advanced to a depth of 11.5 feet bgs (**Figure 3**) as part of a baseline property assessment. No analytes were reported above their respective laboratory reporting limits (LRLs) in any soil samples. Groundwater samples collected from borings, TB-1 and TB-2, detected 1,500 µg/L and 310 µg/L TPH-g, respectively. Historical soil and groundwater analytical results from the soil borings are summarized in **Tables 1 and 2.**

In January 1995, monitoring wells, MW-1 through MW-4, were destroyed. EMCON stated that these wells appeared to be used as tank basin observation wells. Historic documentation does not explicitly state the reason for the destruction of MW-1 through MW-4. However, it is presumed that the wells were destroyed due to poor groundwater recharge in these wells and because of their unknown construction details. It was noted by Hydro Environmental Technologies, Inc. that "neither well seals nor bottom well plugs were observed in any of the four wells at the time of destruction."

During the same phase of work, one 4-inch diameter monitoring well, MW-6, was installed on-site and one 2-inch diameter monitoring well, MW-7, was installed approximately five feet to the northwest of the site (**Figures 2 and 3**). Monitoring well MW-6 was constructed to a depth of 15 feet bgs and MW-7 was constructed to a depth of 16.5 feet bgs. TPH-d, TPH-g, ethylbenzene, xylenes and toluene were reported in the soil sample from MW-6 at a depth of 5 feet bgs at concentrations of 480mg/kg, 89mg/kg, 0.63 mg/kg, 4.8 mg/kg and 0.21 mg/kg, respectively. In a soil sample from MW-7 from a depth of five feet, TPH-d was detected at a concentration of 110 mg/kg. Groundwater was encountered in the monitoring wells at depths ranging from 5 to 7.5 feet bgs.

In November 1996, the oil/water separator located in the floor of the vehicle service bay on the west side of the service station building was removed. Two soil samples (OWS-1, 0.5' and OWS-1, 2') were collected from beneath the former oil/water separator (**Figure 3**). Total recoverable petroleum hydrocarbons (TRPH) were present in the both soil samples with a maximum concentration of 49 mg/kg. All other analytes were below detected below the laboratory detection limit. Soil analytical data is summarized on **Table 1**.

In August 1997, samples of pea gravel base material (S-1, through S-4) were collected from below each fuel dispenser. Only toluene and xylenes were reported above the LRLs in the samples. Soil analytical data is

summarized on **Table 1**.

One 1,000-gallon single-walled fiberglass used-oil UST was removed from the site on July 9, 1998. The UST was noted to be intact with no visible holes or cracks. One native soil sample (S-6-T1E) was collected from the eastern sidewall of the UST cavity at a depth of approximately 7 feet bgs (**Figure 3**). No analytes were detected above the LRL in the soil sample.

In August 2000, site fuel dispensers and product lines were removed and replaced. A total of four pea gravel samples (PD-1-2', PD-2-1.5', PD-3-1.5', and PD-4-1.5') were collected from beneath each of the four fuel dispensers, and four pea gravel samples (PL-3-1.5', PL-4-1.5', PL-6-1.5', and PL-7-1.5') were collected from beneath the product lines. Three pea gravel samples were also collected at each of the ends of the fuel USTs (F-1-4', F-2-4', and F-5-3'). No analytes were reported above LRLs in any of the samples submitted for laboratory analysis. Historical soil analytical results are summarized in **Table 1** and soil sample locations are shown on **Figure 3**.

On October 31, 2001, ACEH issued a letter to evaluate the case for closure consideration. In a letter dated November 7, 2001, BP Oil notified the ACEH that monitoring and sampling of the site's monitoring wells would cease pending case closure/ the issue of an NFA. On October 21, 2004, URS submitted a Case Closure Summary to ACEH.

ACEH denied URS case closure on August 21, 2008. ACEH had concerns whether sample SW1 was over-excavated. The sample was collected from a depth of 4.5 feet bgs, and appeared to be a sidewall sample for the 8 foot deep excavation to the south. ACEH then stated that concentrations reported in SW1 would require additional investigation.

In February 2009, Broadbent & Associates, Inc (BAI) attempted to advance soil boring B-4 to assess the presence of residual petroleum hydrocarbon-impacted soil onsite in the vicinity of the UST complex and the pump islands. Field activities were stopped in accordance with BP's safety protocol after encountering pea gravel. According to the manager who has operated the facility for 24 years, during original construction, a large area of the subsurface soil was excavated from the site and backfilled with pea gravel. The approximate extent of the pea gravel is shown on **Figure 2**. BAI also conducted a preferential pathway study, but stated that results of the study were inconclusive. BAI recommended case closure based on historically low hydrocarbon concentrations.

On May 8, 2009, ACEH did not concur with BAI's closure request and stated that investigation had not been performed to confirm or repudiate concentrations in SW1. Further, ACEH stated that since pea gravel covers much of the subsurface at the site, that vapor intrusion should be investigated.

On December 10, 2009, Delta installed five soil vapor wells at the site at locations shown on **Figures 2 and 3**. One soil sample was collected from 4.5 feet bgs in each well, and soil vapor samples were collected on January 10, 2010. TPH-d and methyl tertiary butyl ether (MTBE) were reported in soil sample SV-5 at concentrations of 50.9 mg/kg and 0.022 mg/kg, respectively. TPH-g was reported in soil vapor samples from wells SV-2, SV-4 and SV-5 at concentrations of 1,400 micrograms per cubic meter (µg/m3), 35,000 µg/m3 and 16,000 µg/m3, respectively. MTBE was reported in the same wells at concentrations of 60 µg/m3, 92 µg/m3 and 4,700 µg/m3 respectively. Benzene was reported in vapor samples from all wells at concentrations ranging from 9.9 µg/m3 in well SV-1 to 33 µg/m3 in well SV-2. Soil vapor samples collected from SV-1, SV-2 and SV-3 did not contain analytes above the residential or commercial ESL for TPH-g. MTBE and benzene detections in all samples were below their residential and commercial ESLs. The residential ESL for TPH-g was exceeded in samples SV-4 and SV-5; however the TPH-g detection in SV-5 is below the commercial ESL. These sample locations are not near the station building, and contamination in their vicinity does not pose a risk to indoor air quality. Based on the distance from the station building and the soil vapor TPH-g concentrations in wells SV-1 (<920 µg/m3) and SV-2 (1,400 µg/m3) adjacent to the station building, Delta concluded that intrusion of soil vapor into the service station building is not a concern at the site, and that the site is capped with asphalt and concrete, impeding the upward movement of soil vapor towards potential receptors. Therefore, Delta recommended suspension of additional soil vapor sampling events.

Geology & Hydrogeology:

The site is situated approximately 4,500 feet south of San Leandro Bay, and approximately 3,500 feet northeast of the present shoreline of San Francisco Bay, and approximately 600 feet south of a channel. Sediments beneath the site have been classified as Holocene beach sands and dune deposits (Brabb et al. 2006). Sediments encountered at the site generally consisted of silty to gravelly sand and sandy gravel to the maximum explored depth of 16.5 feet bgs. Lean clay was encountered in boring MW-5 from 13 to 15 feet bgs, and gravelly clay (possibly fill) from 3.5 to 5 feet bgs in boring MW-7.

The site overlies the Alameda East Plain Subbasin, which is part of the larger Santa Clara Valley Groundwater Basin. Deposits that makeup the East Bay Plain Subbasin consist of Pliocene through Holocene age tidal deposits including bay mud, sand and gravel beach deposits, and silts and clays from channel and swamp deposits. The East Bay Plain

Subbasin is estimated to be 1,000 feet thick, with depth to water varying from sea level to 140 feet below mean sea level. Since 2000, water in the East Bay Plain Aquifer has been at sea level (RWQCB 1999). Groundwater was encountered during drilling at a depths ranging from 5 to 7.5 feet bgs (Hydro 1995), and historically groundwater in site wells has ranged in elevation from 1.26 feet below sea level (MW-7 10/12/1995) to 2.25 feet above mean sealevel (XW-1 on 4/19/1998). Groundwater at the site has typically been directed to the northwest, with north and northeast horizontal components and an average hydraulic gradient of 0.029 feet per foot. Historic groundwater elevation data including a groundwater flow rose diagram are presented in attached tables.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes		
Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, it does not appear that the release would present a significant risk to human health based upon current land use and conditions.		
Site Management Requirements: Case closure for this fuel leak site is granted for the current commercial land use as a gasoline station only. If a change in land use to any other commercial, residential, or other conservative land use scenario is proposed at this site, Alameda County Environmental Health (AECH) must be notified as required by Government Code Section 65850.2.2. ACEH will re-evaluate the case upon receipt of approved development/construction plans. Excavation or construction activities in areas of residual contamination require planning and implementation of appropriate health and safety procedures by the responsible party (or current property owner/developer) prior to and during excavation and construction activities.		
Should corrective action be reviewed if land use changes? Yes.		
Was a deed restriction or deed notification filed? No		Date Recorded: --
Monitoring Wells Decommissioned: No	Number Decommissioned: 6	Number Retained: 10
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: --		

V. ADDITIONAL COMMENTS, DATA, ETC.

Considerations and/or Variances:

- Residual TPH-g (2,000 mg/kg), TPH-d (480 mg/kg), and benzene (18 mg/kg) in soil remain at the site.
- Residual TPH-d concentrations in groundwater at 1,000 µg/L, remain at the site.
- Also note that the required analysis for a waste oil UST removal was not performed.

