

ALAMEDA COUNTY
HEALTH CARE SERVICES



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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 19, 2005

Mr. Dana Thurman
Chevron
P.O. Box 6012
San Ramon, CA 94583-0804

Dear Mr. Thurman:

Subject: Fuel Leak Site Case Closure Chevron #9-6607, 2340 Otis Drive, Alameda, CA 94502; Case No. RO0000335

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:

- Up to 160 parts per million (ppm) Total Petroleum Hydrocarbons as gasoline (TPHg), 110 ppm TPH as diesel, 880 ppm oil and grease, 0.63 ppm benzene, 2.2 ppm toluene, 1.9 ppm ethyl benzene, 17 ppm xylenes, 3.3 ppm cadmium, 18 ppm chromium, 45 ppm lead, 19 ppm nickel, 100 ppm zinc, and 0.24 ppm methyl tertiary butyl ether (MTBE) remain in soil at this site.
- Up to 2100 parts per billion (ppb) TPH as diesel, 78 ppb MTBE and 350 ppb naphthalene remain in groundwater at this site.

If you have any questions, please call Barney Chan at (510) 567-6765. Thank you.

Sincerely,

Donna L. Drogos, P.E.
LOP and Toxics Program Manager

Enclosures:

1. Remedial Action Completion Certificate
2. Case Closure Summary

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Dear Mr. Thurman:

Subject: Fuel Leak Site Case Closure Chevron #9-6607, 2340 Otis Drive, Alameda, CA 94502; Case No. RO0000335

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 tanks 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.

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,

Mee Ling Tung
Director
Alameda County Environmental Health

cc:

Ms. Cherie Mc Caulou
SF- Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Mr. Toru Okamoto (w/enc)
State Water Resources Control Board
UST Cleanup Fund
P.O. Box 944212
Sacramento, CA 94244-2120

Mr. Greg Fuz (w/enc)
City of Alameda Planning Department
2263 Santa Clara Ave., Room 190
Alameda, CA 94501

files (w/orig enc), D. Drogos (w/enc), R. Garcia (w/enc)

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

I. AGENCY INFORMATION

Date: 10/14/05

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6765
Responsible Staff Person: Barney Chan	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Chevron #9-6607		
Site Facility Address: 2340 Otis Drive, Alameda, CA 94502		
RB Case No.: 01-0344	Local Case No.: STID 1699	LOP Case No.: RO0000335
URF Filing Date: 2-19-91	SWEEPS No.: ---	APN: 074-1200-002-03
Responsible Parties	Addresses	Phone Numbers
Chevron, Mr. Dana Thurman	P.O. Box 6012, San Ramon, CA 94583-0804	925-842-9559

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1-3	2 –10,000 1-1,000	Gasoline Waste oil	Removed	2/14/91
1-4	3-12,000 1-1,000	Gasoline Waste oil	Removed	9/9/04
Piping			Assumed removed w/USTs Removed with USTs	2/14/91 9/9/04

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: unknown		
Site characterization complete? Yes	Date Approved By Oversight Agency: -----	
Monitoring wells installed? Yes	Number: 4	Proper screened interval? Yes
Highest GW Depth Below Ground Surface: 2.64"bgs	Lowest Depth: 7.1' bgs	Flow Direction: south-southwest
Most Sensitive Current Use: Potential drinking water source.		

Summary of Production Wells in Vicinity: No private wells within 500' of site. An irrigation well is located approximately 1600' southeast (cross-gradient) of site. Due to its location, it does not appear to be a receptor for this site.	
Are drinking water wells affected? No	Aquifer Name: East Bay Plain
Is surface water affected? No	Nearest SW Name: : Man-made lakes are ~200' northwest and southeast of the site and the Alameda Estuary is ~1000' to the south
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
Tanks	2-10,000, 1-5,000, 1-1000 3-12,000, 1-1,000	Disposed at Erickson, Richmond Disposed at ECI, Richmond	2/14/91 9/9/04
Piping	Unknown amount Unknown amount	Assumed disposed w/USTs at Erickson, Richmond Disposed at ECI, Richmond	2/28/91 9/9/04
Free Product	---	----	---
Soil	470 cy 18 cy 700 cy	Disposed at Redwood Landfill, Novato Disposed at Vasco Rd. Landfill, Livermore Disposed at Forward Landfill, Manteca	2/25/91 3/14/91 10/04
Fuel/Ground-water	1500 gal 10,576 gal	Recycled at Gibson Refining, Bakersfield Disposed at McKittrick Landfill, McKittrick, CA	2/14/91 10/04

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)	5700	160	48,000	<50
TPH (Diesel)	3100	110	8200	<10 (MW) 2100 (grab)
Oil & Grease	25,000	880	33,000 vi	<5000
Benzene	36	0.63	8600	<0.5
Toluene	270	2.2	5000	<0.5
Ethyl Benzene	870	1.9	1000	<0.5
Xylene	920	17	11,000	<0.5
Heavy Metals: Cd, Cr, Pb, Ni, Zn	3.3,18, 45,19, 100	3.3,18, 45,19, 100	<5, 470, 350, 570,1300 vii	NA
MTBE (if not analyzed, explain below)	0.24 *	0.24 *	2900 MTBE (10/94, MW2)	78 **
Other (8240/8270)	68***	0.14 ****	1100 v	1100 v

* 0.24 ppm MTBE, <0.025 ppm ETOH, <0.002 ppm TAME, <0.001ppm ETBE, <0.001ppm DIPE, <0.02 ppm TBA,

<0.001 ppm EDB, and <0.001 ppm EDC (from 9/04 borings B1-B7)

** 78 ppb MTBE, NA ppb EtOH, 200 ppb TAME, <0.005 ppb ETBE, <0.0005 ppb DIPE, 68 ppb TBA, <0.005 ppb EDB, and <0.0005 ppb EDC (from 9/04 borings grab samples, MTBE from MW1, 8/04)

*** 0.14 ppm benzo(a)anthracene, 0.11 ppm benzo(b) flouranthene, 0.14 ppm chrysene, 0.57 ppm fluoranthene, 0.45 ppm phenanthrene, 0.24 ppm pyrene, 54ppm 2-methylnaphthalene, 68 ppm naphthalene, 2.2ppm 4-methylphenol (from spoils from 1991 waste oil tank removal)

**** naphthalene 0.011ppm, 0.0077ppm n-butyl benzene, 0.014 ppm 1,2,4-trimethyl benzene (from used oil @ 7' sample, over-excavation of waste oil tank, 9/04)

v 350 ppb naphthalene, 56ppb n-butyl benzene, 140 ppb n-propyl benzene, 1100ppb 1,3,5-trimethyl benzene, 38 ppb isopropyl benzene, 1000 ppb 1, 2,4-trimethylbenzene (grab groundwater samples from UST pit water, 9/9/04 and UST pit-post purge, 9/16/04)

vi TOG is from grab groundwater sample from waste oil tank pit, 9/9/04, using Standard Method 5520, gravimetric.

vii From grab groundwater sample, waste oil tank on 9/9/04

Site History and Description of Corrective Actions:

The site is located at the southwest corner of Otis Drive and Park Street in Alameda, California. Chevron operated a service station onsite from the mid-1970s through August 2004. In September 2004, the station was demolished and all underground storage tanks (USTs) and station facilities were removed from the site. Currently the site is vacant. Future plans are to have this location used as a parking lot for a Safeway store within the Alameda Southshore shopping center.

Surrounding site use is mixed commercial and residential. The site is located in the Alameda Bay Plain Basin. Prior to the early 1960s, this portion of Alameda was beneath the San Francisco Bay. The area was artificially filled using local dredge material at that time. See Attachment 1 for site map.

On February 14, 1991, 2-10,000 and 1-5,000 gallon fiberglass gasoline USTs and 1-1k fiberglass used-oil UST were removed from the site. Depth to water was encountered during this investigation at 6 to 7 feet below grade (fbg). Eight soil samples from the capillary fringe at ~ 6' depth and two water samples (one from each UST excavation) were collected from the UST pits. Up to 42 ppm TPHg, 0.94, 0.4, 1.2, 2.3 ppm BTEX, respectively and 13 ppm lead was detected in soil samples from the gasoline tank pit. Up to 3,200 ppm (mg/kg) total oil and grease (TOG), and 3.3, 18, 45, 19 and 100 ppm cadmium, chromium, lead, nickel and zinc, respectively, was detected in northern soil sample from the used-oil UST excavation. Total petroleum hydrocarbons as gasoline (TPHg) at 48,000 ppb (*ug/l*), and 8600, 5000, 1000, 11,000 ppb BTEX, respectively, was detected in the water sample from the gasoline UST pit. TPHg at 3000 ppb, and 150, 630, 120, 690 ppb, BTEX, respectively, was detected in the water sample from the used-oil UST pit. No other analytes were run on this water sample. The gasoline pit was over-excavated to a depth of 15' bgs for the installation of 3-12,000 gallon gasoline USTs. Soil samples #1 through #6 were collected after over-excavation at a depth of 16'bgs. Up to 2.6 ppm TPHg and 0.08, 0.013, 0.02, 0.52 ppm BTEX, respectively were detected in these samples. Additional soil was also removed from the used-oil UST pit. The excavation was widened and expanded to the northeast to remove additional impacted soil. Confirmation soil sample #1 was collected in the northeast corner of the pit and was ND for TOG, as was sample #11, collected after additional over-excavation to the west. However, sample #10 from the south wall at a depth of 6' detected 16,000 ppm TOG. Further excavation was prevented due to the proximity of the existing building. A new 1000 gallon fiberglass waste oil tank was put into this pit. Product lines were removed and soil samples #2 through #15 were collected from the product line trenches and beneath former dispensers at depths ranging from 1-3' bgs. Up to 5700 ppm TPHg, 36, 270, 870, 920 ppm, BTEX respectively, was detected beneath the dispenser islands. In March 1991, further over-excavation was conducted in the product line trenches. After over-excavation, up to 150 ppm TPHg, 2.4, 2.5, 2.1, 17 ppm BTEX, respectively remained in soil at depths ranging from 4-9' bgs.

On August 6&7, 1991 monitoring wells MW -1 through MW -4 were installed on the site. The wells were drilled to a total depth of 24.5' and screened from 3' to the entire depth of the well. One well was located up-gradient and two down-gradient of the gasoline tanks, and one adjacent & up-gradient to the waste oil UST, due to the existing building. Soils encountered beneath the asphalt cap were approximately 1 foot of fill, then sand with small amounts of silt to the depth explored. Groundwater was encountered from 6-7' bgs. Quarterly monitoring was started and continued until the 9/04 decommissioning of wells, UST removals and site demolition. MTBE was first run in October 1994 when 2900 ppb was detected in MW-2 and 121 ppb was detected in MW-1.

Groundwater depths ranges from approximately 2.5 to 5.5 fbg at this site. Due to the proximity of the San Francisco Bay and highly permeable fill soils, tidal influence is possible at the site. Groundwater generally flows towards the south to southwest at an approximate gradient of 0.003 ft/ft.

To further evaluate the lateral and vertical extent of hydrocarbons in soil and groundwater beneath at the site a subsurface investigation was conducted concurrently with well destruction activities on September 1 and 2, 2004. Seven soil borings were advanced at locations across the site, up-gradient and along a down-gradient transect from the former USTs and dispensers using Geoprobe technology. Borings B 1, B2, B4 and B5 were advanced to depths of 11 fbg, boring B7 was advanced to a depth of 15.5 fbg, and borings B3 and B6 were advanced to depths of 20 fbg. Soil samples were collected from all borings at five-foot intervals using a direct push sampler. Grab groundwater samples were also collected from each boring, at depths of eight and eleven fbg. The samples were analyzed for TPHg, BTEX, MTBE, DIPE, TBA, TAME, ETBE, EDC and EDB. No TPHg or BTEX was detected in any of the soil samples collected from borings B1, B2, B3, B4, B6 or B7. TPHg was detected at concentrations of 13 and 11 mg/kg at 5 and 10 fbg, respectively, only in boring B5. The only benzene detected in soil was from boring B5, at 0.0008 mg/kg at 10 fbg. Concentrations of MTBE were detected in the soil samples collected ranging from 0.001 to 0.24 mg/kg (B6-S-20).

The highest concentration of TPHg and benzene was detected in groundwater at 1,700 micrograms per liter (ug/l) and 160 ug/l, respectively in boring B2, down-gradient of the north dispenser island. Concentrations of MTBE ranged from non-detect to 680 ug/l, also in the grab groundwater sample collected from boring B2 at 8' bgs. The groundwater sample from Boring B2 at 11 fbg detected 260 ug/l MTBE. The laboratory noted that nearly all water samples contained greater than 1 volume % sediment, which may have affected these results.

On September 9, 2004, three 12,000-gallon gasoline double-walled fiberglass USTs, three dispenser islands and underground piping and one 1,000-gallon fiberglass used-oil UST were removed from the site. No leaks or cracks were observed in any of the USTs. Twelve (12) soil samples and two grab groundwater samples were collected. Four soil samples, one at the midpoint of each wall at a depth of 9', were collected from the UST pit. Six soil samples were collected from the dispenser islands at a depth of 4' and two soil samples (one from 5' and one from 7') were collected from the used-oil UST pit. Grab water samples were collected from the bottom of both the UST pit and the used-oil pit. The four hydraulic hoists, located within the former building, next to the waste oil tank, were also removed at this time. The used oil sample at 5' appeared impacted and was over-excavated to 7' and sampled.

Samples from the UST pit detected up to 17 ppm TPHg and 0.02, 0.065, 0.35, 1, 0.011 ppm, BTEX and MTBE, respectively. Based on analytical results, over-excavation of the dispenser islands, the used-oil UST pit and the former hydraulic hoist area was performed on September 15 and 16, 2004. Five confirmation soil samples from the over-

excavated dispenser island area, two soil samples from the over-excavation of the used-oil tank pit and four samples from the over-excavation of the former hydraulic hoists were collected. Water was pumped from the UST pit and a second grab sample was collected.

Laboratory analytical results of soil samples collected prior to over-excavation indicated that gasoline range hydrocarbon-impacted soil was limited to the dispenser island areas. The highest concentration of TPHg in soil samples collected during this investigation was 1,500 mg/kg, in soil sample I1-D2 (Island 1, Dispenser 2), collected at a depth of 4 fbg from the southern-most dispenser island. After over-excavation, the soil sample collected from this location at a depth of 6 fbg detected 6.4 mg/kg TPHg. The highest concentration of TPHg detected in post-excavation soil samples was 160 mg/kg in sample I3-D1, collected from the northern-most dispenser island.

