Environmental Management Company
6001 Bollinger Canyon Rd, K2256
P.O. Box 6012
San Ramon, CA 94583-2324
Tel 925-842-1589
Fax 925-842-8370

J. Mark Inglis
Project Manager

ChevronTexaco

Jan 10, 2006
(date)

Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Chevron Service Station # 20-6127
Address: 2301 Blanding Avenue, Alameda CA

I have reviewed the attached report titled Closure Request
and dated Jan. 10, 2006.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Cambria Environmental Technology, Inc., upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct.

Sincerely,

J. Mark Inglis
Project Manager

Enclosure: Report

CAMBRIA

January 10, 2006

Mr. Barney Chan
Alameda County Health Care Services Agency
Environmental Health Services (ACHCSA-EHS)
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-9335

Re: **Closure Request**
Former Signal Oil Marine Storage and Distribution Facility
Chevron Facility #20-6127
2301 Blanding Avenue
Alameda, California
Cambria Project No. 31H-1916

Dear Mr. Chan:

On behalf of Chevron Products Company (Chevron), Cambria Environmental Technology, Inc. (Cambria) submits this request for case closure for the above referenced site. The site is a former Signal Oil and Gas Company (Signal) fuel distribution terminal located on Blanding Avenue between Oak and Park Street in Alameda, California (Figure 1). Signal leased the site from approximately 1930 to 1961. The lease was originally between Edward and Mary Beck and U.S. Refining Co. Inc, whom in 1931 changed their name to Signal Oil & Gas Company. The property is currently a strip mall owned by Julie Beck Hall & Helen Beck Kleeman.

SITE BACKGROUND

Eight above ground storage tanks equipped with concrete secondary containment walls, underground piping, office and storage buildings, a loading rack and pumping station were used to store and distribute fuels and lubricants (Figure 2). A paint storage area, as identified on available site plans was seen on aerial photos from 1932 and 1941. Between 1957 and 1963, the buildings at the site were reportedly removed and it is assumed that the tanks and piping were removed at this time also. From 1973 to 1983, the site was used as a construction yard and boat repair facility. Since 1987, the site has been developed as a strip mall.

SITE CONDITIONS

The site is underlain by fill consisting of clay with fine sand and concrete fragments to approximately 6 fbg. Native soil consists of sandy clay and clayey sand to depths of approximately 16 fbg. Underlying this layer, is poorly-graded sand from approximately 15 to 18 fbg. Boring logs are attached in Appendix A. Based on the quarterly groundwater monitoring events, depth to groundwater has ranged between approximately 7 and 10 fbg. Based on depth to water data collected from the borings, which were temporarily cased and monitored over a 2-day period, and information from RRM's *Tier 2 Risk Based Corrective Action (RBCA)* assessment, dated October 1998, groundwater flow is to the north/northeast toward Alameda Canal at an approximate gradient of 0.01 and is slightly tidally influenced.

Cambria Environmental Technology, Inc.

5900 Hollis Street
Suite A
Emeryville, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

PREVIOUS INVESTIGATIONS

In February 1995, Geomatrix advance eight soil borings (SB-1 through SB-8) on site. Soil samples collected during the investigation contained total petroleum hydrocarbons diesel (TPHd) at a maximum concentration of 250 parts per million (ppm), total petroleum hydrocarbons as gasoline (TPHg) at a maximum concentration of 2,000 ppm and benzene at a maximum concentration of 3.7 ppm. In April 1995, Geomatrix collected groundwater samples from ten shallow borings (GWS-7 through GWS-16). TPHd, TPHg and benzene were detected at maximum concentrations of 1,200 parts per billion (ppb), 22,000 ppb and 6,200 ppb, respectively, in GWS-9 located east of the former loading racks along the Alameda Canal. Maximum hydrocarbon concentrations were collected from borings located in the north eastern portion of the site.