Conclusion:

Alameda County Environmental Health staff believe that the levels of residual contamination do not pose a significantly threat to water resources, public health and safety, and the environment under the current commercial land use as a gasoline station based upon the information available in our files to date. No further investigation or cleanup for the fuel leak case is necessary unless a change in land use to any other commercial, residential or other conservative land use scenario occurs at the site. ACEH staff recommend closure for the site.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Paresh Khatri	Title: Hazardous Materials Specialist
Signature: Paresh Khatri	Date: January 9, 2012
Approved by: Donna L. Drogos, P.E.	Title: Chief
Signature: Donna L. Drogos	Date: 01/13/12

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

VII. REGIONAL BOARD NOTIFICATION

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB: 1/20/2012
Signature: See RWQCB E-Mail	Date: 1/20/2012

VIII. MONITORING WELL DECOMMISSIONING

Date Requested by ACEH: 2/14/2012	Date of Well Decommissioning Report: 5/21/2012	
All Monitoring Wells Decommissioned: No	Number Decommissioned: 11	Number Retained: 0
Reason Wells Retained: NA		
Additional requirements for submittal of groundwater data from retained wells: NA		
ACEH Concurrence - Signature: Paresh Khatri		Date: 6/18/2012

Attachments:

1. Analytical Tables 1 through 7
2. Site Figures 1 through 8
3. Boring Logs (8 pp)

This document and the related CASE CLOSURE LETTER & REMEDIAL ACTION COMPLETION CERTIFICATE shall be retained by the lead agency as part of the official site file.

Khatri, Paresh, Env. Health

From: Cherie MCcaulou [CMccaulou@waterboards.ca.gov]
Sent: Friday, January 20, 2012 10:04 AM
To: Khatri, Paresh, Env. Health
Subject: Re: RO0000511; Closure Summary for BP #11270 (T0600101198)

Paresh - Thank you for the notice of case closure for BP #11270. We have no objection to this intended action.

Sincerely,

Cherie McCaulou
Engineering Geologist
San Francisco Bay Regional Water Quality Control Board
cmccaulou@waterboards.ca.gov
510-622-2342

>>> "Khatri, Paresh, Env. Health" <paresh.khatri@acgov.org> 1/20/2012 9:03 AM >>>
Hello Cherie,

Attached is a closure summary for RO0000511; BP #11270 located at 3255 Mecartney Road in Alameda to comply with the RWQCB's 30-day review period. If no comments from the RWQCB are received within the 30-day review period, ACEH's will proceed with case closure.

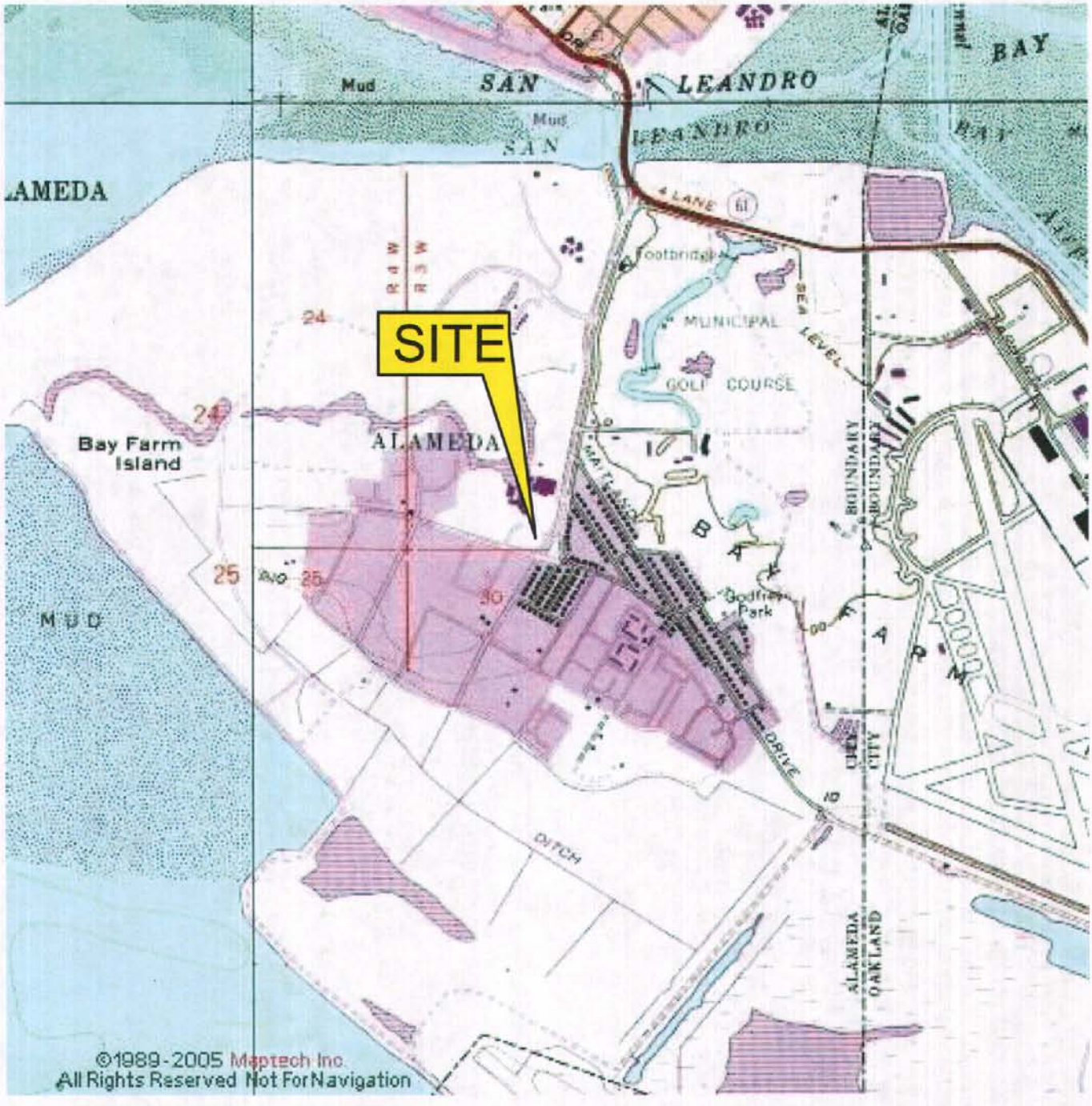
Please contact me should you have any comments or questions regarding the subject site.

Paresh C. Khatri
Sr. Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

Phone: (510) 777-2478
Fax: (510) 337-9335

E-mail: Paresh.Khatri@acgov.org

http://www.acgov.org/aceh/index.htm



North

0 900 1800 FT
SCALE

SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, SAN LEANDRO & HUNTERS POINTE QUADRANGLES (1973

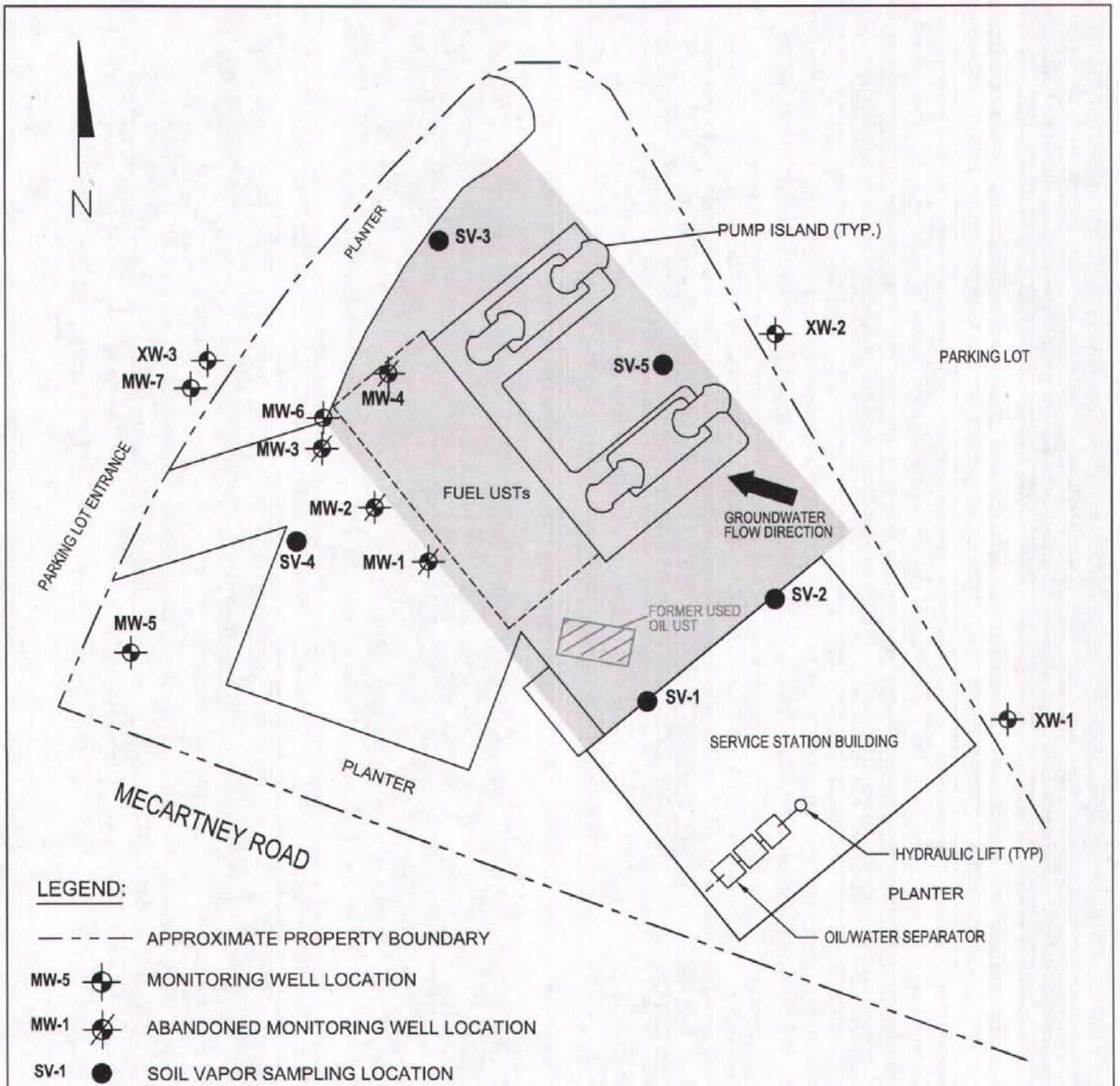
FIGURE 1

SITE LOCATION MAP

76 STATION NO. 11270
3255 MECARTNEY ROAD
ALAMEDA, CALIFORNIA

PROJECT NO. 142611270	DRAWN BY JH 06/02/09
FILE NO. 11270-SiteLocator	PREPARED BY DD
REVISION NO.	REVIEWED BY

DELTA®



LEGEND:

- APPROXIMATE PROPERTY BOUNDARY
- MW-5 — MONITORING WELL LOCATION
- MW-1 — ABANDONED MONITORING WELL LOCATION
- SV-1 — SOIL VAPOR SAMPLING LOCATION
- APPROXIMATE AREA FILLED WITH PEA GRAVEL IN THE SHALLOW SUB-SURFACE PER FACILITY OPERATOR

0 20 FT

SCALE

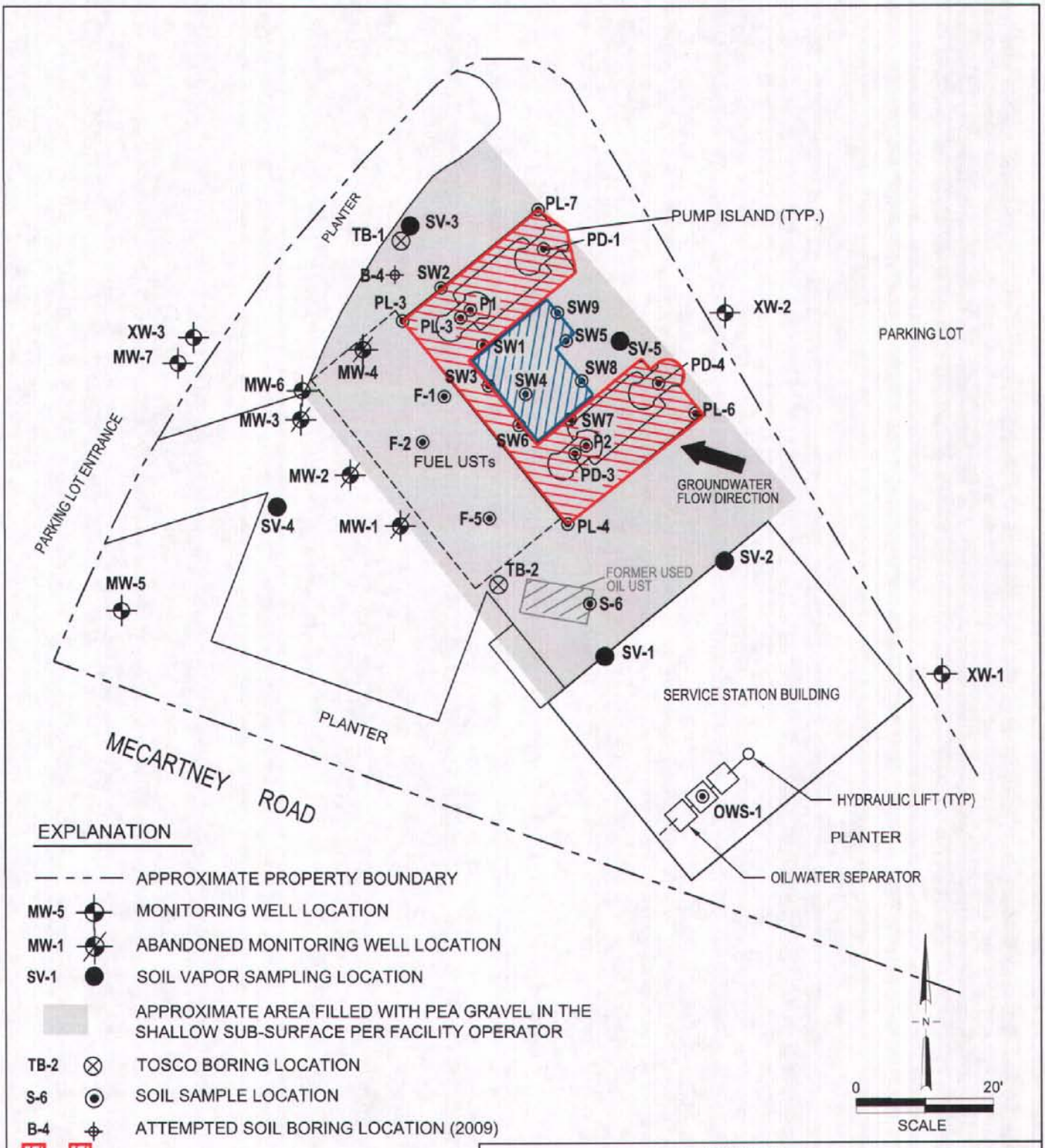
MAP ADAPTED FROM A MAP DATED 10/14/08 BY BROADBENT & ASSOCIATES, INC ENTITLED "SITE MAP".

FIGURE 2
SITE PLAN

BP STATION NO. 11270
3255 MECARTNEY ROAD
ALAMEDA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
142611270	TP	JH
DATE	REVIEWED BY	FILE NAME
02/09/10	DD	11270-Site

DELTA®



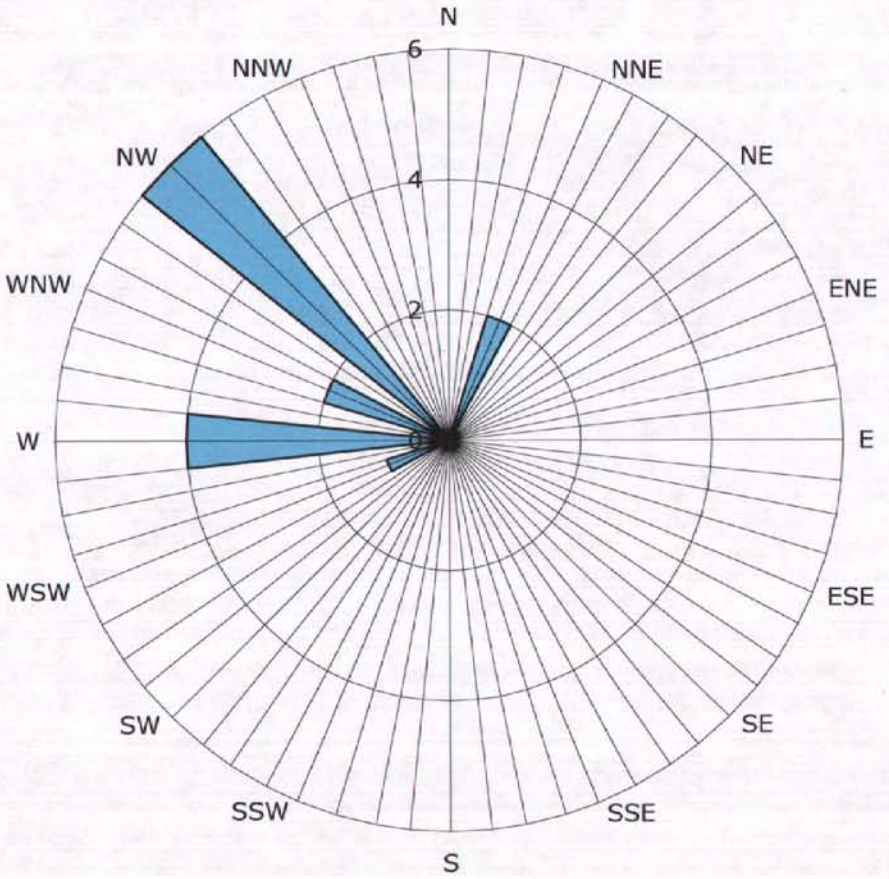
NOTE:
MAP ADAPTED FROM A MAP DATED 10/14/08 BY BROADBENT & ASSOCIATES, INC ENTITLED "SITE MAP".

FIGURE 3
SITE PLAN WITH HISTORICAL SAMPLE LOCATIONS
BP STATION NO. 11270
3255 MECARTNEY ROAD
ALAMEDA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
142611270	NP	JH/KYM
DATE	REVIEWED BY	FILE NAME
06/14/10	DD	11270-Site

DELTA®

Historic Groundwater Flow Directions
BP Station No. 11270
3255 Mecartney Road
Alameda, California



Legend
Groundwater flow directions are based on data from the Fourth Quarter 1994 to the Third Quarter 2009. 15 data points shown.