Laboratory data from the soil samples indicated excavation was successful except in the vicinity of hoist #3, where 12,000 mg/kg TOG was detected. On September 27, 2004, over-excavation of soils around former hydraulic hoist #3 was performed. Confirmation soil samples from the vicinity of hoist #3 were collected after deepening the excavation. The 11.5' soil sample was ND for TOG, TPHg and BTEX.

A total of approximately 700 cubic yards of soil was excavated and disposed at Forward Landfill as well as approximately 9000 gallons of groundwater from the UST pits as part of the tank removal activities.

The highest concentrations of TOG in soil samples collected during this investigation were 25,000 mg/kg in a sample collected from the used-oil UST pit at 5 fbg. After over-excavation of the used-oil UST pit, samples collected from the same vicinity at depths of 6 and 7 fbg contained less than 50 mg/kg of TOG. Note that the lateral and vertical enlargement of the waste oil pit removed the former residual TOG from sample #10, 16,000 ppm TOG (1991). Samples collected after over-excavation of the area beneath hoist #3 contained TOG at 61 and <50 mg/kg at 11 and 11.5 fbg, respectively.

After over-excavation of the dispenser island area, the highest concentrations of BTEX in confirmation samples were 0.065 mg/kg benzene in dispenser island sample I2-D2, 0.98 mg/kg toluene in dispenser island sample I3-D1, 2.7 mg/kg ethyl benzene and 9.4 mg/kg xylene, both of which were from dispenser island sample I3-D1.

Laboratory analytical results of the grab groundwater sample collected from the UST pit prior to pumping detected TPHg and benzene at 14,000 and 160 micrograms per liter (*ug/L*), respectively. MTBE was not present above the detection limit of 17 *ug/L*. The groundwater sample collected after pumping out 9,000 gallons of water contained 11,000 *ug/L* TPHg and 87 *ug/L* benzene. MTBE was not detected at a concentration above the detection limit of 25 *ug/L*. The groundwater sample collected from the used-oil UST pit contained 8,200 *ug/L* TPHd, 33,000 *ug/L* TOG, and 2 *ug/L* MTBE. The analytical report notes that these water samples contained greater than 1% volume sediment and therefore, groundwater results are likely biased high.

The majority of impacted soil has been removed during the tank removal and over-excavation activities. Nine thousand gallons of impacted groundwater has also been removed from the fuel tank pit. Historic releases from the

dispensers has occurred resulting in MTBE concentrations in MW-2 ranging from 2900 ppb (1994) to <0.5 ppb in 8/04. In 9/04, a subsurface investigation was performed to further delineate the lateral and vertical extent of contamination. Seven borings were advanced (B1-B7) up- and down-gradient of tanks and islands. TPHg and BTEX were absent in soil samples taken from 5-20' bgs. Low levels of MTBE (up to 0.24 ppm) were detected in soil at a depth of 20', which is within saturated soils. The highest impacted groundwater sample was near the dispenser island, which is consistent with samples taken during the subsequent tank removals in 9/04. Grab groundwater samples from these borings detected from ND to 1700 ug/l TPHg. It appears the groundwater results from these Geoprobe borings may be more representative of actual conditions than those collected from the UST pits during the tank removals since these samples did not note the presence of sediment and TPHg concentrations were much lower than from the UST pit samples.

The grab groundwater sample taken from waste oil tank pit reported 8200 ppb TPHd and 33,000 ppb TOG. Similarly, this sample is also likely biased and higher than actual due to the presence of sediment/suspended material. Due to the existence of the former service station building and a restaurant, no down-gradient investigation was performed at that time.

On June 16, 2005, an additional soil and groundwater investigation was performed to determine residual BTEX concentrations in soil near former product line samples #5 and #6 (1991) and to determine the extent of TPHd in groundwater in the vicinity of the former waste oil tanks. Geoprobe borings GP-1 and GP-2 were advanced near the former product line samples and soil samples collected at 6, 8 and 10 fbg. Geoprobe borings GP-3 and GP-4 were advanced near the former waste oil tank after the adjacent building was demolished. The benzene soil concentrations in GP-1 and GP-2 were significantly reduced (0.19 ppm). The grab groundwater samples from GP-3 and GP-4 detected 1,000 and 2,000 ppb TPHd, less than the 8200 ppb originally detected in the water sample from the waste oil UST pit. TOG was not run on these samples because the TOG in the grab groundwater sample from the waste oil tank pit was initially erroneously reported as 33 ppb.

The nearest sensitive receptors identified down-gradient of this site are the man-made lakes ~200' southeast (cross-gradient) of the site and the Alameda Estuary is ~1000' to the south. Any residual petroleum contamination in groundwater would be expected to naturally attenuate and be below the ESL Aquatic Habitat Goal (640 ppb TPHd) before reaching these receptors, particularly in the absence of any residual source. MTBE concentrations from wells and grab groundwater sample are 1-2 orders of magnitude lower than the ESL for aquatic protection (8000 ppb).

The sources, USTs, piping and significant amounts of impacted soil and groundwater have been removed from the site. The future use of this property is commercial, with either commercial buildings or parking lots proposed. Case closure is granted for commercial use, the intended future use of the site.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes No		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes No		
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 risk to human health based upon current land use and conditions.		
Site Management Requirements: Case closure for the fuel leak site is granted for commercial land use. If a change in land use to residential or other conservative scenario occurs at this property, Alameda County Environmental Health must be notified and the case needs to be re-evaluated.		
Should corrective action be reviewed if land use changes? Yes		
Was a deed restriction or deed notification filed? No		Date Recorded: ----
Monitoring Wells Decommissioned: Yes	Number Decommissioned: 4	Number Retained: 0
List Enforcement Actions Taken: none		
List Enforcement Actions Rescinded: none		

V. ADDITIONAL COMMENTS, DATA, ETC.

Considerations and/or Variances:

- Up to 14,000 ppb TPHg, 8,200 ppb TPHd, 160, 590, 620, 2900 ppb, BTEX was detected in grab groundwater samples from the fuel and waste oil UST pits in 9/04. These concentrations do not represent true groundwater conditions due to the presence of sediment in the water samples. In addition, the grab groundwater samples taken from Geoprobe borings one week prior to tank removals detected lower concentrations, up to 1700 ppb TPHg, 160 ppb benzene, 37 ppb toluene, 34 ppb ethyl benzene, 110 ppb xylenes and 680 ppb MTBE. Groundwater samples from monitoring wells (8/04) are ND for all analytes except MTBE (78 ppb).
- Monitoring wells are screened from approximately 3.5' to the bottom of well (~25') which may dilute the sample results. Grab groundwater samples at two depths within the same borehole (8' & 11') detected different MTBE concentrations indicating non-homogeneous concentrations within the aquifer, as is expected. However, the soil type is mainly sand and only one water bearing zone exists.
- The monitoring well installed near the former waste oil tank was actually located up-gradient of tank pit due to the presence of the service station building. Therefore, initial down-gradient impacts to groundwater were not assessed. Up to 8200 ppb TPHd, 33,000 ppb TOG and 2 ppb MTBE was detected in grab groundwater samples from waste oil tank. Groundwater samples from Geoprobe borings immediately down-gradient of the UST detected up to 2000ppb TPHd, but TOG was not run on the sample. The quality of the TOG result is uncertain, due to the analytical method (SM5520) used, which includes the sediment in the water sample test. The lab also indicated that this water sample had a sheen, which does not represent dissolved TOG. The hydraulic lifts located near the waste oil tank also leaked. Hydraulic fluid would be reported as TOG in the analytical method used. It is noted that TOG was never detected in water samples from the monitoring well adjacent to the waste oil pit.
- Groundwater were not tested for dissolved metals in the MWs, however, the metals cadmium, chromium, lead, nickel and zinc were detected in soil at levels below the ESL for shallow soils where groundwater is a potential source of drinking water. Note, the metals concentrations reported in groundwater were from a grab sample from the waste oil tank removed in 9/04 and these results are biased due to the presence of sediment.

- No investigation along utilities was done, though utilities were identified to be within the historic groundwater elevation and down-gradient of the site. However, due to the permeable soil type (sand), contamination is expected to migrate similarly to that in the preferential pathways, minimizing any impact of utilities/preferential pathways.
- The PAHs, 2-methyl naphthalene and naphthalene were detected in the soil sample from the original waste oil tank removal in 1991 at concentrations of 54 and 88 ppm, respectively, which exceed the commercial ESL where groundwater is considered a drinking water source, (0.25 and 4.2 ppm, respectively). The waste oil tank pit has since been expanded and over-excavated beyond the limits of this sample during the 2004 waste oil tank removal, so this soil is no longer present. Stockpiled soil from this excavation detected 3.7 ppm naphthalene (2-methyl naphthalene not run) and the grab groundwater sample detected 230 ppb naphthalene, which is approximately the groundwater ceiling level for groundwater not a current drinking water source (210 ppb).
- A sensitive receptor survey report was prepared in October 2002. Only one well, an irrigation well, was identified from the DWR search. It is located approximately 1600' southeast (cross-gradient) from the site. No private wells were identified within 500' of the site through a door-to-door survey. The most sensitive receptors are the Alameda estuary and man made lakes, however, historic and recent monitoring well concentrations do not exceed ecological ESLs.

Conclusion:

The USTs, impacted soil and ~10,000 gallons of petroleum impacted groundwater have been removed from the site. Groundwater monitoring over a period of twelve (12) years has occurred. TPHg and BTEX concentrations have showed a decreasing and stable trend, while MTBE has ranged from 200-1600 ppb. Recent soil and groundwater investigation in 9/04 show the absence of petroleum contamination in soil and low levels of TPHg, BTEX and MTBE in groundwater. Alameda County Environmental Health staff believe that the levels of residual contamination do not pose a significant threat to water resources, public health and safety, and the environment under the future planned commercial land use. It is anticipated that bioremediation and attenuation process over time will be effective in reducing residual pollution remaining at this site. ACEH staff grant closure for this site.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Barney Chan	Title: Hazardous Materials Specialist
Signature: <i>Barney Chan</i>	Date: 10-17-05
Approved by: Donna L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature: <i>Donna L. Drogos</i>	Date: 10/17/05

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:
Signature: <i>Cherie McCaulou</i>	Date: 10/18/05

Post-it* Fax Note 7671	Date 10/18/05	# of pages 1
To <i>Barney Chan</i>	From <i>Cherie McCaulou</i>	
Co./Dept. <i>ACEH</i>	Co. <i>RAVCCA</i>	
Phone # <i>510 567 6765</i>	Phone # <i>510 622 2342</i>	
Fax # <i>510 387 9335</i>	Fax # <i>510 622 0464</i>	

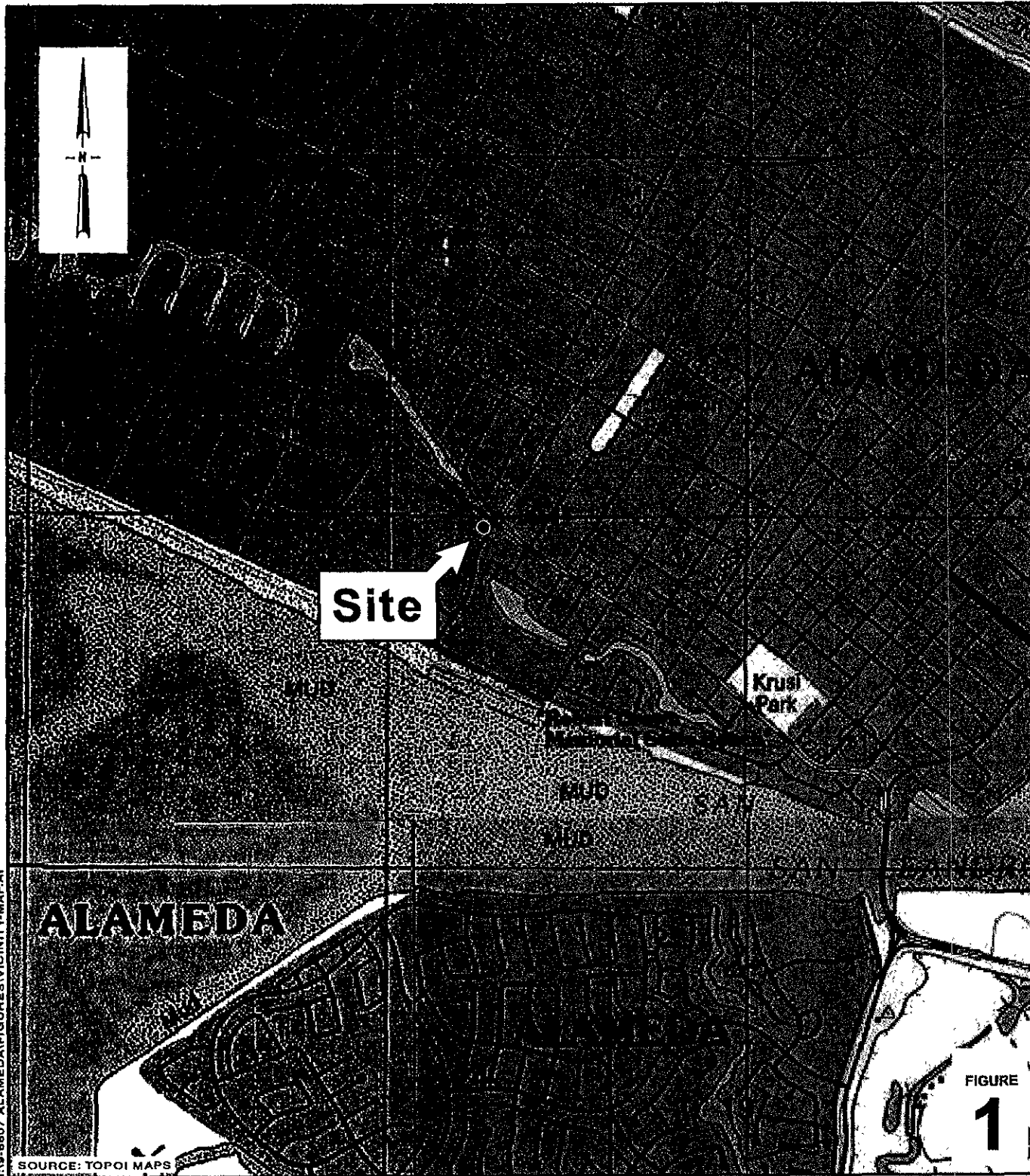
VIII. MONITORING WELL DECOMMISSIONING

Date Requested by ACEH: ---	Date of Well Decommissioning Report: 9/1/04	
All Monitoring Wells Decommissioned: Yes	Number Decommissioned: 4	Number Retained: 0
Reason Wells Retained: NA		
Additional requirements for submittal of groundwater data from retained wells: <i>NA</i>		
ACEH Concurrence - Signature:	<i>Barney Chen</i>	Date: <i>10-17-05</i>

Attachments:

1. Site Vicinity Map
2. Site Plan
3. Soil Analytical Data
4. Groundwater Analytical Data
5. Soil Borings and Soil and Groundwater Analytical Data
6. Boring Logs
7. Cross Sections

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.