RRM, Inc. advanced additional borings SB-9 through SB-12 at the site in October 1998, as part of a RBCA assessment. Hydrocarbons were detected in soil samples from borings SB-9 and SB-11. TPHd, TPHg and benzene were detected in groundwater at maximum concentrations of 62,000 ppb, 14,000 ppb and 1,400 ppb, respectively, in SB-9. TPHd, TPHg and benzene were also detected in soil at maximum concentrations of 2,200 ppm, 900 ppm, and 3.3 ppm, respectively in SB-9. (Table 1 and Table 2). Water samples collected from Alameda Canal, adjacent to the site, did not contain hydrocarbons above method reporting limits. Tidal measurements were collected from the Alameda Canal and the four temporary wells. Measurements indicated that the Alameda Canal varied by 2.62 feet while SB-9, located approximately 60 feet from the canal varied by 0.42 feet. SB-10, 11 and 12 located approximately 120, 260, and 330 feet from the canal fluctuated by 0.14, 0.17 and 0.14 feet, respectively.

In December 2000, Gettler Ryan, Inc. installed groundwater monitor well MW-1 along the northeastern portion of the site adjacent to the Alameda Canal. Low concentrations of hydrocarbons were detected in soil at 10 fbg.

Cambria collected surface soil samples S1, S2 and S3 from the soil bank above the western shore of the Alameda Canal in January 2004 in response to an October 16, 2002 letter from ACEHS regarding concerns of impact to surface water. One sample (S2) was collected directly down-slope of MW-1 near a water seep observed on the slope above the canal. Due to the historical industrial nature of the property two additional samples were collected approximately 70 feet east and 90 feet north of MW-1 to observe background concentrations. No TPHg, MTBE or BTEX was detected in any of the soil samples. Low to moderate concentrations of TPHd were detected in all three soil samples. Laboratory chromatographs indicate that the hydrocarbon pattern observed in these soil samples is not typical of diesel fuel. This may represent either highly degraded diesel fuel from various historical onsite and nearby operations, or residual organic material of unknown origin present in local fill material.

HYDROCARBON DISTRIBUTION IN SOIL

TPHd was detected at a maximum concentration of 2,200 mg/kg in a sample collected from SB-9 at six fbg. A sample collected from SB-9 at 14 fbg contained 620 mg/kg of TPHd. Deeper samples collected from SB-9 did not contain TPHd above the method reporting limits of 1.0 mg/kg. TPHg and BTEX constituents were detected at maximum concentrations of 2,000 mg/kg, 3.7 mg/kg, 34 mg/kg, 14 mg/kg, and 46 mg/kg, respectively in SB-2 at 7 fbg. MTBE was

detected in one sample at 12 mg/kg in SB-9 at 14fbg. Figure 3 illustrates hydrocarbon distributions in soil.

HYDROCARBON DISTRIBUTION IN GROUNDWATER

Hydrocarbons have been detected at maximum concentrations in groundwater on the northeast section of the site in borings GWS-8 through GWS-10 and in monitor well MW-1. TPHg and benzene were detected at maximum concentrations of 22,000 ug/L and 6,200 ug/L respectively, from samples collected from GWS-9. TPHd was detected at a maximum concentration of 62,000 ug/L from a grab groundwater sample collected from SB-9. Typically grab groundwater samples contain higher concentrations of hydrocarbons than samples collected from permanent sampling points.

The first quarterly samples collected from MW-1 in January 2001 contained hydrocarbon concentrations of 5,210 ug/L TPHg, 1,100 ug/L TPHd and 868 ug/L benzene. During the fourth quarter 2005 groundwater monitoring event, hydrocarbon concentrations were below method reporting limits for all constituents, with the exception of TPHd at 920 ug/L. The laboratory noted the sample to indicate the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes later in the DRO range. A copy of the Fourth Quarter 2005 groundwater sampling event is attached as Appendix B.