11270 ROSE DIAGRAM.xls

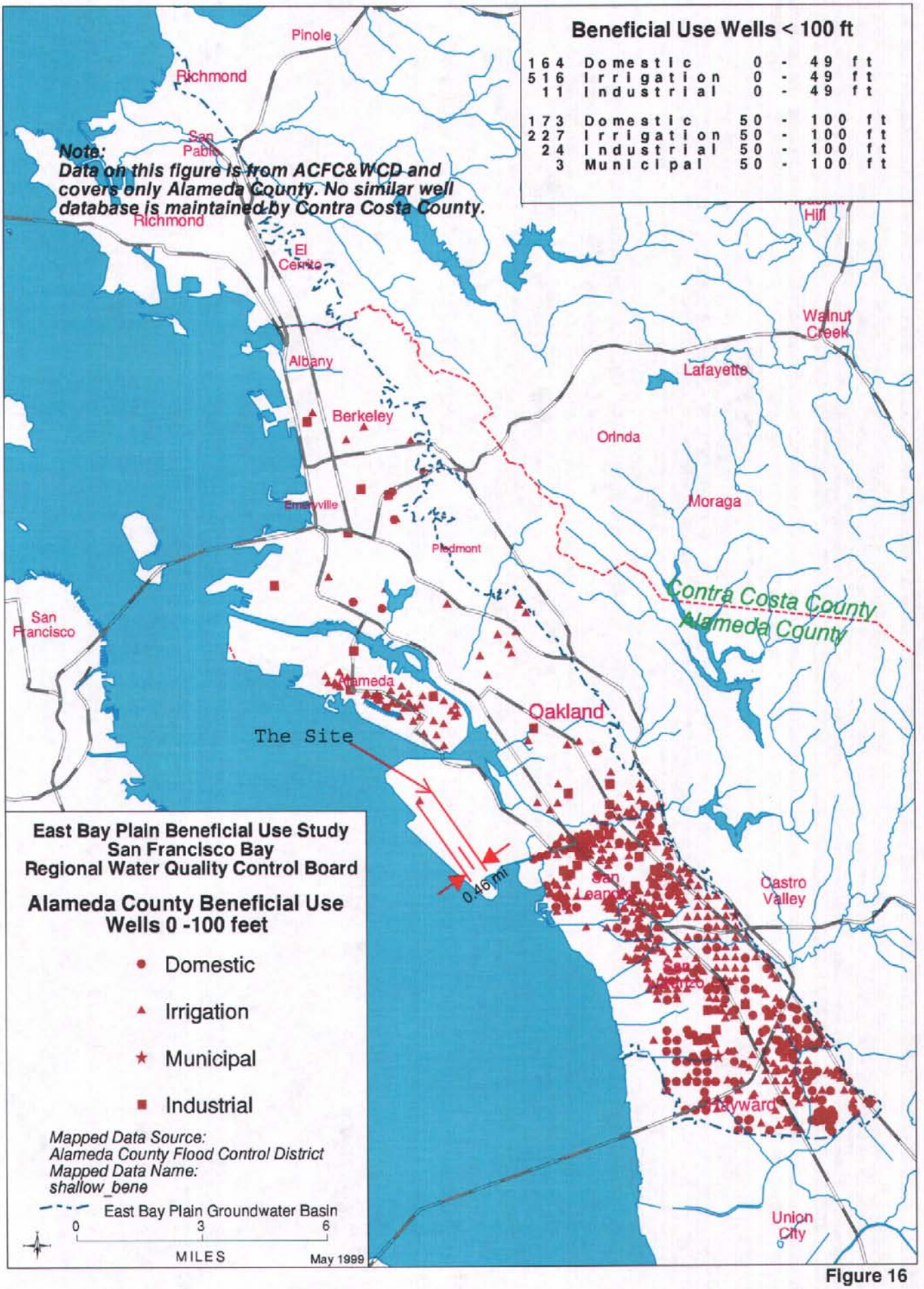

Beneficial Use Wells < 100 ft
164 Domestic 0 - 49 ft
516 Irrigation 0 - 49 ft
11 Industrial 0 - 49 ft
173 Domestic 50 - 100 ft
227 Irrigation 50 - 100 ft
24 Industrial 50 - 100 ft
3 Municipal 50 - 100 ft
Note:
Data on this figure is from ACFC&WCD and covers only Alameda County. No similar well database is maintained by Contra Costa County.
Pinole
Richmond
San Pablo
Richmond
El Cerrito
Albany
Berkeley
Emeryville
Piedmont
Hill
Walnut Creek
Lafayette
Orinda
Moraga
Contra Costa County
Alameda County
San Francisco
Alameda
Oakland
The Site
0.46 mi
San Leandro
Castro Valley
Hayward
Union City
East Bay Plain Beneficial Use Study
San Francisco Bay
Regional Water Quality Control Board
Alameda County Beneficial Use
Wells 0 -100 feet
Domestic
Irrigation
Municipal
Industrial
Mapped Data Source:
Alameda County Flood Control District
Mapped Data Name:
shallow_bene
East Bay Plain Groundwater Basin
0
3
6
MILES
May 1999

Figure 16

TABLE 2
Groundwater Gradient and Flow Direction
BP Station Number 11270
3255 Mecartney Road
Alameda, California

Site	Monitoring Date	Groundwater Gradient (feet per foot)	Groundwater Flow Direction															
			N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
11270	10/26/94	0.03	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	0
	02/05/95	0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0
	05/05/95	0.03	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	0	0
	01/08/96	0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0
	09/11/97	0.01	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	0
	01/27/98	0.02 ; 0.07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0
	04/19/98	0.03	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	0
	07/29/99	0.06	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10/18/99	0.06	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	01/12/00	0.07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0
	09/27/00	0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0
	03/21/01	0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0
	09/18/01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	0
	09/18/08	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0
	07/22/09	0.013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0.029 Average	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**	**2**	**6**	**0**

Explanation

NA = Not available

Number of Events = 14

HISTORICAL SOIL ANALYTICAL RESULTS
76 Station No.11270
Alameda, California

Sample ID	Date	Sample Depth (feet)	TPH-G (mg/kg)	TPH-D (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	DIPE (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Ethanol (mg/kg)	Total Lead (mg/kg)
SW1	5/22/90	4.5	**2,000**	--	**18**	**56**	**39**	**270**	--	--	--	--	--	--	--	--	**6.5**
SW2	5/22/90	4.5	**8.0**	--	**0.31**	**0.084**	**0.26**	**1.2**	--	--	--	--	--	--	--	--	**1.7**
SW3	5/30/90	8	**860**	--	**5**	**2.8**	**7.5**	**13**	--	--	--	--	--	--	--	--	**5.7**
SW4	5/30/90	4.5	**1.0**	--	**0.009**	**0.017**	**0.0099**	**0.03**	--	--	--	--	--	--	--	--	**0.071**
SW5	5/30/90	4.5	**15**	--	**0.035**	**0.26**	**0.14**	**0.49**	--	--	--	--	--	--	--	--	**2.1**
SW6	5/30/90	4.5	**1.5**	--	**0.0079**	**0.0052**	**0.023**	**0.069**	--	--	--	--	--	--	--	--	**2.9**
SW7	5/30/90	4.5	<1.0	--	**0.034**	**0.0073**	**0.042**	**0.076**	--	--	--	--	--	--	--	--	**36**
SW8	5/30/90	4.5	<1.0	--	**0.01**	**0.0098**	**0.016**	**0.035**	--	--	--	--	--	--	--	--	**5.8**
SW9	5/30/90	4.5	<1.0	--	**0.024**	<0.005	**0.02**	**0.026**	--	--	--	--	--	--	--	--	**11**
P1	5/22/90	4.5	**6,900**	--	**70**	**260**	**120**	**700**	--	--	--	--	--	--	--	--	**0.91**
P1(8)	5/22/90	8	**7.0**	--	**1**	**0.025**	**0.19**	**0.47**	--	--	--	--	--	--	--	--	**1.7**
P2	5/22/90	4.5	<1.0	--	**0.0058**	**0.005**	**0.01**	**0.023**	--	--	--	--	--	--	--	--	**1.6**
TB1-S, 2.5-3	10/26/94	2.5-3	<0.1	<1	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--
TB1-S, 5.5-6	10/26/94	5.5-6	<0.1	<1	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--
TB2-S, 2.5-3	10/26/94	2.5-3	<0.1	<1	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--
TB2-S, 6.5-7	10/26/94	6.5-7	<0.1	<1	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--
MW-5-5	6/17/93	5	<1	**11**	<.0050	<.0050	<.0050	<.0050	--	--	--	--	--	--	--	--	--
MW-6-5	1/19/95	5	**89**	**480**	<.050	**0.21**	**0.63**	**4.8**	--	--	--	--	--	--	--	--	--
MW-7-5	1/18/95	5	<0.050	**110**	<0.0005	<0.0005	<0.0005	<.0010	--	--	--	--	--	--	--	--	--
OWS-1-0.5	12/12/96	0.5	ND*	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
OWS-1-2	12/12/96	2	ND**	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
S-1	8/15/97	0.5-1	<0.1	--	<0.001	**0.085**	<0.002	**0.0047**	<0.1	--	--	--	--	--	--	--	--
S-2	8/15/97	0.5-1	<0.1	--	<0.001	**0.047**	<0.002	<0.002	<0.1	--	--	--	--	--	--	--	--
S-3	8/15/97	0.5-1	<0.1	--	<0.001	**0.058**	<0.002	<0.002	<0.1	--	--	--	--	--	--	--	--
S-4	8/15/97	0.5-1	<0.1	--	<0.001	**0.049**	<0.002	<0.002	<0.1	--	--	--	--	--	--	--	--
S-6-T1E	7/9/98	6	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	ND
PD-1-2	8/7/00	2	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	<10
PD-2-1.5	8/7/00	1.5	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	<10
PD-3-1.5	8/7/00	1.5	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	<10
PD-4-1.5	8/7/00	1.5	<1.0	--	<0.005	<0.005	<0.005	<0.005	**0.0582**	--	--	--	--	--	--	--	<10
PL-3-1.5	8/7/00	1.5	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	<10
PL-6-.15	8/7/00	1.5	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	<10
PL-7-1.5	8/7/00	1.5	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	<10
F-1-4	8/7/00	4	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	<10
F-2-4	8/7/00	4	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	<10
F-5-3	8/7/00	4	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	<10
SV-1	12/10/09	4.5	<0.23	<5.9	<0.0027	<0.0027	<0.0027	<0.0055	<0.0027	<0.014	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.37	--
SV-2	12/10/09	4.5	<0.22	<5.8	<0.0027	<0.0027	<0.0027	<0.0054	<0.0027	<0.013	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.36	--
SV-3	12/10/09	4.5	<0.23	<5.8	<0.0028	<0.0028	<0.0028	<0.0055	<0.0028	<0.014	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.37	--
SV-4	12/10/09	4.5	<0.24	<6.0	<0.0028	<0.0028	<0.0028	<0.0056	<0.0028	<0.014	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.38	--
SV-5	12/10/09	4.5	<0.24	51	<0.0029	<0.0029	<0.0029	<0.0058	0.022	0.032	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.38	--
COMP ABCD	12/11/09	--	<0.25	<5.9	<0.003	<0.003	<0.003	<0.0059	<0.003	<0.015	<0.003	<0.003	<0.003	<0.003	<0.003	<0.39	9.9