Chevron Service Station 9-6607
 2340 Otis Drive
 Alameda, California

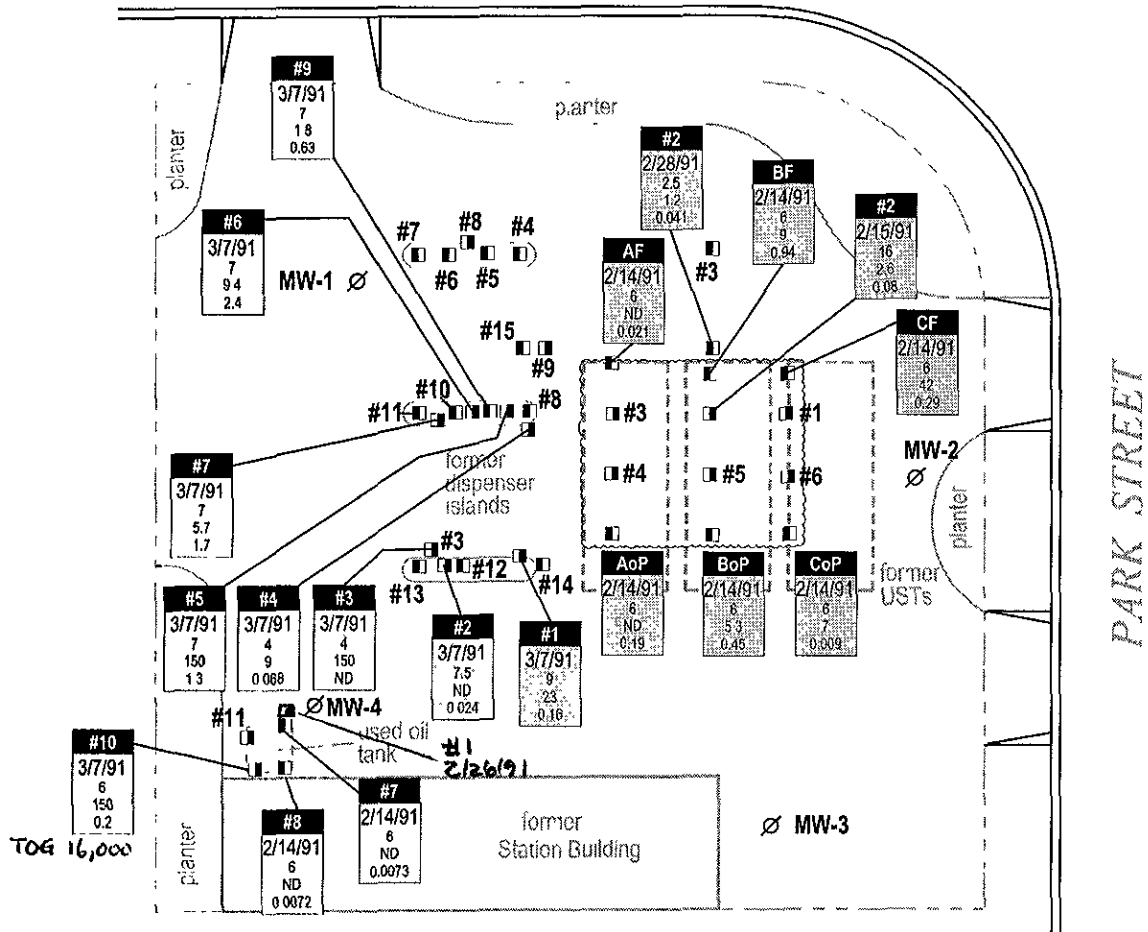


C A M B R I A

Vicinity Map

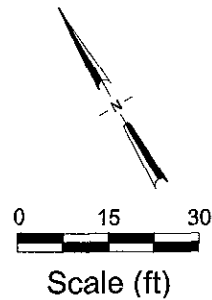
ATTACHMENT 1

OTIS DRIVE



EXPLANATION

- MW-1 ∅ Destroyed monitoring well location
- B4 ⊙ Soil boring location
- #1 ■ Soil sample location (1991 sampling)
- #1 □ Soil over-excavation sample location (1991)
- Sample □ Sample location
- Date
Depth
TPHg
Benz. TPHg and Benzene concentrations are in milligrams per kilograms (mg/kg)
- Sample locations without concentrations indicate over-excavated or ND concentrations
- See Table 1 for sample details
- ND Not detected



ATTACHMENT 2

Former Chevron Service Station 9-6607
 2340 Otis Drive
 Alameda, California

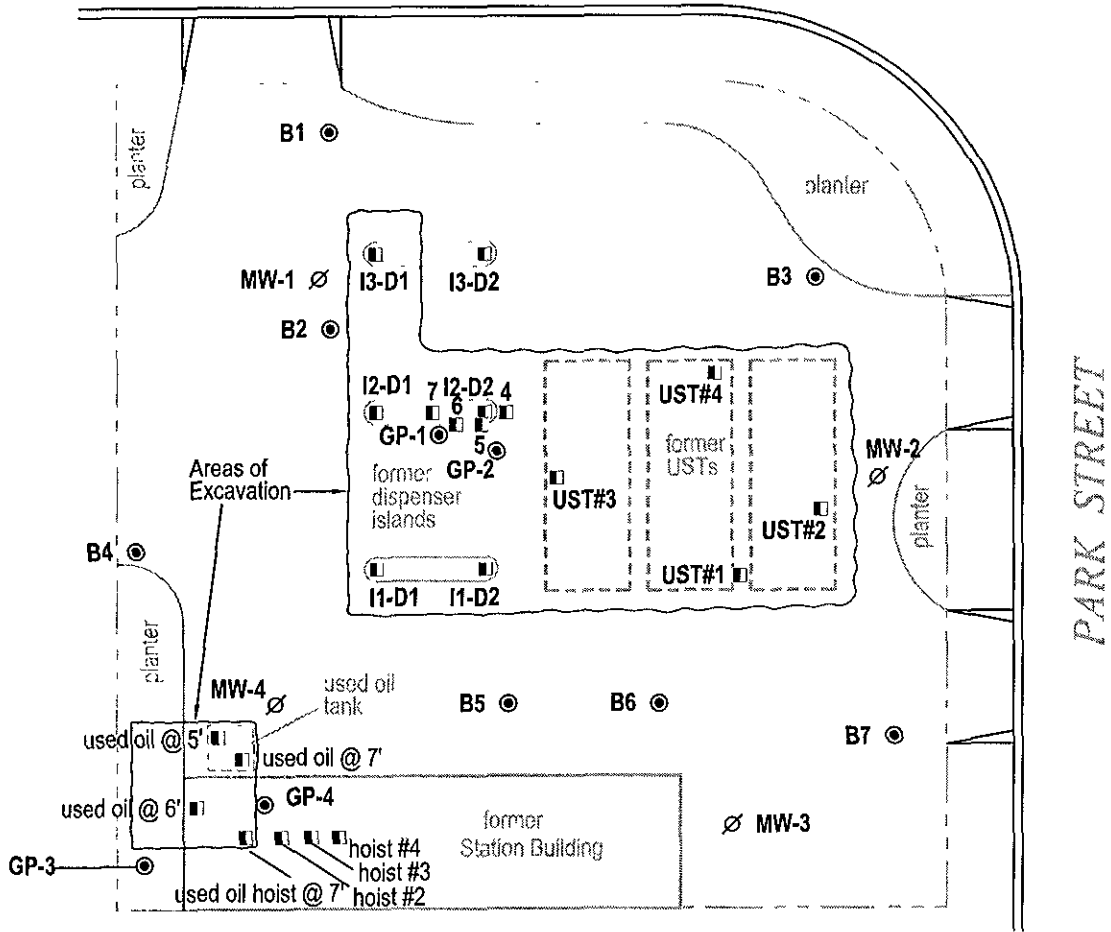


C A M B R I A

Original Soil Concentration Data

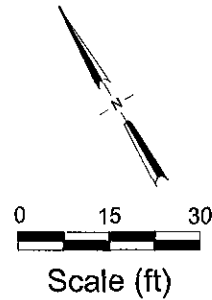
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OTIS DRIVE



EXPLANATION

- MW-1 ∅ Destroyed monitoring well location
- B4 ● Soil boring location
- I1-D1 ■ Soil sample location



ATTACHMENT 2

Soil Boring Locations

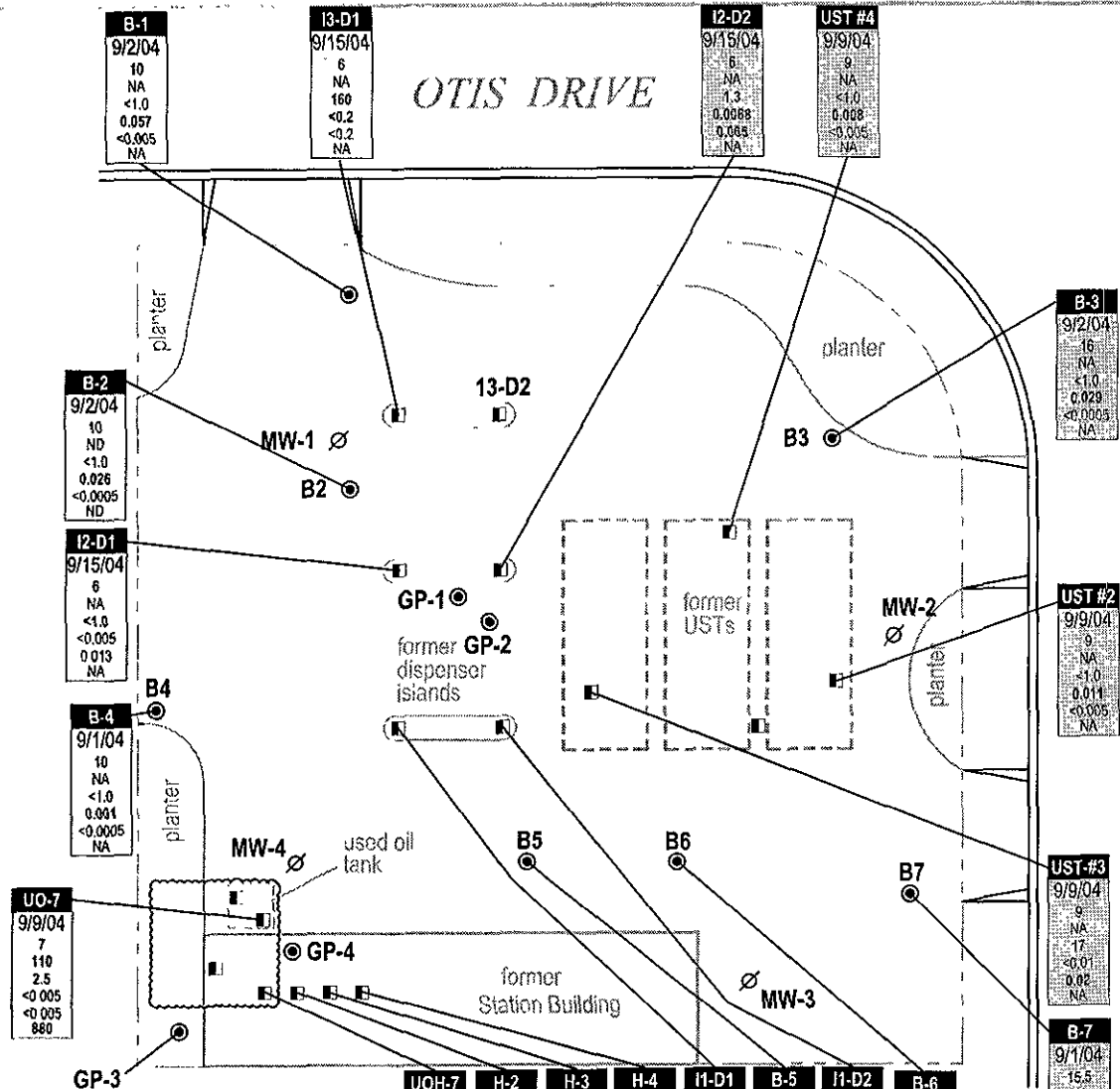
Former Chevron Service Station 9-6607
 2340 Otis Drive
 Alameda, California



C A M B R I A

R:\9-6607\CHEVRO\05\PROF-606.DWG

R19-6607 OTIS, ALAMEDA FIGURES 19-6607, POST-REMEDIATION DWG



EXPLANATION

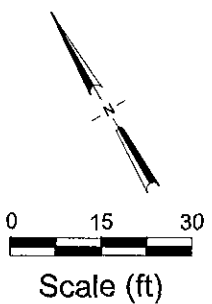
- MW-1 ∅ Destroyed monitoring well location
- B4 ⊙ Soil boring location (2004 sampling)
- GP-1 ⊙ Soil boring location (2005 sampling)
- #1 ■ Soil sample location (2004 sampling)

B-1	Sample location
date	
depth	
TPHd	Hydrocarbon concentrations in milligrams per kilograms (mg/kg)
TPHg	
MTBE	
Benz	
TOG	

Sample locations without concentrations indicate ND concentrations
See Table 1 for sample details

ND Not Detected
NA Not Analyzed

UOH-7	H-2	H-3	H-4	I1-D1	B-5	I1-D2	B-6
9/15/04	9/15/04	9/27/04	9/15/04	9/15/04	9/1/04	9/15/04	9/2/04
7	7	11	7	6	10	6	20
6.6	NA	NA	NA	NA	NA	NA	NA
<1.0	<0.005	<1.0	<0.005	4.4	11	8.4	<1.0
<0.005	<0.005	NA	<0.005	0.0097	0.085	<0.005	0.24
<0.005	<0.005	<0.005	<0.005	<0.005	0.0068	0.014	<0.0005
<50	129	61	250	NA	NA	NA	NA