TPH-G = total purgeable petroleum hydrocarbons as gasoline by EPA Method 8260B
TPH-D = total purgeable petroleum hydrocarbons as diesel by EPA Method 8015
TPH-O = total purgeable petroleum hydrocarbons as oil by EPA Method 8015
BTEX = benzene, toluene, ethylbenzene, total xylenes by EPA Method 8020 or 8260B
MTBE = methyl tertiary butyl ether by EPA Method 8020 or 8260B
TBA = tertiary butyl alcohol by EPA Method 8260B
ETBE = ethyl tertiary butyl ether by EPA Method 8260B
TAME = tertiary amyl methyl ether by EPA Method 8260B
DIPE = di-isopropyl ether by EPA Method 8260B
* TRPH reported in sample at 49 mg/kg
**= TRPH reported in sample at 13 mg/kg
Soil sample overexcavated

1,2-DCA = 1,2-Dichloroethane (also known as ethylene dichloride) by EPA Method 8260B
EDB = ethylene dibromide (also known as 1,2-Dibromoethane) by EPA method 8260B
Ethanol was analyzed by EPA Method 8260B

mg/kg = milligrams per kilogram
ND = not detected above the laboratory detection limit (reporting limit unkown)
-- = not analyzed
Bold = detected compound concentration
EPA = US Environmental Protection Agency

HISTORICAL GRAB GROUNDWATER ANALYTICAL RESULTS
76 Station No. 1270
Alameda, California

Sample ID	Date	Sample Depth (feet)	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	ETBE (µg/L)	TAME (µg/L)	DIPE (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Ethanol (µg/L)
TB-1-W-11.5	10/26/94	11.5	**1,500**	<1	<1	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
TB-2-W-11.5	10/26/94	11.5	**310**	<1	<1	<0.5	1.0	<0.5	1.0	--	--	--	--	--	--	--	--

TPH-G = total purgeable petroleum hydrocarbons as gasoline by EPA Method 8260B
TPH-D = total purgeable petroleum hydrocarbons as diesel by EPA Method 8015
TPH-O = total purgeable petroleum hydrocarbons as oil by EPA Method 8015
BTEX = benzene, toluene, ethylbenzene, total xylenes by EPA Method 8020 or 8260B
MTBE = methyl tertiary butyl ether by EPA Method 8260B
TBA = tertiary butyl alcohol by EPA Method 8260B
ETBE = ethyl tertiary butyl ether by EPA Method 8260B
TAME = tertiary amyl methyl ether by EPA Method 8260B
DIPE = di-isopropyl ether by EPA Method 8260B
1,2-DCA = 1,2-Dichloroethane (also known as ethylene dichloride) by EPA Method 8260B
EDB = ethylene dibromide (also known as 1,2-Dibromoethane) by EPA method 8260B
Ethanol was analyzed by EPA Method 8260B

mg/kg = milligrams per kilogram
ND = not detected above the laboratory detection limit (no reporting limit available)
-- = not analyzed
Bold = detected compound concentration
EPA = US Environmental Protection Agency

Soil Analytical Results (Fuel Oxygenates)
76 Service Station No.11270
3255 Mecartney Road, Alameda, CA

Sample ID	Date	TAME (mg/kg)	TBA (mg/kg)	EDB (mg/kg)	1,2-DCA (mg/kg)	DIPE (mg/kg)	Ethanol (mg/kg)	ETBE (mg/kg)
SV-1 @4.5 feet	12/10/2010	<0.0027	<0.014	<0.0027	<0.0027	<0.0027	<0.37	<0.0027
SV-2 @4.5 feet	12/10/2010	<0.0027	<0.013	<0.0027	<0.0027	<0.0027	<0.36	<0.0027
SV-3 @4.5 feet	12/11/2010	<0.0028	<0.014	<0.0028	<0.0028	<0.0028	<0.37	<0.0028
SV-4 @4.5 feet	12/11/2010	<0.0028	<0.014	<0.0028	<0.0028	<0.0028	<0.38	<0.0028
SV-5 @4.5 feet	12/10/2010	<0.0029	**0.032**	<0.0029	<0.0029	<0.0029	<0.38	<0.0029
comp ABCD	12/11/2010	<0.0030	<0.015	<0.0030	<0.0030	<0.0030	<0.39	<0.0030

Notes
TBA: Tertiary butyl alcohol
ETBE: Ethyl tertiary butyl ether
TAME: Tertiary amyl methyl ether
DIPE: Di-isopropyl ether
ETBE: Ethyl tertiary butyl ether

EDB: 1,2-Dibromoethane
1,2-DCA: 1,2-dichloroethane

mg/Kg: milligrams per kilogram
<: Below the laboratory indicated

Soil Gas Analytical Results (TPH-G, BTEX, MTBE, Fuel Oxygenates)
76 Service Station No.11270
3255 Mecartney Road, Alameda, CA

Sample ID	Date	TPH-G ($\mu g/m^3$)	MTBE ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Toluene ($\mu g/m^3$)	Ethyl-benzene ($\mu g/m^3$)	M,P-Xylenes ($\mu g/m^3$)	O-Xylenes ($\mu g/m^3$)	1,2-DCA ($\mu g/m^3$)	EDB ($\mu g/m^3$)	Ethanol ($\mu g/m^3$)	TAME ($\mu g/m^3$)
SV-1	1/8/2010	<920	<8.1	9.9	40	<9.7	<9.7	<9.7	<9.0	<17	<21	<47
SV-2	1/8/2010	1,400	60	33	60	<8.7	<8.7	10	<8.1	<16	<19	<42
SV-3	1/8/2010	<770	<6.7	12	49	<8.0	<8.0	11	<7.5	<14	<18	<39
SV-4	1/8/2010	35,000	92	13	54	<7.7	8.2	12	<7.2	<14	<17	<38
SV-5	1/8/2010	16000	4,700	14	45	<8.5	<8.5	13	<7.9	<15	<19	<42

notes:
<: below the laboratory reporting limit
$\mu g/m^3$: micrograms per cubic meter

MTBE: Methyl tertiary butyl ether
1,2-DCA: 1,2-dichloroethane

EDB: 1,2-dibromoethane
TAME: tertiary amyl methyl ether
TPH-G: total petroleum hydrocarbons as gasoline

Soil Gas Analytical Results (Expanded List & Fixed Gases)
76 Service Station No. 11270
3255 Mecartney Road, Alameda, CA

Sample ID	Date	Iso-propanol ($\mu g/m^3$)	t-butanol ($\mu g/m^3$)	Isopropyl ether ($\mu g/m^3$)	TBEE ($\mu g/m^3$)	Oxygen/ Argon (% v/v)	Nitrogen (% v/v)	Methane (% v/v)	CO_2 (% v/v)	CO (% v/v)
SV-1	1/8/2010	1,200	<34	<47	<47	16	82	<0.0022	4.0	<0.0022
SV-2	1/8/2010	60	<30	<42	<42	1.6	35	55	10	<0.0020
SV-3	1/8/2010	<22	<28	<39	<39	12	78	<0.0019	8.6	<0.0019
SV-4	1/8/2010	6,200	<27	<38	<38	2.9	87	0.89	9.3	<0.0018
SV-5	1/8/2010	3,800	<30	<42	<42	5.1	76	10	9.0	<0.0020

notes:
<: below the laboratory reporting limit
$\mu g/m^3$: micrograms per cubic meter
MTBE: Methyl tertiary butyl ether
1,2-DCA: 1,2-dichloroethane

(%) v/v: percent volume of gas per volume of air

TBEE: tertiary butyl ethyl ether
CO_2: Carbon Dioxide

CO: Carbon Monoxide

TABLE 1
Historical Groundwater Monitoring and Analytical Data
ConocoPhillips (Former BP) Station Number 2611270
3255 Mecartney Road, Alameda, CA

Well No.	Date	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	TPHg (µg/L)	TPPH (µg/L)	TPHd (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	D.O. (mg/L)	Comments
MW-1	10/29/92	7.48	7.25	-	0.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-1	06/21/93	7.48	5.4	-	2.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-1	04/05/94	7.48	5.64	-	1.85	1700	-	-	20	1.1	3.9	7.8	-	-	-	-	-	-	-	-	-	
MW-1	07/28/94	7.48	6.22	-	1.27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-1	10/26/94	7.48	6.4	-	1.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-1	02/05/95	7.48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-2	10/29/92	7.07	6.84	-	0.23	2500	-	3900	140	<10	65	22	-	-	-	-	-	-	-	-	-	
MW-2	06/21/93	7.07	5.49	-	1.58	720	-	770	12	1.5	11	12	-	-	-	-	-	-	-	-	-	
MW-2	04/05/94	7.07	5.4	-	1.67	420	-	1300	<0.50	<0.50	<0.50	4	4500	-	-	-	-	-	-	-	1.8	
MW-2	07/28/94	7.07	5.97	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-2	10/26/94	7.07	6.1	-	0.97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-2	02/02/95	7.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-3	10/29/92	7.08	7.14	-	-0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-3	06/21/93	7.08	5.84	-	1.24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-3	04/05/94	7.08	5.83	-	1.25	990	-	4300	3.2	<0.50	<0.50	1.3	790	-	-	-	-	-	-	-	-	
MW-3	07/28/94	7.08	6.32	-	0.76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-3	10/26/94	7.08	6.42	-	0.66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-3	02/02/95	7.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-4	10/29/92	7.13	6.9	-	0.23	2600	-	-	250	2.5	74	6.6	-	-	-	-	-	-	-	-	-	
MW-4	06/21/93	7.13	5.54	-	1.59	1400	-	1100	24	2.9	2.6	7.9	-	-	-	-	-	-	-	-	-	
MW-4	04/05/94	7.13	5.46	-	1.67	930	-	940	33	0.8	<0.50	2.8	8700	-	-	-	-	-	-	-	2.7	
MW-4	07/28/94	7.13	6.02	-	1.11	2400	-	1400	19	1.8	0.5	8	-	-	-	-	-	-	-	-	6.7	
QC-1	7/28/1994	-	-	-	-	2300	-	-	19	1.7	0.5	7.4	-	-	-	-	-	-	-	-	-	
MW-4	10/26/94	7.13	6.13	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-4	2/5/1995	7.13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-5	06/21/93	8.36	7.44	-	0.92	<50	-	100	<0.50	<0.50	<0.50	<0.50	-	-	-	-	-	-	-	-	-	
MW-5	04/05/94	8.36	7.42	-	0.94	<50	-	100	<0.50	<0.50	<0.50	<0.50	-	-	-	-	-	-	-	-	2.5	
MW-5	07/28/94	8.36	7.88	-	0.48	<50	-	<50	<0.50	<0.50	<0.50	<0.50	-	-	-	-	-	-	-	-	7.4	
MW-5	10/26/94	8.36	7.92	-	0.44	<50	-	160	<0.50	<0.50	<0.50	<0.50	-	-	-	-	-	-	-	-	5.5	
MW-5	02/05/95	8.36	7.83	-	0.53	<50	-	<500	<0.25	<0.25	<0.25	<0.50	-	-	-	-	-	-	-	-	-	
MW-5	05/05/95	8.36	9.00	-	-0.64	<50	-	-	<0.50	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	3.1	
MW-5	07/19/95	8.36	9.03	-	-0.67	<50	-	-	<0.50	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	4.6	
MW-5	10/12/95	8.36	9.15	-	-0.79	<50	-	-	<0.50	<0.50	<0.50	<1.0	<5.0	-	-	-	-	-	-	-	4.3	
MW-5	01/08/96	8.36	9.04	-	-0.68	<50	-	-	<0.50	<0.50	<0.50	<1.0	<5.0	-	-	-	-	-	-	-	4.9	
MW-5	09/11/97	8.36	8.90	-	-0.54	<50	-	-	<0.50	<1.0	<1.0	<1.0	<10	-	-	-	-	-	-	-	4	
MW-5	01/27/98	8.36	8.27	-	0.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-5	04/19/98	8.36	8.60	-	-0.24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-5	09/27/00	8.36	8.68	-	-0.32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-5	03/21/01	8.36	8.13	-	0.23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-5	09/18/01	8.36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-5	09/19/08	8.36	8.93	-	-0.57	<50	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	-	
MW-5	**07/22/09**	8.36	8.86	-	-0.49	-	<50	-	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	-	
MW-6	02/05/95	6.88	6.39	-	0.49	1000	-	1000	7.6	19	9.1	96	-	-	-	-	-	-	-	-	5	
MW-6	05/05/95	6.88	6.85	-	0.03	2300	-	-	49	9	130	46	-	-	-	-	-	-	-	-	3.3	
MW-6	07/19/95	6.88	7.13	-	-0.25	1500	-	-	84	3.3	28	24	-	-	-	-	-	-	-	-	3.7	
MW-6	10/12/95	6.88	7.35	-	-0.47	1800	-	-	38	13	38	86	2500	-	-	-	-	-	-	-	4.1	
MW-6	01/08/96	6.88	7.04	-	-0.16	1300	-	-	31	4.7	60	53	170	-	-	-	-	-	-	-	4.2	
MW-6	09/11/97	6.88	7.29	-	-0.41	<250	-	-	8.5	<5.0	11	6	1400	-	-	-	-	-	-	-	3.5	
MW-6	01/27/98	6.88	6.2	-	0.68	47000	-	-	350	150	360	690	38000	-	-	-	-	-	-	-	4.6	
MW-6	04/19/98	6.88	6.64	-	0.24	36000	-	-	40	510	140	10500	660	-	-	-	-	-	-	-	4	
MW-6	09/27/00	6.88	6.99	-	-0.11	1400	-	-	6.9	19	110	53	33	-	-	-	-	-	-	-	-	
MW-6	03/21/01	6.88	6.36	-	0.52	330	-	-	2.2	1.42	60.4	10.2	56.3	-	-	-	-	-	-	-	-	
MW-6	09/18/01	6.88	7.11	-	-0.23	290	-	-	0.957	<5.0	11.2	6.83	50.7	-	-	-	-	-	-	-	-	
MW-6	09/19/08	6.88	7.31	-	-0.43	83	-	-	<0.50	4.1	2	17	3.4	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	-	
MW-6	**07/22/09**	6.88	7.27	-	-0.39	-	<50	-	<0.50	<0.50	<0.50	<1.0	2.6	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	-	
MW-7	02/05/95	6.62	7.62	-	-1.00	280	-	<500	<0.25	<0.25	<0.25	<0.50	-	-	-	-	-	-	-	-	5.1	
MW-7	05/05/95	6.62	7.64	-	-1.02	290	-	-	<0.50	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	3.6	
MW-7	07/19/95	6.62	7.70	-	-1.08	150	-	-	<0.50	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	4.6	
MW-7	10/12/95	6.62	7.88	-	-1.26	110	-	-	<0.50	<0.50	<0.50	<1.0	390	-	-	-	-	-	-	-	4.7	
MW-7	01/08/96	6.62	7.66	-	-1.04	9	-	-	<0.50	<0.50	<0.50	<1.0	300	-	-	-	-	-	-	-	4.9	
MW-7	09/11/97	6.62	7.78	-	-1.16	<50	-	-	<2.5	<5.0	<5.0	<5.0	63	-	-	-	-	-	-	-	3.8	
MW-7	01/27/98	6.62	7.30	-	-0.68	1400	-	-	7.7	<1.0	<1.0	<1.0	920	-	-	-	-	-	-	-	4.4	
MW-7	04/19/98	6.62	7.52	-	-0.90	3500	-	-	15	7.7	11	19.3	3600	-	-	-	-	-	-	-	4.7	
MW-7	09/27/00	6.62	7.71	-	-1.09	<50	-	-	<0.50	<0.50	<0.50	<0.50	71	-	-	-	-	-	-	-		
MW-7	03/21/01	6.62	7.62	-	-1.00		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-7	03/29/01	6.62	7.57	-	-0.95	80	-	-	<0.50	<0.50	<0.50	<1.5	88.2	-	-	-	-	-	-	-	-	
MW-7	09/18/01	6.62	7.74	-	-1.12	<250	-	-	<2.5	<2.5	<2.5	<7.5	36.6	-	-	-	-	-	-	-	-	
MW-7	09/19/08	6.62	7.81	-	-1.19	<50	-	-	<0.50	<0.50	<0.50	<0.50	1.8	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	-	
MW-7	**07/22/09**	6.62	7.7	-	-1.08	-	<50	-	<0.50	<0.50	<0.50	<1.0	1.2	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	-	

TABLE 1
Historical Groundwater Monitoring and Analytical Data
ConocoPhillips (Former BP) Station Number 2611270
3255 Mecartney Road, Alameda, CA