ATTACHMENT 2

Former Chevron Service Station 9-6607
 2340 Otis Drive
 Alameda, California



**Post-Remediation Soil
 Concentration Data**

**Table 1
Historical Soil Results**

Former Chevron Station #9-6607, 2340 Otis Drive, Alameda, CA

Sample ID	Depth (fbg)	Date	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TOG
			500	400	0.38	9.3	32	11	5.6	1,000
(concentrations reported in mg/kg)										
Gasoline UST										
AF	6	2/14/1991	-	ND	0.021	ND	ND	0.02	-	-
AoP	6	2/14/1991	-	ND	0.19	0.012	ND	0.013	-	-
BF	6	2/14/1991	-	9	0.94	0.18	0.8	0.52	-	-
BoP	6	2/14/1991	-	5.3	0.45	0.075	0.07	0.075	-	-
CF	6	2/14/1991	-	42	0.29	0.4		2.3	-	-
CoP	6	2/14/1991	-	7	0.009	0.01	0.021	0.06	-	-
New Installation UST										
#1	16	2/15/1991	-	ND	ND	ND	ND	ND	-	-
#2	16	2/15/1991	-	2.6	0.08	0.013	0.02	0.074	-	-
#3	16	2/15/1991	-	ND	ND	ND	ND	ND	-	-
#4	16	2/15/1991	-	ND	ND	ND	ND	ND	-	-
#5	16	2/15/1991	-	ND	ND	ND	ND	ND	-	-
#6	16	2/15/1991	-	ND	ND	ND	ND	ND	-	-
Used-oil UST										
#7*	6	2/14/1991	ND	ND	0.0073	0.04	0.013	0.061	-	3,200
#8	6	2/14/1991	ND	ND	0.0072	0.012	ND	0.012	-	ND
#1*	6-25	2/22/1991	ND	ND	ND	ND	ND	ND	-	260
#1	5-5	2/26/1991	ND	ND	ND	ND	ND	ND	-	ND
#10	6	3/7/1991	-	150	0.2	1.9	1.6	5.7	-	16,000
#11	6	3/7/1991	-	ND	ND	ND	ND	ND	-	ND
Product Line Replacement										
#2	2.5	2/28/1991	-	1.2	0.041	0.016	0.025	0.038	-	ND
#3	3	2/28/1991	-	ND	ND	ND	ND	ND	-	ND
#4	2.5	2/28/1991	-	ND	ND	0.008	ND	ND	-	ND
#5*	1.5	2/28/1991	-	310	1.7	1.9	5	13	-	180
#6*	2	2/28/1991	-	53	0.11	0.14	0.67	3	-	640
#7	2	2/28/1991	-	ND	ND	0.006	ND	ND	-	ND
#8*	2.5	2/28/1991	-	690	0.9	8.3	6.6	62	-	220
#9*	3	2/28/1991	-	4700	13	27	65	320	-	ND
#10*	2.5	2/28/1991	-	2100	23	190	870	430	-	160
#11*	2.5	2/28/1991	-	5200	27	270	150	920	-	ND
#12*	3	2/28/1991	-	240	0.76	7.2	4.4	21	-	ND
#13*	2.5	2/28/1991	-	5700	36	190	91	430	-	ND
#14	2.5	2/28/1991	-	ND	ND	ND	ND	ND	-	ND
#15*	2.5	2/28/1991	-	660	2.7	20	12	73	-	80
*Product Line Over-excavation										
#1	9	3/7/1991	-	23	0.16	1.1	0.48	2.5	-	-
#2	7.5	3/7/1991	-	ND	0.024	0.02	0.012	0.051	-	-
#3	4	3/7/1991	-	150	ND	2.2	1.9	17	-	-
#4	4	3/7/1991	-	9	0.068	ND	ND	0.83	-	-
#5	7	3/7/1991	-	150	1.3	2.5	2.1	7.7	-	-

Cambria

Table 1
Historical Soil Results

Former Chevron Station #9-6607, 2340 Otis Drive, Alameda, CA

Sample ID	Depth (fbg)	Date	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TOG
(concentrations reported in mg/kg)										
#6	7	3/7/1991	-	9.4	2.4	0.75	0.55	0.7	-	-
#7	7	3/7/1991	-	5.7	1.7	0.18	0.22	1.1	-	-
#8	6	3/7/1991	-	ND	ND	ND	ND	ND	-	-
#9	7	3/7/1991	-	1.8	0.62	0.03	0.085	0.13	-	-
Well Borings										
MW-1	3	8/6/1991	-	<1	<0.005	<0.005	<0.005	<0.005	-	-
MW-1	5	8/6/1991	-	<1	<0.005	<0.005	<0.005	<0.005	-	-
MW-2	2	8/6/1991	-	<1	<0.005	<0.005	<0.005	<0.005	-	-
MW-2	5	8/6/1991	-	<1	<0.005	<0.005	<0.005	<0.005	-	-
MW-3	3	8/6/1991	-	<1	<0.005	<0.005	<0.005	<0.005	-	-
MW-3	5	8/6/1991	-	<1	<0.005	<0.005	<0.005	<0.005	-	-
MW-4	3	8/7/1991	<10	<1	<0.005	<0.005	<0.005	<0.005	-	-
MW-4	5	8/7/1991	<10	<1	<0.005	<0.005	<0.005	<0.005	-	-
Borings										
B1	5	9/2/2004	-	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	-
	10	9/2/2004	-	<1.0	<0.005	<0.001	<0.001	<0.001	0.057	-
B2	5	9/2/2004	-	<1.0	<0.0005	<0.001	<0.001	<0.001	0.015	-
	10	9/2/2004	-	<1.0	<0.0005	<0.001	<0.001	<0.001	0.026	-
B3	5	9/2/2004	-	<1.0	<0.0005	<0.001	<0.001	<0.001	0.002	-
	10	9/2/2004	-	<1.0	<0.0005	<0.001	<0.001	<0.001	0.003	-
	16	9/2/2004	-	<1.0	<0.0005	<0.001	<0.001	<0.001	0.029	-
	20	9/2/2004	-	<1.0	<0.0005	<0.001	<0.001	<0.001	0.024	-
B4	5	9/1/2004	-	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	-
	10	9/1/2004	-	<1.0	<0.0005	<0.001	<0.001	<0.001	0.001	-
B5	5	9/1/2004	-	13	<0.0005	<0.001	<0.001	<0.001	<0.0005	-
	10	9/1/2004	-	11	0.0008	<0.001	<0.001	<0.001	0.005	-
B6	5	9/1/2004	-	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	-
	10	9/2/2004	-	<1.0	<0.0005	<0.001	<0.001	<0.001	0.002	-
	16	9/2/2004	-	<1.0	<0.0005	<0.001	<0.001	<0.001	0.14	-
	20	9/2/2004	-	<1.0	<0.0005	<0.001	<0.001	<0.001	0.24	-
B7	5	9/1/2004	-	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	-
	10	9/1/2004	-	<1.0	<0.0005	<0.001	<0.001	<0.001	0.014	-
	15.5	9/1/2004	-	<1.0	<0.0005	<0.001	<0.001	<0.001	0.052	-
Site Demolition										
UST#1	9	9/9/2004	-	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	-
UST#2	9	9/9/2004	-	<1.0	<0.005	<0.005	<0.005	<0.005	0.011	-

Cambria

Table 1
Historical Soil Results

Former Chevron Station #9-6607, 2340 Otis Drive, Alameda, CA

Sample ID	Depth (fbg)	Date	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TOG
(concentrations reported in mg/kg)										
UST#3	9	9/9/2004	-	17	0.02	0.065	0.35	1	<0.01	-
UST#4	9	9/9/2004	-	<1.0	<0.005	<0.005	<0.005	0.003	0.008	-
I1-D1	4	9/9/2004	-	290	<0.01	<0.01	0.026	0.036	<0.01	-
I1-D2	4	9/9/2004	-	1,500	<0.5	0.64	19	38	<0.5	-
I2-D1	4	9/9/2004	-	19	0.2	0.08	0.6	1.9	<0.05	-
I2-D2	4	9/9/2004	-	190	<0.1	<0.1	0.11	0.53	<0.1	-
I3-D1	4	9/9/2004	-	37	0.74	<0.05	2.3	0.74	<0.05	-
I3-D2	4	9/9/2004	-	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	-
used oil @ 5	5	9/9/2004	3,100	420	<1.0	1.3	4.5	19	<1.0	25,000
used oil @ 7	7	9/9/2004	110	2.5	<0.005	<0.005	<0.005	<0.005	<0.005	880
I1-D1 @ 6	6	9/15/2004	-	4.4	<0.005	0.005	0.049	0.1	0.0097	-
I1-D2 @ 6	6	9/15/2004	-	6.4	0.014	0.14	0.067	0.37	<0.005	-
I2-D1 @ 6	6	9/15/2004	-	<1.0	0.013	<0.005	0.01	0.018	<0.005	-
I2-D2 @ 6	6	9/15/2004	-	1.3	0.065	<0.005	0.08	0.13	0.0068	-
I3-D1 @ 6	6	9/15/2004	-	160	<0.2	0.98	2.7	9.4	<0.2	-
used oil @ 6	6	9/15/2004	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<50
used oil hoist	7	9/15/2004	6.6	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<50
hoist #2	7	9/15/2004	-	-	<0.005	<0.005	<0.005	<0.005	<0.005	120
hoist #3	7	9/15/2004	-	23	0.007	0.027	0.1	0.071	<0.005	12,000
hoist #4	7	9/15/2004	-	-	<0.005	<0.005	<0.005	<0.005	<0.005	250
hoist #3 @ 11	11	9/27/2004	-	<1.0	<0.005	<0.005	<0.005	<0.005	-	61
hoist #3 @ 11.5	11.5	9/27/2004	-	<1.0	<0.005	<0.005	<0.005	<0.005	-	<50
GP-1	6	6/16/2005	-	-	0.001	<0.001	0.013	0.07	0.001	-
	8	6/16/2005	-	-	0.19	1.1	3	16	0.005	-
	10	6/16/2005	-	-	<0.063	0.25	0.59	3.4	<0.063	-
GP-2	6	6/16/2005	-	-	<0.0005	<0.001	<0.001	0.005	<0.0005	-
	8	6/16/2005	-	-	<0.063	<0.13	5.8	27	<0.063	-
	10	6/16/2005	-	-	<0.0005	0.001	0.032	0.32	<0.0005	-

Additional Notes

TPHg = Total Petroleum Hydrocarbons as Gasoline by EPA Method 8015

Table 1
Groundwater Monitoring Data and Analytical Results
Chevron Service Station #9-6607
2340 Otis Drive
Alameda, California

WELL ID/ DATE	TOC* (<i>l</i>)	DTW (<i>l</i>)	GWE (<i>msl</i>)	TPH-D (<i>ppb</i>)	TPH-G (<i>ppb</i>)	B (<i>ppb</i>)	T (<i>ppb</i>)	E (<i>ppb</i>)	X (<i>ppb</i>)	MTBE (<i>ppb</i>)	TOG (<i>ppb</i>)
MW-1											
08/21/91	7.12	6.10	1.02	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/09/92	7.12	3.96	3.16	--	<50	<0.5	<0.5	<0.5	<0.5	--	<5.000
04/20/92	7.12	3.90	3.22	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/25/92	7.12	4.18	2.94	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/24/92	7.12	4.72	2.40	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/21/93	7.12	3.18	3.94	--	<50	<0.5	0.7	<0.5	1.0	--	--
04/13/93	7.12	3.70	3.42	--	<50	<0.5	<0.5	<0.5	1.0	--	--
07/14/93	7.12	4.21	2.91	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/26/93	7.12	4.28	2.84	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/11/94	7.12	4.16	2.96	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
03/31/94	7.12	3.88	3.24	--	<50	<0.5	0.6	<0.5	0.7	--	--
07/14/94	7.12	3.00	4.12	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/12/94 ¹	7.12	4.25	2.87	--	80	<0.5	<0.5	<0.5	<0.5	121	--
01/11/95	7.12	3.12	4.00	--	<50	<0.5	<0.5	<0.5	<0.5	130	--
04/05/95 ³	7.12	3.46	3.66	--	<50	<0.5	<0.5	<0.5	<0.5	170	--
07/13/95	7.12	3.99	3.13	--	<125	<1.2	<1.2	<1.2	<1.2	400	--
10/05/95	7.12	4.38	2.74	--	<50	<0.5	2.3	0.66	4.0	300	--
10/03/96	7.12	4.44	2.68	--	<50	0.63	<0.5	<0.5	<0.5	560	--
01/22/97	7.12	3.39	3.73	--	<200	<2.0	<2.0	<2.0	<2.0	530/880 ⁵	--
04/09/97 ⁶	6.92	3.70	3.22	--	<125	<1.2	<1.2	<1.2	<1.2	610	--
07/09/97	6.92	3.87	3.05	--	240	47	<2.0	<2.0	<2.0	990	--
10/16/97	6.92	3.97	2.95	--	250	<2.0	<2.0	<2.0	<2.0	1,000	--
01/08/98	6.92	3.45	3.47	--	<200	<2.0	<2.0	<2.0	<2.0	-- ⁸	--
04/24/98	6.92	3.61	3.31	--	170	20	<0.5	<0.5	<0.5	1,700	--
07/15/98	6.92	3.85	3.07	--	160	58	1.1	<0.5	0.59	1,500/1,600 ⁵	--
10/27/98	6.92	4.12	2.80	--	140	<0.5	<0.5	<0.5	<0.5	1,200	--
01/20/99	6.92	4.48	2.44	--	<250	<2.5	<2.5	<2.5	<2.5	1,330	--
04/19/99	6.92	2.71	4.21	--	150	73	<0.5	<0.5	<0.5	620	--
07/29/99	6.92	3.97	2.95	--	142	<0.5	0.82	<0.5	2.08	824	--
10/25/99	6.92	4.06	2.86	--	<200	<2.0	<2.0	<2.0	<2.0	972	--
01/24/00	6.92	2.89	4.03	--	143	<0.5	<0.5	<0.5	<0.5	1,170	--
04/03/00	6.92	3.60	3.32	--	130 ⁹	22	<0.50	<0.50	<0.50	550	--
07/03/00	6.92	4.06	2.86	--	180 ⁹	12	<1.0	<1.0	<1.0	850	--