Well No.	Date	TOC Elevation (ft-MSL)	Depth to Water (feet)	Measured SPH Thickness (feet)	Calc. GW Elev. (ft-MSL)	TPHg (µg/L)	TPPH (µg/L)	TPHd (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	D.O. (mg/L)	Comments
XW-1	06/21/93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-1	04/05/94	-	5.36	-	-	<50	-	70	<0.50	<0.50	<0.50	<0.50	-	-	-	-	-	-	-	-	3	
XW-1	07/28/94	-	5.92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-1	10/26/94	-	6.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-1	02/05/95	7.49	5.82	-	1.67	<50	-	<500	<0.25	<0.25	<0.25	<0.50	-	-	-	-	-	-	-	-	4.9	
XW-1	05/05/95	7.49	5.57	-	1.92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-1	07/19/95	7.49	6.12	-	1.37	<50	-		<0.50	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	4.3	
XW-1	10/12/95	7.49	6.82	-	0.67	<50	-		<0.50	<0.50	<0.50	<1.0	<5.0	-	-	-	-	-	-	-	3.8	
XW-1	01/08/96	7.49	6.11	-	1.38	<50	-		<0.50	<0.50	<0.50	<1.0	<5.0	-	-	-	-	-	-	-	4.7	
XW-1	09/11/97	7.49	6.57	-	0.92	<50	-		<0.50	<1.0	<1.0	<1.0	<10	-	-	-	-	-	-	-	3.3	
XW-1	01/27/98	7.49	5.27	-	2.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-1	04/19/98	7.49	5.24	-	2.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-1	09/27/00	7.49	6.13	-	1.36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-1	03/21/01	7.49	5.97	-	1.52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-1	09/18/01	7.49	6.59	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-1	09/19/08	7.49	6.76	-	0.73	<50	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	-	
XW-1	**07/22/09**	7.49	6.65	-	0.84	-	<50	-	<0.50	<0.50	<0.50	<1.0	<0.50	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	-	
XW-2	06/21/93	7.48	5.89	-	1.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-2	04/05/94	7.48	5.77	-	1.71	<50	-	160	<0.50	<0.50	<0.50	<0.50	-	-	-	-	-	-	-	-	3	
XW-2	07/28/94	7.48	6.25	-	1.23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-2	10/26/94	7.48	6.39	-	1.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-2	02/05/95	7.48	5.62	-	1.86	<50	-	<500	<0.25	0.38	<0.25	<0.50		-	-	-	-	-	-	-	5.2	
XW-2	05/05/95	7.48	5.66	-	1.82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-2	07/19/95	7.48	6.80	-	0.68	<50	-	-	<0.50	<0.50	<0.50	<1.0		-	-	-	-	-	-	-	3.9	
XW-2	10/12/95	7.48	7.21	-	0.27	<50	-	-	<0.50	<0.50	<0.50	<1.0	<5.0	-	-	-	-	-	-	-	4.3	
XW-2	01/08/96	7.48	6.79	-	0.69	<50	-	-	<0.50	<0.50	<0.50	<1.0	<5.0	-	-	-	-	-	-	-	4.2	
XW-2	09/11/97	7.48	6.86	-	0.62	<50	-	-	<0.50	<1.0	<1.0	<1.0	<10	-	-	-	-	-	-	-	3.6	
XW-2	01/27/98	7.48	5.88	-	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-2	04/19/98	7.48	5.42	-	2.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-2	09/27/00	7.48	6.86	-	0.62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-2	03/21/01	7.48	6.60	-	0.88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-2	09/18/01	7.48	7.15	-	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-2	09/19/08	7.48	7.39	-	0.09	<50	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	-	
XW-2	**07/22/09**	7.48	7.23	-	0.25	-	<50	-	**1.5**	**11**	**1.9**	**12**	<0.50	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	-	
XW-3	06/21/93	6.84	5.85	-	0.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-3	04/05/94	6.84	5.85	-	0.99	<50	-	150	<0.50	**0.7**	<0.50	<0.50	-	-	-	-	-	-	-	-	3.1	
XW-3	07/28/94	6.84	6.28	-	0.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-3	10/26/94	6.84	6.40	-	0.44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-3	02/05/95	6.84	7.23	-	-0.39	**280**	-	<500	<0.50	<0.50	**0.63**	<1.0	-	-	-	-	-	-	-	-	4.9	
XW-3	05/05/95	6.84	7.43	-	-0.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
XW-3	07/19/95	6.84	7.60	-	-0.76	**400**	-	-	<0.50	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	43	
XW-3	10/12/95	6.84	7.74	-	-0.90	**130**	-	-	<0.50	<0.50	<0.50	<1.0	**480**	-	-	-	-	-	-	-	4.7	
XW-3	01/08/96	6.84	7.58	-	-0.74	**320**	-	-	<2.5	<2.5	<2.5	<5.0	**1100**	-	-	-	-	-	-	-	4.4	
XW-3	01/27/98	6.84	7.01	-	-0.17	**1200**	-	-	**2.8**	<1.0	<1.0	<1.0	**990**	-	-	-	-	-	-	-	4.3	
XW-3	04/19/98	6.84	7.28	-	-0.44	**4500**	-	-	<2.5	<5.0	<5.0	<5.0	**4500**	-	-	-	-	-	-	-	4.3	
XW-3	09/27/00	6.84	7.59	-	-0.75	<50	-	-	<0.50	<0.50	<0.50	<0.50	**35**	-	-	-	-	-	-	-	-	
XW-3	03/21/01	6.84	7.35	-	-0.51	<250	-	-	<2.5	<2.5	<2.5	<7.5	**61.7**	-	-	-	-	-	-	-	-	
XW-3	09/18/01	6.84	7.70	-	-0.86	<250	-	-	<2.5	<2.5	<2.5	<7.5	**23.4**	-	-	-	-	-	-	-	-	
XW-3	09/19/08	6.84	7.90	-	-1.06	<50	-	-	<0.50	<0.50	<0.50	<0.50	1.3	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	-	
XW-3	**07/22/09**	6.84	7.70	-	-0.86	-	<50	-	<0.50	<0.50	<0.50	<1.0	**1.4**	<10	<0.50	<0.50	<0.50	<250	<0.50	<0.50	-	
QC-2	04/05/94	-	-	-	-	<50	-	-	<0.50	<0.50	<0.50	<0.50	-	-	-	-	-	-	-	-	-	
QC-2	07/28/94	-	-	-	-	<50	-	-	<0.50	<0.50	<0.50	<0.50	-	-	-	-	-	-	-	-	-	
QC-2	10/26/94	-	-	-	-	<50	-	-	<0.50	<0.50	<0.50	<0.50	-	-	-	-	-	-	-	-	-	
QC-2	02/05/95	-	-	-	-	<50	-	-	<0.25	<0.25	<0.25	<0.50	-	-	-	-	-	-	-	-	-	
QC-2	05/05/95	-	-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	-	
QC-2	07/19/95	-	-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	-	-	-	-	-	-	-	-	-	
QC-2	10/12/95	-	-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	<5.0	-	-	-	-	-	-	-	-	
QC-2	01/08/96	-	-	-	-	<50	-	-	<0.50	<0.50	<0.50	<1.0	<5.0	-	-	-	-	-	-	-	-	

Notes:

TOC: Top of casing
TPHg: Total petroleum hydrocarbons as gasoline
TPPH: Total purgeable petroleum hydrocarbons
TPHd: Total petroleum hydrocarbons as diesel
B: Benzene
T: Toluene
E: Ethylbenzene
X: Total xylenes
MTBE: Methyl tert butyl ether
TBA: Tert-butyl alcohol
DIPE: Diisopropyl ether
ETBE: Ethyl-t-butyl ether
TAME: Tert-amyl-methyl ether
1,2-DCA: 1,2-dichloroethane
EDB: Dibromoethane
D.O: Dissolved oxygen
µg/L: Micrograms per liter
mg/L: Milligrams per liter
<: Below reporting limits
ft: Feet
msl: Mean sea level
SPH: Separate phase hydrocarbon

Well Destroyed

SITE/LOCATION 3255 Mecartney Road, Alameda, C[redacted]	BEGUN 6/17/93	BORING DIAMETER 10 Inches	[redacted]E/BEARING 9[redacted] Degrees	BORING NO MW-5
DRILLING CONTRACTOR Bayland Drilling	COMPLETED 6/17/93	FIRST ENCOUNTERED WATER DEPTH 7.5 Feet		BOTTOM OF BORING 15 Feet
OPERATOR Adam Higuaro	LOGGED BY Tony Ramirez	STATIC WATER DEPTH/DATE 7.0 Feet		WELL NO. MW-5
DRILL MAKE & MODEL CME 75	SAMPLING METHOD California modified split spoon			BOTTOM OF WELL 15 Feet
WELL MATERIAL 4" SCH 40 PVC	SLOT SIZE 0.010"	FILTER PACK #2/16	WELL SEAL Neat cement over hydrated bentonite pellets	PLANNED USE Monitoring

BLOWS/FOOT	PID FIELD HEADSPACE (ppm)	DEPTH	SAMPLES	WATER LEVEL	WELL CONSTR.	GRAPHIC LOG	MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION
		1					PEAT(Pt); dark brown; covered with tanbark; moist.
		2					Poorly graded SAND with Gravel (SP); tan; fine angular to sub-rounded sand; 35% fine to coarse, sub-angular to sub-rounded gravel; trace fines; damp.
		3					
		4					Poorly graded SAND with Gravel (SP); medium brown; fine angular to sub-rounded sand; 25% fine, sub-angular to sub-rounded gravel; trace fines; damp.
12	14.0	5					
		6					Silty SAND (SM); grey- brown; fine to coarse sub-angular to sub-rounded sand; 20% silt; moist.
		7		▼			
		8		▽			
		9					Same as above, but wet.
		10					
		11					Poorly graded GRAVEL with Sand (GP); grey-brown; fine to coarse sub-angular to sub-rounded gravel; 35% fine to coarse, angular to sub-rounded sand; wet.
		12					
		13					Lean CLAY with Sand; grey-brown; fine sub-angular to sub-rounded sand; 40% clay; wet.
		14					
		15					

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

DATE: June 18, 1993

APPROVED BY: Owen C. Ratchye, P.E.

SOIL BORING LOG AND WELL CONSTRUCTION DIAGRAM MW-5

BP Service Station No. 11270
3255 Mecartney Road
Alameda, CA

PLATE B-2

SHEET 1 OF 1

JOB NO. 9-042.1

SITE/LOCATION: 3255 Mecartney Road, Alameda, CA	BEGUN: 1/19/95	BORING DIAMETER: 10 Inches	ANG[illegible]EARING: 90[illegible]grees		BORING NO: MW-6
DRILLING CONTRACTOR: PC Exploration, Inc.	COMPLETED: 1/19/95	FIRST ENCOUNTERED WATER DEPTH: 5.0 Feet			BOTTOM OF BORING: 15.0 Feet
DRILL MAKE & MODEL: CME 75	OPERATOR: Frank Bartolovi	LOGGED BY: Frances Maroni	STATIC WATER DEPTH/DATE: 5.76 Feet (1/28/95)		WELL NO.: MW-6
WELL MATERIAL: PVC SCH 40	SLOT SIZE: 0.010"	SAMPLING METHOD: California modified split spoon			BOTTOM OF WELL: 15.0 Feet
FILTER PACK: #2/12 SAND	WELL SEAL: Neat cement over hydrated bentonite pellets				PLANNED USE: Monitoring

BLOWS/FOOT	PID FIELD HEADSPACE (ppm)	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTR.	GRAPHIC LOG	MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION
		1					Asphalt, Baserock
		2					SAND (SW); Brown with yellow mottling and iron oxide mottling, well graded, fine grained, subrounded to rounded, moist.
		3					
		4					
5	2.6	5		▽			As above; Dark gray, wet.
		6		▼			
		7					
		8					
		9					
29		10					Silty SAND (SM); Dark gray with black mottling,well graded, fine-grained, subrounded to rounded, some silt, wet.
		11					
		12					
		13					
		14					
		15					As above; Greenish-gray-blue, wet.
		16					
		17					
		18					
		19					
		20					

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

DATE: February 10, 1995

APPROVED BY: Gary Plschke C.E.G.

SOIL BORING LOG AND WELL CONSTRUCTION DIAGRAM
MW-6

BP Service Station No. 11270
3255 Mecartney Road
Alameda, CA

PLATE
B-3

SHEET 1 OF 1

JOB NO.
9-042.2

SITE/LOCATION 3255 Mecartney Road, Alameda, CA	BEGUN 1/18/95	BORING DIAMETER 10 Inches	AN[illegible] BEARING 90 [illegible]egrees		BORING NO MW-7
DRILLING CONTRACTOR PC Exploration, Inc.	COMPLETED 1/19/95	FIRST ENCOUNTERED WATER DEPTH 5.0 Feet			BOTTOM OF BORING 16.5 Feet
DRILL MAKE & MODEL CME 75	OPERATOR Frank Bartolovi	LOGGED BY Frances Maroni	STATIC WATER DEPTH/DATE 7.54 Feet		WELL NO. MW-7
WELL MATERIAL PVC SCH 40	SLOT SIZE 0.010"	SAMPLING METHOD California modified split spoon			BOTTOM OF WELL 15.0 Feet
FILTER PACK #2/12 SAND	WELL SEAL Neat cement over hydrated bentonite pellets				PLANNED USE Monitoring

BLOWS/FOOT	PID FIELD HEADSPACE (ppm)	DEPTH	SAMPLES	WATER LEVEL	WELL CONSTR.	GRAPHIC LOG	MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION
		1					Asphalt, Baserock
		2					SAND (SP); Gray brown, poorly-graded, fine grained, rounded, medium dense, dry.
		3					
		4					
5	2.6	5		▼			Gravely Clay (CH); Dark reddish brown, high plasticity, some coarse to fine grained angular to subangular gravel, medium stiff, moist.
		6					
		7		▽			Silty SAND (SM); Dark brown with black organic mottling, well-graded, fine grained, occasional coarse to fine grained, angular to subangular gravel, some silt, moist to wet.
		8					
		9					
32		10					As above; Dark gray, some gravel, wet.
		11					Silty SAND (SM); Dark gray with yellow green mottling, well graded, fine-grained, subrounded to rounded, some silt, occasional subangular cobble, wet.
		12					
		13					
		14					
46		15					
		16					SAND (SW); Yellowish orange, well-graded fine-grained, subrounded, wet.
		17					Heaving sands 14.5-16.5 feet bgs.
		18					
		19					
		20					

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

DATE: February 10, 1995

APPROVED BY: Gary Pischke C.E.G.

SOIL BORING LOG AND WELL CONSTRUCTION DIAGRAM
MW-7

BP Service Station No. 11270
3255 Mecartney Road
Alameda, CA

PLATE
B-4

SHEET 1 OF 1

JOB NO.
9-042.2

Delta

Consultants, Inc.

Project No:	I42611270	Client:	ELT	Well No: SV-1	
Logged By:	Joe Dumas	Location:	3255 Mecartney Rd, Alameda, CA	Page 1 of 1	
Driller:	Gregg Drilling	Date Drilled:	12/10/2009	Location Map - See Site Map for Location	
Drilling Method:	Hand Auger	Hole Diameter:	3"		
Sampling Method:	Hand Auger	Hole Depth:	5' 2"		
Casing Type:	1/4"OD, 0.17"ID Nylaflow	Well Diameter:	1/4"		
Slot Size:	Vapor Tip	Well Depth:	5'		
Gravel Pack:	-	Casing Stickup:	-		
Elevation		Northing		Easting	

Well Completion: Backfill	Well Completion: Casing	Well Completion: Backfill	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample: Recovery	Sample: Interval	Soil Type	LITHOLOGY / DESCRIPTION
			7" diam vault									Concrete
			grout					1				Pea Gravel
			1/4"Nylaflow tubing					2			CL	**Lean Clay with Sand:** brown, 20% fine sand, medium plastic, medium stiff, moist
			bentonite					3				
			sand					4				As above: becoming dark brown in color
			vapor tip		MOIST	0.1		5				Boring terminated at 5 feet 2 inches below ground surface.
								6				
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								25				

Delta

Consultants, Inc.

Project No:	I42811270	Client:	ELT
Logged By:	Joe Dumas	Location:	3255 Mecartney Rd, Alameda, CA
Driller:	Gregg Drilling	Date Drilled:	12/10/2009
Drilling Method:	Hand Auger	Hole Diameter:	3"
Sampling Method:	Hand Auger	Hole Depth:	5' 2"
Casing Type:	1/4"OD, 0.17"ID Nylaflow	Well Diameter:	1/4"
Slot Size:	Vapor Tip	Well Depth:	5'
Gravel Pack:	-	Casing Stickup:	-
Elevation		Northing	Easting

Well No: SV-2
Page 1 of 1

Location Map - See Site Map for Location

Well Completion: Backfill	Well Completion: Casing	Well Completion: Backfill	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample: Recovery	Sample: Interval	Soil Type	LITHOLOGY / DESCRIPTION
			7" diam vault									9" Concrete
			grout									3" Pea Gravel
			1/4"Nylaflow tubing					1			CL	**Lean Clay with Sand:** dark brown, 20% fine sand, medium plastic, medium stiff, moist
			bentonite					2				
								3				
			sand									
			vapor tip		MOIST	0.4		4			ML	**Silt**: black, 10% fine sand, non-plastic, soft, moist
								5				Boring terminated at 5 feet 2 inches below ground surface.
								6				
								7				
								8				
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								25				

Delta

Consultants, Inc.

Project No:	I42611270	Client:	ELT	Well No: SV-3	
Logged By:	Joe Dumas	Location:	3255 Mecartney Rd, Alameda, CA	Page 1 of 1	
Driller:	Gregg Drilling	Date Drilled:	12/11/2009	Location Map - See Site Map for Location	
Drilling Method:	Hand Auger	Hole Diameter:	3"		
Sampling Method:	Hand Auger	Hole Depth:	5' 2"		
Casing Type:	1/4"OD, 0.17"ID Nylaflow	Well Diameter:	1/4"		
Slot Size:	Vapor Tip	Well Depth:	5'		
Gravel Pack:	-	Casing Stickup:	-		
Elevation		Northing		Easting	

Well Completion: Backfill	Well Completion: Casing	Well Completion: Backfill	Well Details	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample: Recovery	Sample: Interval	Soil Type	LITHOLOGY / DESCRIPTION
			7" diam vault								4" Concrete; 2" Pea Gravel
			grout				1			SW-SC	**Well Graded Sand with Clay**: tan with white
			1/4"Nylaflow tubing				2			SW	(trace white substance has the consistency of clay) 10% fines, medium dense
			bentonite				3				**Well Graded Sand:** light brown, <5% fines, loose
			sand				4			SC	**Clayey Sand**: light brown-red with trace gray clay, 25% fines, 10% coarse gravel, dense
			vapor tip	MOIST			5			SM	**Silty Sand:** brown, 20% fines, 10% organic matter, medium dense
							6				Boring terminated at 5 feet 2 inches below ground surface.
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Delta

Consultants, Inc.

Project No:	I42611270	Client:	ELT	Well No: SV-4	
Logged By:	Joe Dumas	Location:	3255 Mecartney Rd, Alameda, CA	Page 1 of 1	
Driller:	Gregg Drilling	Date Drilled:	12/11/2009	Location Map - See Site Map for Location	
Drilling Method:	Hand Auger	Hole Diameter:	3"		
Sampling Method:	Hand Auger	Hole Depth:	5' 2"		
Casing Type:	1/4"OD, 0.17"ID Nylaflow	Well Diameter:	1/4"		
Slot Size:	Vapor Tip	Well Depth:	5'		
Gravel Pack:	-	Casing Stickup:	-		
Elevation		Northing		Easting	

Well Completion: Backfill	Well Completion: Casing	Well Completion: Backfill	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample: Recovery	Sample: Interval	Soil Type	LITHOLOGY / DESCRIPTION
			7" diam vault									Concrete
			grout					1			SW	**Well Graded Sand:** tan, 85% fine sand, 15% medium sand, loose
			1/4"Nylaflow tubing					2			CL	**Lean Clay**: brown, 10% fine sand, medium plastic, moist
			bentonite					3			CL	**Lean Clay with Sand:** brown-red, 15% fine sand, medium plastic, moist
			sand					4			ML	**Silt:** black, 5% fine sand, low plastic, moist
			vapor tip		MOIST			5				Boring terminated at 5 feet 2 inches below ground surface.
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Delta

Consultants, Inc.

Project No:	I42611270	Client:	ELT		Well No: SV-5
Logged By:	Joe Dumas	Location:	3255 Mecartney Rd, Alameda, CA		Page 1 of 1
Driller:	Gregg Drilling	Date Drilled:	12/10/2009	Location Map - See Site Map for Location	
Drilling Method:	Hand Auger	Hole Diameter:	3"		
Sampling Method:	Hand Auger	Hole Depth:	5' 2"		
Casing Type:	1/4"OD, 0.17"ID Nylaflow	Well Diameter:	1/4"		
Slot Size:	Vapor Tip	Well Depth:	5'		
Gravel Pack:	-	Casing Stickup:	-		
Elevation		Northing		Easting	

Well Completion: Backfill	Well Completion: Casing	Well Completion: Backfill	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample: Recovery	Sample: Interval	Soil Type	LITHOLOGY / DESCRIPTION
			7" diam vault									Concrete
			grout					1				Pea Gravel
			1/4"Nylaflow tubing					2			CL	**Lean Clay:** dark brown, 10% fine gravel, medium plastic, medium stiff, moist, trace sand
			bentonite					3				
			sand					4			ML	**Silt**: black, <5% fine sand, non-plastic, soft, moist
			vapor tip		MOIST	0.4		5				Boring terminated at 5 feet 2 inches below ground surface.
								6				
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