ATTACHMENT 4

Table 1
Groundwater Monitoring Data and Analytical Results
Chevron Service Station #9-6607
2340 Otis Drive
Alameda, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msl)	TPH-D (pph)	TPH-G (pph)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	TOG (ppb)
MW-1 (cont)											
10/02/00 ¹¹	6.92	4.03	2.89	--	120 ¹⁰	<0.50	<0.50	<0.50	<0.50	520	--
01/09/01	6.92	4.07	2.85	--	<250	<2.5	<2.5	<2.5	<2.5	510	--
04/09/01	6.92	3.57	3.35	--	120	<0.500	<2.00	<0.500	<2.00	683	--
08/23/01	6.92	3.90	3.02	--	<50	<0.50	<0.50	<0.50	<0.50	350	--
11/27/01	6.92	3.90	3.02	--	270	<0.50	<0.50	<0.50	<1.5	280	--
02/26/02	6.92	3.51	3.41	--	820	<0.50	<0.50	<0.50	<1.5	1,600	--
05/22/02	6.92	3.78	3.14	--	350	<0.50	<0.50	<0.50	<1.5	1,100/1,000 ¹²	--
08/15/02	6.92	4.01	2.91	--	460	<0.50	<0.50	<0.50	<1.5	820/850 ¹²	--
11/14/02	6.92	3.91	3.01	--	100	<0.50	<0.50	<0.50	<1.5	310/290 ¹²	--
02/03/03	6.92	3.71	3.21	--	300	<0.50	<0.50	<0.50	<1.5	650/780 ¹²	--
05/09/03	6.92	3.95	2.97	--	330	<0.5	<0.5	<0.5	<1.5	810/740 ¹²	--
08/15/03 ¹³	6.92	4.02	2.90	--	51	<0.5	<0.5	<0.5	<0.5	110	--
11/14/03 ¹³	6.92	4.08	2.84	--	<50	<0.5	<0.5	<0.5	<0.5	11	--
02/13/04 ¹³	6.92	3.59	3.33	--	170	<0.5	<0.5	<0.5	<0.5	410	--
05/14/04 ¹³	6.92	4.09	2.83	--	83	2	<0.5	<0.5	<0.5	250	--
08/13/04 ¹³	6.92	4.05	2.87	--	<50	<0.5	<0.5	<0.5	<0.5	78	--
MW-2											
08/21/91	7.43	6.40	1.03	--	430	170	0.9	1.0	3.6	--	--
01/09/92	7.43	4.23	3.20	--	58	16	<0.5	<0.5	<0.5	--	<5,000
04/20/92	7.43	4.17	3.26	--	180	9.6	<0.5	0.8	<0.5	--	--
07/25/92	7.43	4.47	2.96	--	220	8.0	0.7	4.0	8.6	--	--
11/24/92	7.43	5.82	1.61	--	72	3.2	<0.5	0.5	0.6	--	--
01/21/93	7.43	3.35	4.08	--	<50	0.8	<0.5	<0.5	<0.5	--	--
04/13/93	7.43	4.02	3.41	--	78	<0.5	<0.5	<0.5	0.6	--	--
07/14/93	7.43	4.49	2.94	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/26/93	7.43	4.56	2.87	--	<50	<0.5	0.9	<0.5	0.6	--	--
01/11/94	7.43	4.39	3.04	--	<50	<0.5	1.0	<0.5	<0.5	--	--
03/31/94	7.43	4.18	3.25	--	<50	0.5	<0.5	<0.5	0.8	--	--
07/14/94	7.43	4.90	2.53	--	<50	<0.5	<0.5	<0.5	0.6	--	--
10/12/94 ²	7.43	4.54	2.89	--	<50	<0.5	<0.5	<0.5	<0.5	2,900	--
01/11/95	7.43	3.26	4.17	--	<50	<0.5	<0.5	<0.5	<0.5	2,500	--

Table 1
Groundwater Monitoring Data and Analytical Results
Chevron Service Station #9-6607
2340 Otis Drive
Alameda, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msf)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	TOG (ppb)
MW-2 (cont)											
04/05/95 ³	7.43	3.65	3.78	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
07/13/95	7.43	4.31	3.12	--	<250	<2.5	<2.5	<2.5	<2.5	1.100	--
10/05/95	7.43	4.68	2.75	--	<50	<0.5	1.9	0.54	3.4	280	--
10/03/96	7.43	4.80	2.63	--	<500	<5.0	<5.0	<5.0	<5.0	1.000	--
01/22/97	7.43	3.36	4.07	--	540 ⁷	<5.0	<5.0	<5.0	<5.0	1,300/1,600 ⁵	--
04/09/97	7.43	4.25	3.18	--	<500	<5.0	<5.0	<5.0	<5.0	970	--
07/09/97	7.43	4.48	2.95	--	<125	<1.2	<1.2	<1.2	<1.2	710	--
10/16/97	7.43	4.44	2.99	--	<100	<1.0	<1.0	<1.0	<1.0	1,000	--
01/08/98	7.43	3.79	3.64	--	68	<0.5	<0.5	<0.5	<0.5	-- ⁸	--
04/24/98	7.43	3.95	3.48	--	<50	<0.5	<0.5	<0.5	<0.5	490	--
07/15/98	7.43	4.30	3.13	--	51	1.2	1.2	<0.5	<0.5	480	--
10/27/98	7.43	4.45	2.98	--	<50	<0.5	<0.5	<0.5	<0.5	180	--
01/20/99	7.43	4.21	3.22	--	<50	<0.5	<0.5	<0.5	<0.5	388	--
04/19/99	7.43	4.38	3.05	--	620	13	35	11	78	510	--
07/29/99	7.43	4.49	2.94	--	<50	<0.5	<0.5	<0.5	<0.5	229	--
10/25/99	7.43	4.55	2.88	--	<50	<0.5	<0.5	<0.5	<0.5	314	--
01/24/00	7.43	2.82	4.61	--	<50	<0.5	<0.5	<0.5	<0.5	236	--
04/03/00	7.43	4.05	3.38	--	<50	<0.50	<0.50	<0.50	<0.50	420	--
07/03/00	7.43	4.52	2.91	--	140 ⁹	<0.50	<0.50	<0.50	0.88	1,300	--
10/02/00	7.43	4.55	2.88	--	<1,000	<10	<10	<10	<10	1,300	--
01/09/01	7.43	4.45	2.98	--	<1,000	<10	<10	<10	<10	1,100	--
04/09/01	7.43	3.96	3.47	--	214	<0.500	<2.00	0.512	<2.00	1,770	--
08/23/01	7.43	4.38	3.05	--	130	24	<0.50	<0.50	<0.50	440	--
11/27/01	7.43	4.25	3.18	--	650	<0.50	<0.50	<0.50	<1.5	770	--
02/26/02	7.43	3.98	3.45	--	160	<0.50	<0.50	<0.50	<1.5	470	--
05/22/02	7.43	4.23	3.20	--	86	<0.50	<0.50	<0.50	<1.5	320/300 ¹²	--
08/15/02	7.43	4.52	2.91	--	66	<0.50	<0.50	<0.50	<1.5	260/290 ¹²	--
11/14/02	7.43	4.29	3.14	--	<50	<0.50	<0.50	<0.50	<1.5	120/120 ¹²	--
02/03/03	7.43	4.10	3.33	--	80	<0.50	<0.50	<0.50	<1.5	190/200 ¹²	--
05/09/03	7.43	4.18	3.25	--	94	<0.5	<0.5	<0.5	<1.5	190/150 ¹²	--
08/15/03 ¹³	7.43	4.45	2.98	--	240	<1	<1	<1	<1	740	--
11/14/03 ¹³	7.43	4.51	2.92	--	<50	<0.5	<0.5	<0.5	<0.5	9	--

Table 1
Groundwater Monitoring Data and Analytical Results
Chevron Service Station #9-6607
2340 Otis Drive
Alameda, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msf)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	TOG (ppb)
MW-2 (cont)											
02/13/04 ¹³	7.43	4.05	3.38	--	<50	<0.5	<0.5	<0.5	<0.5	29	--
05/14/04 ¹³	7.43	4.51	2.92	--	<50	<0.5	<0.5	<0.5	<0.5	14	--
08/13/04 ¹³	7.43	4.48	2.95	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
MW-3											
08/21/91	8.07	7.10	0.97	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/09/92	8.07	5.03	3.04	--	<50	<0.5	<0.5	<0.5	<0.5	--	<5.000
04/20/92	8.07	4.91	3.16	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/25/92	8.07	5.34	2.73	--	<50	1.0	1.0	1.0	3.4	--	--
11/24/92	8.07	5.00	3.07	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/21/93	8.07	4.34	3.73	--	<50	<0.5	0.5	<0.5	1.0	--	--
04/13/93	8.07	4.84	3.23	--	<50	<0.5	<0.5	<0.5	0.6	--	--
07/14/93	8.07	5.29	2.78	--	<50	<0.5	<0.5	<0.5	2.0	--	--
10/26/93	8.07	5.36	2.71	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/11/94	8.07	5.22	2.85	--	<50	<0.5	1.0	<0.5	<0.5	--	--
03/31/94	8.07	4.99	3.08	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/14/94	8.07	5.36	2.71	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/12/94	8.07	5.02	3.05	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/11/95	8.07	4.35	3.72	--	<50	<0.5	<0.5	<0.5	0.7	<5.0	--
04/05/95 ³	8.07	2.64	5.43	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
07/13/95	8.07	5.13	2.94	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/05/95	8.07	5.46	2.61	--	<50	<0.5	1.2	<0.5	<0.5	--	--
10/03/96	8.07	5.53	2.54	--	<50	0.98	1.2	0.53	2.5	<2.5	--
01/22/97	8.07	4.62	3.45	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/09/97 ⁶	8.00	5.05	2.95	SAMPLED ANNUALLY		--	--	--	--	--	--
07/09/97	8.00	5.14	2.86	--	--	--	--	--	--	--	--
10/16/97	8.00	5.20	2.80	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
01/08/98	8.00	4.75	3.25	--	<50	<0.5	<0.5	<0.5	<0.5	9.3	--
04/24/98	8.00	4.73	3.27	--	--	--	--	--	--	--	--
07/15/98	8.00	5.07	2.93	--	--	--	--	--	--	--	--
10/27/98	8.00	5.24	2.76	--	--	--	--	--	--	--	--
01/20/99	8.00	5.18	2.82	--	<50	<0.5	<0.5	<0.5	<0.5	42.2	--

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Chevron Service Station #9-6607
2340 Otis Drive
Alameda, California

WELL ID/ DATE	TOC ⁺ (%)	DTW (ft.)	GWE (msl)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	TOG (ppb)
MW-3 (cont)											
04/19/99	8.00	4.26	3.74	--	--	--	--	--	--	--	--
07/29/99	8.00	5.18	2.82	--	--	--	--	--	--	--	--
10/25/99	8.00	5.27	2.73	--	--	--	--	--	--	--	--
01/24/00	8.00	4.22	3.78	--	<50	<0.5	<0.5	<0.5	<0.5	71.1	--
04/03/00	8.00	4.90	3.10	--	--	--	--	--	--	--	--
07/03/00	NP	5.25	2.75	--	--	--	--	--	--	--	--
10/02/00	8.00	5.29	2.71	--	--	--	--	--	--	--	--
01/09/01	8.00	5.27	2.73	--	<50	<0.50	<0.50	<0.50	<0.50	120	--
04/09/01	8.00	4.81	3.19	--	--	--	--	--	--	--	--
08/23/01	8.00	5.24	2.76	--	--	--	--	--	--	--	--
11/27/01	8.00	5.14	2.86	SAMPLED ANNUALLY		--	--	--	--	--	--
02/26/02	8.00	4.78	3.22	--	<50	<0.50	<0.50	<0.50	<1.5	190	--
05/22/02	8.00	5.03	2.97	SAMPLED ANNUALLY		--	--	--	--	--	--
08/15/02	8.00	5.27	2.73	SAMPLED ANNUALLY		--	--	--	--	--	--
11/14/02	8.00	5.08	2.92	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 ¹²	--
02/03/03	8.00	4.88	3.12	--	<50	<0.50	<0.50	<0.50	<1.5	82/88 ¹²	--
05/09/03	8.00	5.10	2.90	--	<50	<0.5	<0.5	<0.5	<1.5	150/100 ¹²	--
08/15/03 ¹³	8.00	5.18	2.82	--	<50	<0.5	<0.5	<0.5	<0.5	190	--
11/14/03 ¹³	8.00	5.23	2.77	--	<50	<0.5	<0.5	<0.5	<0.5	0.6	--
02/13/04 ¹³	8.00	4.86	3.14	--	<50	<0.5	<0.5	<0.5	<0.5	36	--
05/14/04 ¹³	8.00	5.25	2.75	--	<50	<0.5	<0.5	<0.5	<0.5	5	--
08/13/04 ¹³	8.00	5.21	2.79	--	<50	<0.5	<0.5	<0.5	<0.5	2	--
MW-4											
08/21/91	7.85	6.85	1.00	--	<50	0.6	<0.5	<0.5	<0.5	--	<5,000
01/09/92	7.85	4.70	3.15	--	<50	<0.5	<0.5	<0.5	<0.5	--	<5,000
04/20/92	7.85	4.64	3.21	--	<50	<0.5	<0.5	<0.5	<0.5	--	<5,000
07/25/92	7.85	4.95	2.90	78	<50	0.5	1.1	<0.5	0.8	--	--
11/24/92	7.85	5.42	2.43	--	<50	<0.5	<0.5	<0.5	1.0	--	<5,000
01/21/93	7.85	4.07	3.78	<10	<50	<0.5	0.5	<0.5	0.7	--	--
04/13/93	7.85	4.45	3.40	<10	<50	<0.5	<0.5	<0.5	1.0	--	--
07/14/93	7.85	4.90	2.95	--	<50	<0.5	<0.5	<0.5	<0.5	--	--

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2340 Otis Drive
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WELL ID/ DATE	TOC* (%)	DTW (ft.)	GWE (msf)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	TOC (ppb)
MW-4 (cont)											
10/26/93	7.85	4.95	2.90	--	<50	2.0	3.0	2.0	3.0	--	--
01/11/94	7.85	4.77	3.08	--	<50	<0.5	0.5	<0.5	<0.5	--	--
03/31/94	7.85	4.65	3.20	--	<50	<0.5	<0.5	<0.5	1.0	--	--
07/14/94	7.85	5.05	2.80	--	<50	0.9	1.2	<0.5	2.0	--	--
10/12/94	7.85	4.88	2.97	--	<50	<0.5	0.9	<0.5	0.7	--	--
01/11/95	7.85	4.00	3.85	--	<50	<0.5	0.8	0.7	1.5	<5.0	--
04/05/95 ⁴	7.85	4.22	3.63	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	<5.000
07/13/95	7.85	4.71	3.14	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/05/95	7.85	5.02	2.83	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/03/96	7.85	5.08	2.77	--	100	5.5	5.6	2.5	12	<2.5	--
01/22/97	7.85	4.28	3.57	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/09/97	7.85	4.60	3.25	SAMPLED ANNUALLY		--	--	--	--	--	--
07/09/97	7.85	4.79	3.06	--	--	--	--	--	--	--	--
10/16/97	7.85	4.81	3.04	--	<50	<0.5	<0.5	<0.5	<0.5	2.7	--
01/08/98	7.85	4.37	3.48	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/24/98	7.85	4.34	3.51	--	--	--	--	--	--	--	--
07/15/98	7.85	4.46	3.39	--	--	--	--	--	--	--	--
10/27/98	7.85	4.52	3.33	--	--	--	--	--	--	--	--
01/20/99	7.85	4.32	3.53	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
04/19/99	7.85	4.07	3.78	--	--	--	--	--	--	--	--
04/19/99	7.85	4.87	2.98	--	--	--	--	--	--	--	--
10/25/99	7.85	4.90	2.95	--	--	--	--	--	--	--	--
01/24/00	7.85	4.32	3.53	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/03/00	7.85	4.38	3.47	--	--	--	--	--	--	--	--
07/03/00	NP	4.88	2.97	--	--	--	--	--	--	--	--
10/02/00	7.85	4.89	2.96	--	--	--	--	--	--	--	--
01/09/01	7.85	4.93	2.92	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
04/09/01	7.85	4.48	3.37	--	--	--	--	--	--	--	--
08/23/01	7.85	4.85	3.00	--	--	--	--	--	--	--	--
11/27/01	7.85	4.80	3.05	SAMPLED ANNUALLY		--	--	--	--	--	--
02/26/02	7.85	4.40	3.45	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
05/22/02	7.85	4.64	3.21	SAMPLED ANNUALLY		--	--	--	--	--	--
08/15/02	7.85	4.91	2.94	SAMPLED ANNUALLY		--	--	--	--	--	--

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MW-4 (cont)											
11/14/02	7.85	4.73	3.12	SAMPLED ANNUALLY		--	--	--	--	--	--
02/03/03	7.85	4.52	3.33	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<0.5 ¹²	--
05/09/03	7.85	4.75	3.10	SAMPLED ANNUALLY		--	--	--	--	--	--
08/15/03	7.85	4.82	3.03	SAMPLED ANNUALLY		--	--	--	--	--	--
11/14/03	7.85	4.85	3.00	SAMPLED ANNUALLY		--	--	--	--	--	--
02/13/04 ¹¹	7.85	4.52	3.33	--	<50	<0.5	<0.5	<0.5	<0.5	4	--
05/14/04	7.85	4.87	2.98	SAMPLED ANNUALLY		--	--	--	--	--	--
08/13/04 ¹³	7.85	4.79	3.06	--	<50	<0.5	<0.5	<0.5	<0.5	2	--
TRIP BLANK											
TB-LB											
01/21/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
04/13/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/14/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/26/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/11/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
03/31/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/14/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/12/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/11/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
04/05/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/13/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/05/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/03/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/22/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/09/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
07/09/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/16/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
01/08/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/24/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
07/15/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/27/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--

Table 1
Groundwater Monitoring Data and Analytical Results
Chevron Service Station #9-6607
2340 Otis Drive
Alameda, California

WELL ID/ DATE	TOC+ (ft.)	DTW (ft.)	GWE (msl)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	TOG (ppb)
TRIP BLANK (cont)											
01/20/99	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
04/19/99	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
07/29/99	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/25/99	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
01/24/00	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/03/00	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--
07/03/00	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
10/02/00	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
01/09/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
04/09/01	--	--	--	--	<50.0	<0.500	<2.00	<0.500	<2.00	<0.500	--
08/23/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
QA											
11/27/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
02/26/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
05/22/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
08/15/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
11/14/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
02/03/03	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
05/09/03	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
08/15/03 ¹³	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/14/03 ¹³	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/13/04 ¹³	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/14/04 ¹³	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/13/04 ¹³	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--

Table 1
Groundwater Monitoring Data and Analytical Results
Chevron Service Station #9-6607
2340 Otis Drive
Alameda, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to April 3, 2000, were compiled from reports prepared by Blaine Tech Services, Inc.

TOC = Top of Casing

(ft.) = Feet

DTW = Depth to Water

GWE = Groundwater Elevation

(msl) = Mean sea level

TPH-D = Total Petroleum Hydrocarbons as Diesel

TPH-G = Total Petroleum Hydrocarbons as Gasoline

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

MTBE = Methyl tertiary butyl ether

TOG = Total Oil and Grease

(ppb) = Parts per billion

NP = No Purge

-- = Not Measured/Not Analyzed

QA = Quality Assurance/Trip Blank

* TOC elevations are relative to msl.

¹ Laboratory report indicates Volatile Organic Compounds (VOCs) were <5.0-<50 ppb.

² Laboratory report indicates VOCs were <50-<500 ppb.

³ Laboratory report indicates Polynuclear Aromatics (PNAs) were <5.0 ppb.

⁴ Laboratory report indicates VOCs were <5.0 ppb.

⁵ Confirmation of MTBE.

⁶ Wellhead elevation altered due to maintenance.

⁷ Chromatogram pattern indicates an unidentified hydrocarbon.

⁸ No value for MTBE could be determined; see laboratory report.

⁹ Laboratory report indicates gasoline C6-C12.

¹⁰ Laboratory report indicates unidentified hydrocarbons C6-C12.

¹¹ Laboratory report indicates this sample was analyzed outside the EPA recommended holding time.

¹² MTBE by EPA Method 8260.

¹³ BTEX and MTBE by EPA Method 8260.

Table 2
Groundwater Analytical Results - Oxygenate Compounds
Chevron Service Station #9-6607
2340 Otis Drive
Alameda, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
MW-1	05/22/02	<500	<100	1,000	<2	<2	410	<2	<2
	08/15/02	<500	<100	850	<2	<2	290	<2	<2
	11/14/02	<500	<100	290	<2	<2	83	<2	<2
	02/03/03	<50	24	780	<0.5	<0.5	240	<0.5	<0.5
	05/09/03	<50	44	740	<0.5	<0.5	220	<0.5	<0.5
	08/15/03	<50	20	110	<0.5	<0.5	10	<0.5	<0.5
	11/14/03	<50	<5	11	<0.5	<0.5	0.8	<0.5	<0.5
	02/13/04	<50	23	410	<0.5	<0.5	120	<0.5	<0.5
	05/14/04	<50	9	250	<0.5	<0.5	69	<0.5	<0.5
08/13/04	<50	<5	78	<0.5	<0.5	17	<0.5	<0.5	
MW-2	05/22/02	<500	130	300	<2	<2	28	<2	<2
	08/15/02	<500	<100	290	<2	<2	23	<2	<2
	11/14/02	<500	<100	120	<2	<2	7	<2	<2
	02/03/03	<50	55	200	<0.5	<0.5	22	<0.5	<0.5
	05/09/03	<50	38	150	<0.5	<0.5	15	<0.5	<0.5
	08/15/03	<100	<10	740	<1	<1	200	<1	<1
	11/14/03	<50	<5	9	<0.5	<0.5	<0.5	<0.5	<0.5
	02/13/04	<50	11	29	<0.5	<0.5	2	<0.5	<0.5
	05/14/04	<50	<5	14	<0.5	<0.5	<0.5	<0.5	<0.5
08/13/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-3	11/14/02	<500	<100	<2	<2	<2	<2	<2	<2
	02/03/03	<50	<5	88	<0.5	<0.5	1	<0.5	<0.5
	05/09/03	<50	<5	100	<0.5	<0.5	2	<0.5	<0.5
	08/15/03	<50	<5	190	<0.5	<0.5	4	<0.5	<0.5
	11/14/03	<50	<5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
	02/13/04	<50	<5	36	<0.5	<0.5	0.5	<0.5	<0.5
	05/14/04	<50	<5	5	<0.5	<0.5	<0.5	<0.5	<0.5
	08/13/04	<50	<5	2	<0.5	<0.5	<0.5	<0.5	<0.5

Table 2
Groundwater Analytical Results - Oxygenate Compounds
Chevron Service Station #9-6607
2340 Otis Drive
Alameda, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
MW-4	02/03/03	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	05/09/03	SAMPLED ANNUALLY		--	--	--	--	--	--
	02/13/04	<50	<5	4	<0.5	<0.5	1	<0.5	<0.5
	08/13/04	<50	<5	2	<0.5	<0.5	<0.5	<0.5	<0.5

Table 2
Groundwater Analytical Results - Oxygenate Compounds
Chevron Service Station #9-6607
2340 Otis Drive
Alameda, California

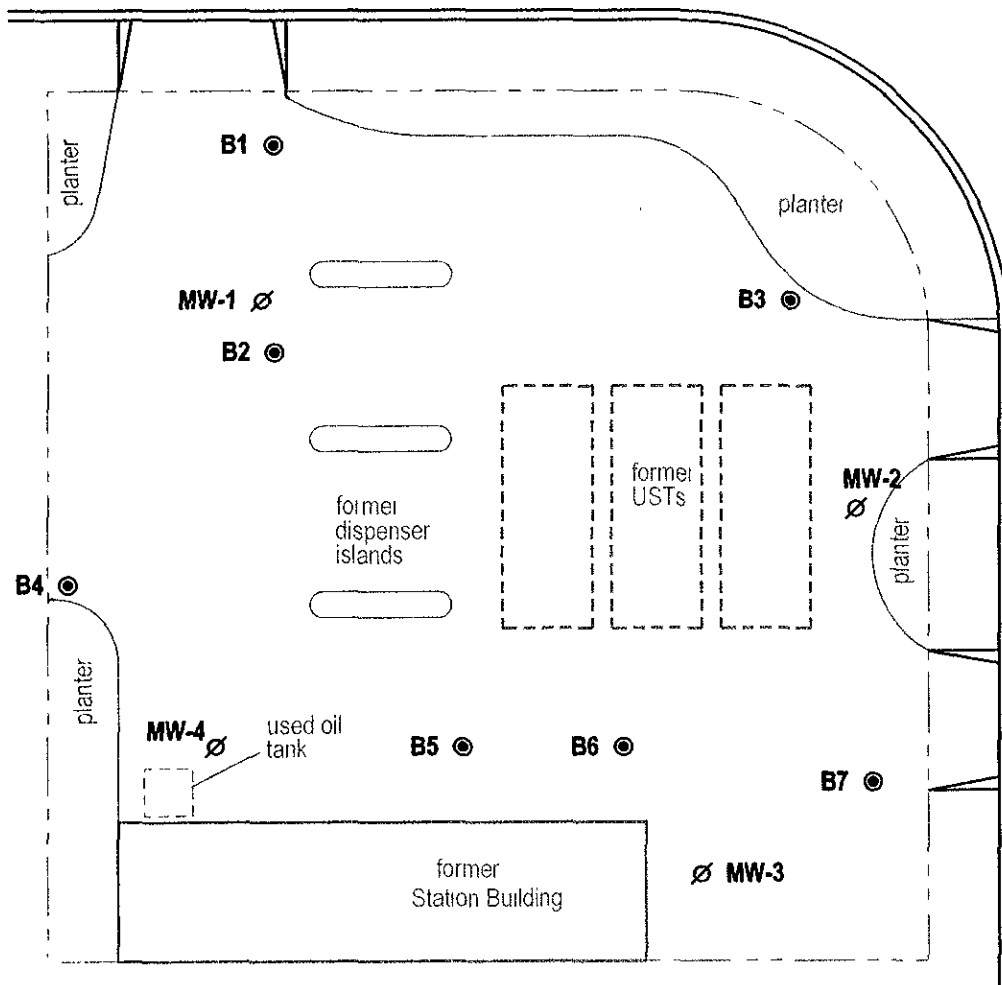
EXPLANATIONS:

TBA = Tertiary butyl alcohol
MTBE = Methyl tertiary butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tertiary butyl ether
TAME = Tertiary amyl methyl ether
1,2-DCA = 1,2-Dichloroethane
EDB = 1,2-Dibromoethane
(ppb) = Parts per billion
-- = Not Analyzed

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

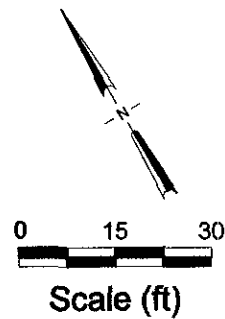
OTIS DRIVE



EXPLANATION

MW-1 ∅ Destroyed monitoring well location

B4 ● Soil boring location



ATTACHMENT 5

Soil Boring and Sample Locations

Chevron Service Station 9-6607

2340 Otis Drive

Alameda, California



C A M B R I A

1:9-0007FIGURESSTEP.LANDWG

CAMBRIA

Table 1. Analytic Results for Soil Borings - Chevron Station 9-6607, 2340 Otis Drive, Alameda, CA

Sample ID	Sample Depth (ft)	Sample Date	TPHg	B	T	E	X	MTBE
Concentrations reported in milligrams per kilogram mg/kg = parts per million								
B1-S-5	5	9/2/2004	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005
B1-S-10	10	9/2/2004	<1.0	<0.005	<0.001	<0.001	<0.001	0.057
B2-S-5	5	9/2/2004	<1.0	<0.0005	<0.001	<0.001	<0.001	0.015
B2-S-10	10	9/2/2004	<1.0	<0.0005	<0.001	<0.001	<0.001	0.026
B3-S-5	5	9/2/2004	<1.0	<0.0005	<0.001	<0.001	<0.001	0.002
B3-S-10	10	9/2/2004	<1.0	<0.0005	<0.001	<0.001	<0.001	0.003
B3-S-16	16	9/2/2004	<1.0	<0.0005	<0.001	<0.001	<0.001	0.029
B3-S-20	20	9/2/2004	<1.0	<0.0005	<0.001	<0.001	<0.001	0.024
B4-S-5	5	9/1/2004	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005
B4-S-10	10	9/1/2004	<1.0	<0.0005	<0.001	<0.001	<0.001	0.001
B5-S-5	5	9/1/2004	13	<0.0005	<0.001	<0.001	<0.001	<0.0005
B5-S-10	10	9/1/2004	11	0.0008	<0.001	<0.001	<0.001	0.005
B6-S-5	5	9/1/2004	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005
B6-S-10	10	9/2/2004	<1.0	<0.0005	<0.001	<0.001	<0.001	0.002
B6-S-16	16	9/2/2004	<1.0	<0.0005	<0.001	<0.001	<0.001	0.14
B6-S-20	20	9/2/2004	<1.0	<0.0005	<0.001	<0.001	<0.001	0.24
B7-S-5	5	9/1/2004	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005
B7-S-10	10	9/1/2004	<1.0	<0.0005	<0.001	<0.001	<0.001	0.014
B7-S-15.5	15.5	9/1/2004	<1.0	<0.0005	<0.001	<0.001	<0.001	0.052

Abbreviations/Notes:

Total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8015M
 Benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8260B
 Methyl tertiary butyl ether (MTBE) by EPA Method 8260B
 <x = Not detected above method detection limit

CAMBRIA

Table 2. Analytic Results for Grab Groundwater Samples - Chevron Station 9-6607, 2340 Otis Drive, Alameda, CA

Sample ID	Sample Depth (ft)	Sample Date	TPHg	B	T	E	X	MTBE
Concentrations reported in micrograms per liter - $\mu\text{g/l}$ = parts per billion								
B1-W-8	8	9/2/2004	<50	<0.5	<0.5	<0.5	<0.5	77
B1-W-11	11	9/2/2004	<50	<0.5	<0.5	<0.5	<0.5	300
B2-W-8	8	9/1/2004	1,700	160	2	2	0.8	680
B2-W-11	11	9/2/2004	69	<0.5	<0.5	<0.5	<0.5	260
B3-W-8	8	9/2/2004	52	<0.5	0.6	1	4	16
B3-W-11	11	9/2/2004	<50	<0.5	<0.5	<0.5	<0.5	47
B4-W-8	8	9/1/2004	<50	<0.5	<0.5	<0.5	<0.5	<0.5
B4-W-11	11	9/1/2004	<50	<0.5	<0.5	<0.5	<0.5	4
B5-W-8	8	9/1/2004	260	<0.5	<0.5	4	15	23
B5-W-11	11	9/2/2004	300	3	1	<0.5	0.9	100
B6-W-8	8	9/2/2004	380	<0.5	37	34	110	4
B6-W-11	11	9/2/2004	<50	<0.5	<0.5	<0.5	<0.5	180
B7-W-8	8	9/1/2004	<50	<0.5	<0.5	1	5	1
B7-W-11	11	9/1/2004	57	<0.5	<0.5	<0.5	<0.5	480

Abbreviations/Notes:

Total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8015M

Benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8260B

Methyl tertiary butyl ether (MTBE) by EPA Method 8260B

<x = Not detected above method detection limit

Table 2
Historical Grab-Groundwater Results

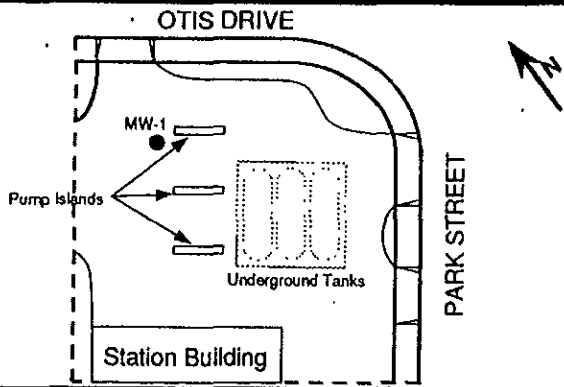
Former Chevron Station 9-6607, 2340 Otis Drive, Alameda, CA

Sample ID	Discrete Depth (fbg)	Sample Date	TPHg	TPHd	TOG	B	T	E	X	MTBE
Concentrations reported in micrograms per liter - µg/L = parts per billion										
B1	8	9/2/2004	<50	--	--	<0.5	<0.5	<0.5	<0.5	77
	11	9/2/2004	<50	--	--	<0.5	<0.5	<0.5	<0.5	300
B2	8	9/1/2004	1,700	--	--	160	2	2	0.8	680
	11	9/2/2004	69	--	--	<0.5	<0.5	<0.5	<0.5	260
B3	8	9/2/2004	52	--	--	<0.5	0.6	1	4	16
	11	9/2/2004	<50	--	--	<0.5	<0.5	<0.5	<0.5	47
B4	8	9/1/2004	<50	--	--	<0.5	<0.5	<0.5	<0.5	<0.5
	11	9/1/2004	<50	--	--	<0.5	<0.5	<0.5	<0.5	4
B5	8	9/1/2004	260	--	--	<0.5	<0.5	4	15	23
	11	9/2/2004	300	--	--	3	1	<0.5	0.9	100
B6	8	9/2/2004	380	--	--	<0.5	37	34	110	4
	11	9/2/2004	<50	--	--	<0.5	<0.5	<0.5	<0.5	180
B7	8	9/1/2004	<50	--	--	<0.5	<0.5	1	5	1
	11	9/1/2004	57	--	--	<0.5	<0.5	<0.5	<0.5	480
used-oil pit	--	9/9/2004	<50	8,200	33	<0.5	<0.5	<0.5	<0.5	2
UST pit	--	9/9/2004	14,000	--	--	160	590	620	2,700	<17
UST pit-post	--	9/15/2004	11,000	--	--	87	390	430	2,900	<25
GP-3	--	6/16/2005	--	1,000	--	--	--	--	--	--
GP-4	--	6/16/2005	--	2,100	--	--	--	--	--	--

Abbreviations/Notes:

Total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8015M
 Total petroleum hydrocarbons as diesel (TPHd) by EPA Method 8015C
 Total Oil and Grease (TOG) by EPA Method 5520
 Benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8260B
 Methyl tertiary butyl ether (MTBE) by EPA Method 8260B
 <x = Not detected above method detection limit

-' = Not analyzed



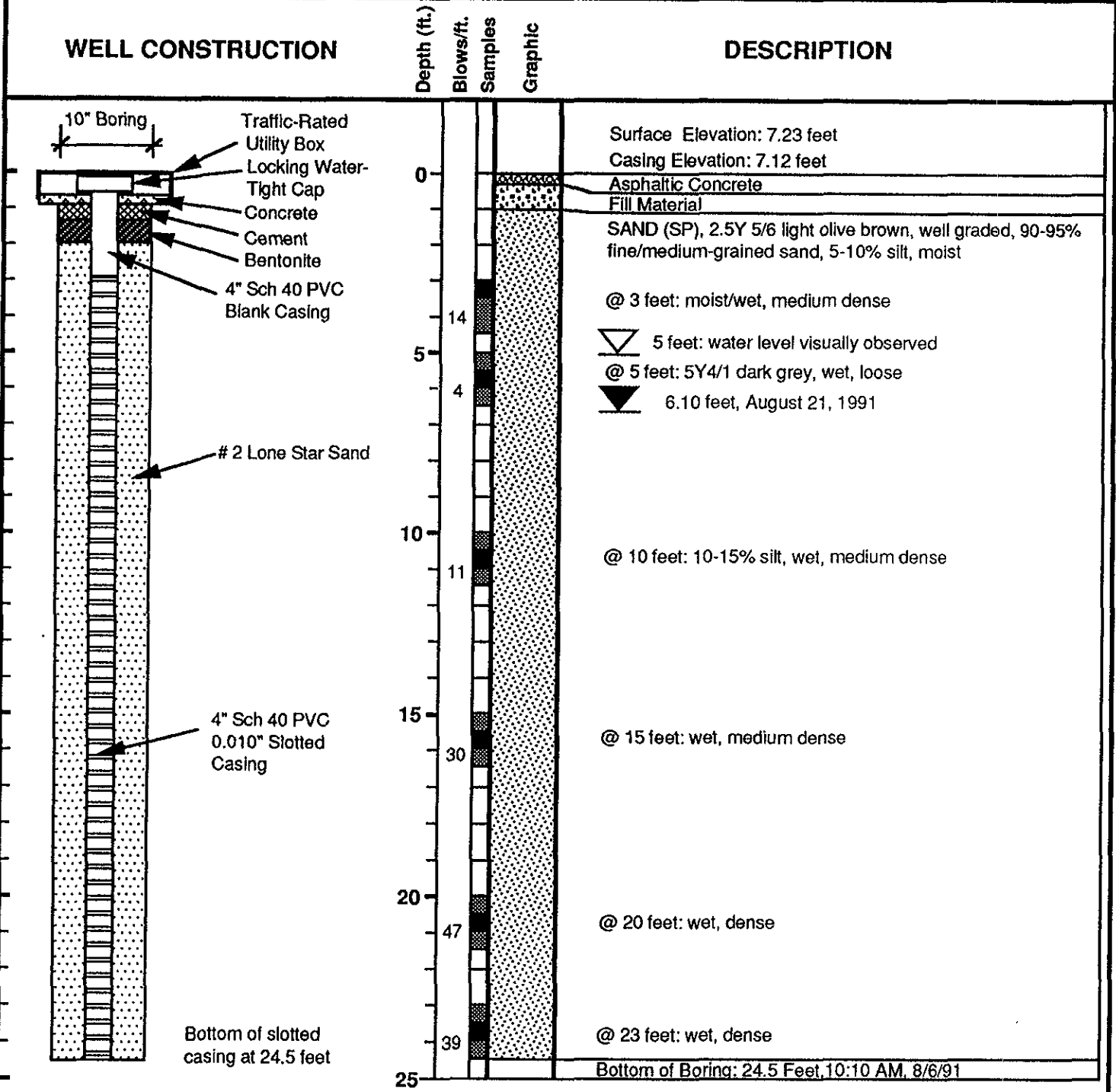
LOG OF BORING MW-1

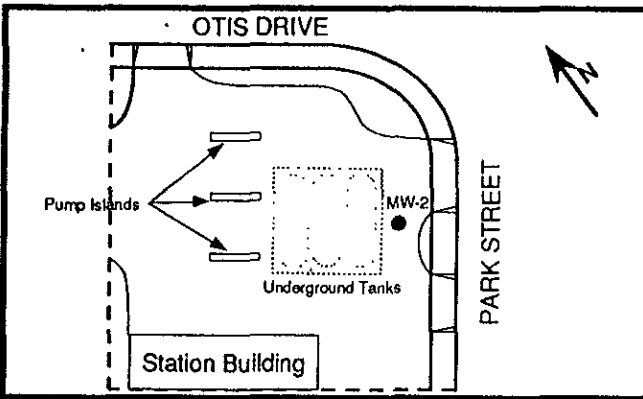
Chevron Service Station #9-6607

2340 Otis Drive

Alameda, California

Project No.: RC05002 Date Drilled: August 6, 1991
 Logged By: Andy Bunten Drilling Method: 10" Hollow Stem Auger
 Drilling Co.: West Hazmat Sampling Method: 2" Split Spoon
 Driller: Doug Howard Inclination: Vertical



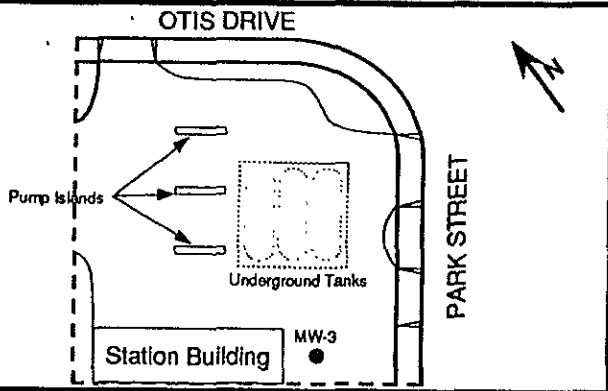


LOG OF BORING MW-2

Chevron Service Station #9-6607 2340 Otis Drive Alameda, California

Project No.: RC05002 Date Drilled: August 6, 1991
 Logged By: Andy Buntan Drilling Method: 10" Hollow Stem Auger
 Drilling Co.: West Hazmat Sampling Method: 2" Split Spoon
 Driller: Doug Howard Inclination: Vertical

WELL CONSTRUCTION	Depth (ft.)	Blows/ft.	Samples	Graphic	DESCRIPTION
	0				Surface Elevation: 7.78 feet Casing Elevation: 7.43 feet Asphaltic Concrete
	0				Fill Material
	5				SAND (SP), 2.5Y 5/6 light olive brown, well graded, 90-95% fine/medium-grained sand, 5-10% silt, moist @ 3 feet: moist/wet, medium dense @ 3.5 feet: large cobble encountered, 6 inches in diameter @ 5 feet: 5Y4/1 dark grey, very moist/wet, medium dense
	12				6 feet 6.40 feet, August 21, 1991
	10				@ 10 feet: wet, medium dense
	15				@ 15 feet: wet, dense
	20				@ 20 feet: wet, dense
	23				@ 23 feet: wet, dense
Bottom of slotted casing at 24.5 feet	24.5				Bottom of Boring: 24.5 Feet, 12:35 PM, 8/6/91



LOG OF BORING MW-3

Chevron Service Station #9-6607

2340 Otis Drive

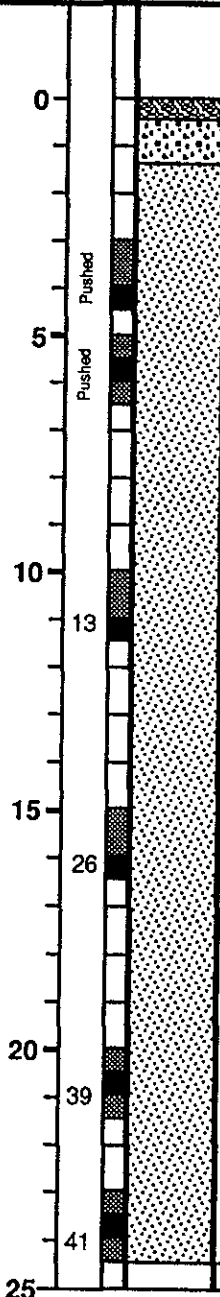
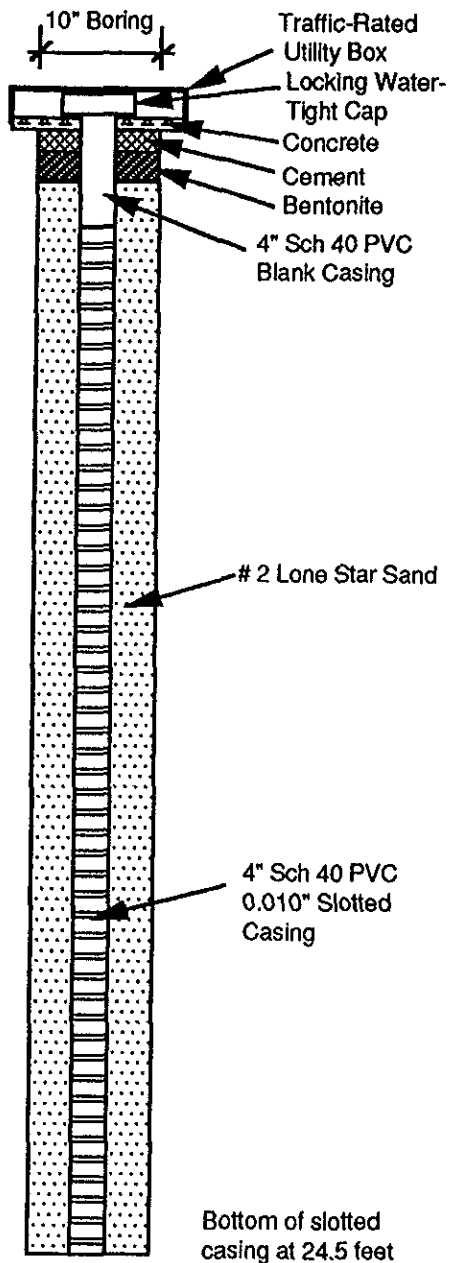
Alameda, California

Project No.: RC05002 Date Drilled: August 6, 1991
 Logged By: Andy Bunten Drilling Method: 10" Hollow Stem Auger
 Drilling Co.: West Hazmat Sampling Method: 2" Split Spoon
 Driller: Doug Howard Inclination: Vertical

WELL CONSTRUCTION

Depth (ft.)
Blows/ft.
Samples
Graphic

DESCRIPTION



Surface Elevation: 8.24 feet
 Casing Elevation: 8.07 feet
 Asphaltic Concrete
 Fill Material

SAND (SP), 2.5Y 5/6 light olive brown, well graded, 90-95% fine/medium-grained sand, 5-10% silt, moist

@ 3 feet: moist/wet

@ 5 feet: 5Y4/1 dark grey, moist/wet

▽ @ 6 feet

▽ 7.10 feet, August 21, 1991

@ 10 feet: wet, medium dense

@ 15 feet: wet, medium dense

@ 20 feet: wet, dense

@ 23 feet: wet, dense

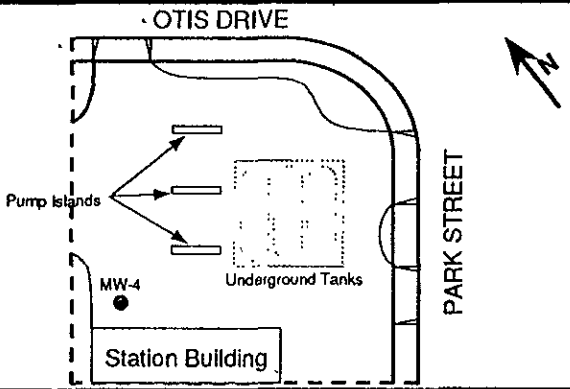
Bottom of Boring: 24.5 Feet, 2:30 PM, 8/6/91

LOG OF BORING MW-4

Chevron Service Station #9-6607

2340 Otis Drive Alameda, California

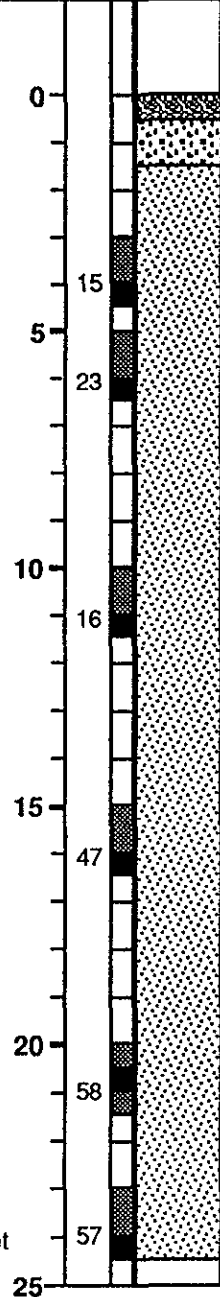
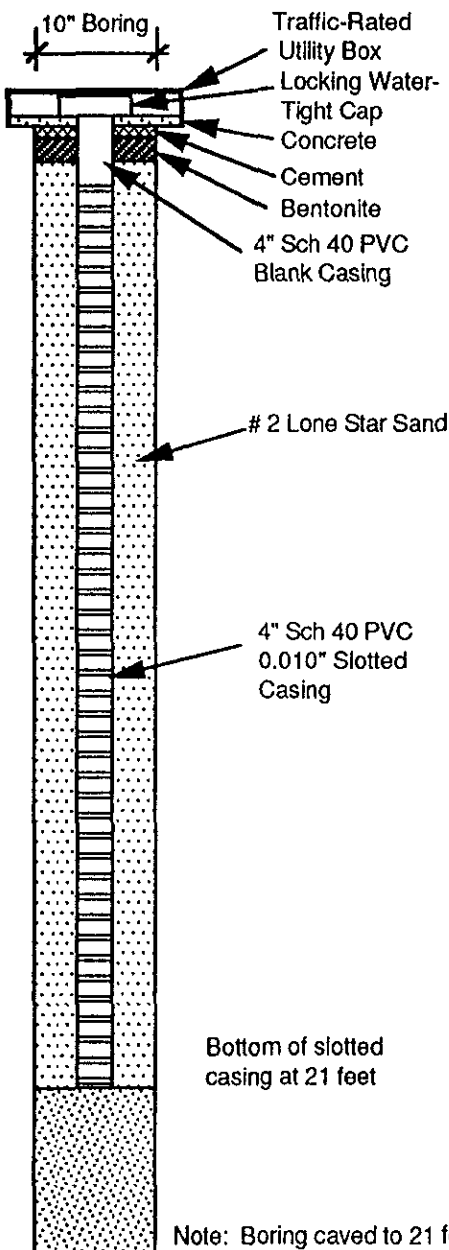
Project No.: RC05002 Date Drilled: August 7, 1991
 Logged By: Andy Bunten Drilling Method: 10" Hollow Stem Auger
 Drilling Co.: West Hazmat Sampling Method: 2" Split Spoon
 Driller: Doug Howard Inclination: Vertical



WELL CONSTRUCTION

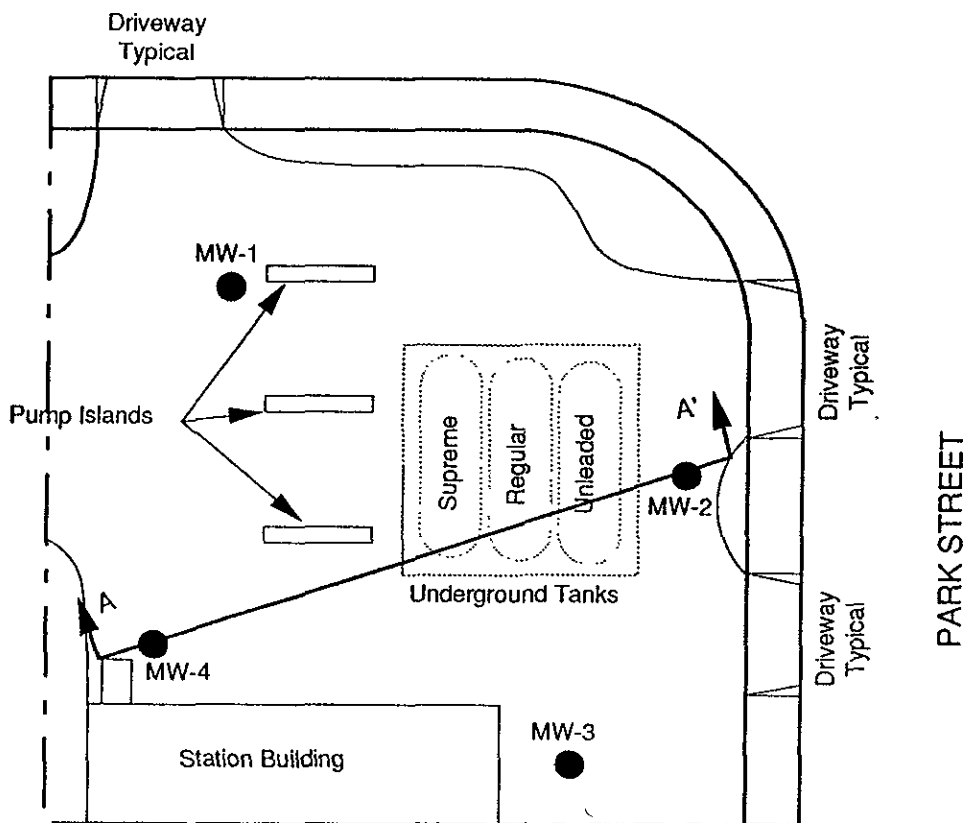
Depth (ft.)
 Blows/ft.
 Samples
 Graphic

DESCRIPTION






Surface Elevation: 8.01 feet
 Casing Elevation: 7.85 feet
 Asphaltic Concrete
 Fill Material
 SAND (SP), 2.5Y 5/6 light olive brown, well graded, 90-95% fine/medium-grained sand, 5-10% silt, moist
 @ 3 feet: moist, medium dense
 @ 4.5 feet: 5Y4/1 dark grey
 @ 5 feet: moist, medium dense
 @ 7 feet
 6.85 feet, August 21, 1991
 @ 10 feet: wet, medium dense
 @ 15 feet: wet, dense
 @ 16 feet: 2.5YR 5/6 light olive brown
 @ 20 feet: 5Y4/1 dark grey, wet, very dense
 @ 23 feet: wet, very dense
 Bottom of Boring: 24.5 Feet, 10:15 AM, 8/7/91

OTIS DRIVE



EXPLANATION

-  Monitor Well
-  Property line
-  Line of cross-section



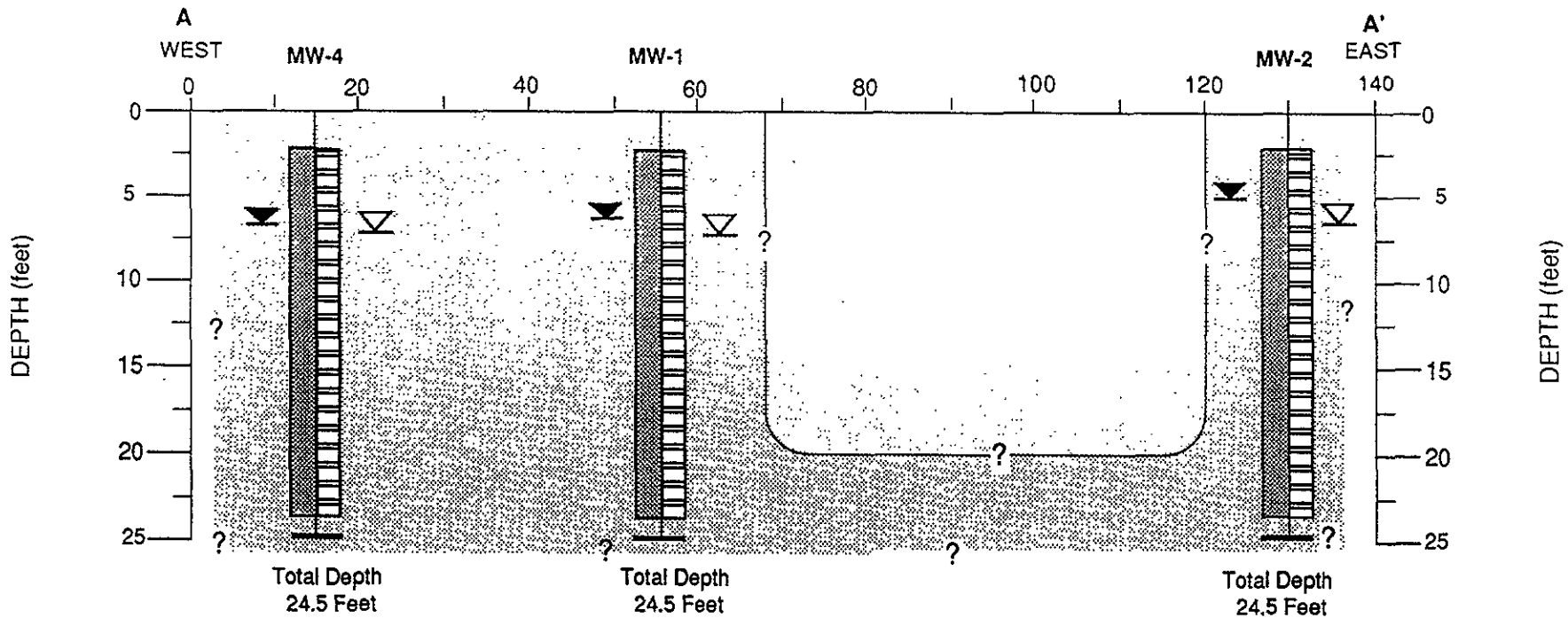
Reference: Blaine Tech Services, Inc. Report No. 910409-J-1







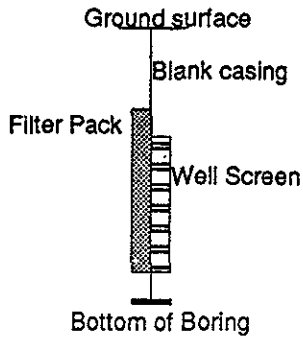
Project No. RC05002

PLAN VIEW OF CROSS SECTION

Chevron Service Station #9-6607
2340 Otis Drive
Alameda, California



EXPLANATION

-  SP
 -  Tank Backfill
 -  Potentiometric Surface Measured 8/21/91
 -  Depth ground-water encountered during drilling.
- 



Horizontal Scale 1" = 20'
Vertical Exaggeration: 2X



Project No. RC05002

CROSS-SECTION A - A'
Chevron Service Station # 9-6607
2340 Otis Drive
Alameda, California