HYDROCARBON DISTRIBUTION IN SURFACE WATER

TPHd was detected at low concentrations from samples collected from the Alameda Canal between July 2001 and April 2002. A slight sheen has been noticed on the water and is likely due to inadvertent discharge from gasoline and diesel powered boats. No additional petroleum hydrocarbons have been detected in grab water samples collected from the Alameda Canal.

REGULATORY STATUS REVIEW AND RECOMMENDATIONS

The site appears to meet the Regional Water Quality Control Board (RWQCB) San Francisco Bay Region criteria for a low-risk fuel site. As described by the April 1, 1996 RWQCB memorandum, *Regional Board Supplemental Instructions to State Water Board December 8, 1995, Interim Guidance on Required Cleanup at Low-Risk Fuel Sites*, a low-risk groundwater case has the following general characteristics:

- The leak has stopped and ongoing sources, including free product, have been removed or remediated;
- The site has been adequately characterized;
- The dissolved hydrocarbon plume is not migrating;
- No water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted; and
- The site presents no significant risk to human health or the environment.

Each of the low-risk groundwater case characteristics, as they relate to the site, is discussed below.

The Leak Has Stopped and Ongoing Sources, Including Free Product, Have Been Removed

It is assumed that all tanks and piping were removed between 1957 and 1963 when the buildings at the site were reportedly removed. No records of these activities are available. Over several phases of investigation, no soil samples collected have contained hydrocarbon concentrations indicative of light non-aqueous phase liquids (LNAPL). LNAPL has never been observed in any samples collected from borings or the monitor well and dissolved hydrocarbon concentrations in grab groundwater samples collected from borings across the site do not indicate the presence of LNAPL.

The Site Has Been Adequately Characterized

A total of sixteen soil borings to a maximum depth of 16 fbg have been advanced onsite. Hydrocarbon impacted soil at the site has been defined to the north by soil samples that were collected from surface samples S1 through S3, which contained maximum concentrations of diesel-range hydrocarbons at 220 mg/kg. No additional constituents were detected in S1 through S3 above method detection limits. Hydrocarbon impacted soil has been defined to the south by soil samples collected from SB-12 which did not contain TPHg, TPHd, or BTEX constituents above method reporting limits. Hydrocarbon impacted soil has been defined to the east by SB-7, which contained 250 mg/kg TPHd at 4.0 fbg.

Grab groundwater samples were collected from fourteen borings advanced across the site. Additionally, one groundwater monitor well and three sample points within the estuary channel have been sampled. Grab groundwater samples typically detect hydrocarbons at higher concentrations than static groundwater conditions. MW-1 and CS-2 have been sampled on a quarterly basis since July 2001. Hydrocarbon impact in water has been defined to the north by samples collected from CS-1, CS-2 and CS-3 which have not contained hydrocarbons above method reporting limits, with the exception of low levels of TPHd prior to July 2002 in samples collected from CS-2. The limits of hydrocarbons in groundwater to the east has been defined by GWS-12, which contained 0.06 ug/L of toluene. No additional hydrocarbons were detected above method reporting limits in GWS-12. Hydrocarbon impact in groundwater has been defined to the south and west by GWS-14 and GWS-15, which did not contain hydrocarbons above method reporting limits. Maximum concentrations of TPHg, TPHd, and benzene detected in groundwater were collected from GWS-9 and SB-9 located east of the former tanks along the Alameda Canal.

The Dissolved Hydrocarbon Plume Is Not Migrating

Based on information from RRM's RBCA, groundwater at the site appears to be only slightly tidally influenced. Low concentrations of TPHd were historically above detection limits during three sampling events between 2001 and 2002 in the Alameda Canal. The canal is used as a marina and the occasional presence of hydrocarbons may be due to releases or spills from boats or runoff from storm drains. Hydrocarbons have not been detected in the Canal since 2002, which indicates that groundwater is not discharging dissolved petroleum hydrocarbons to the canal. The lack of significant plume migration and lack of evidence of petroleum hydrocarbon impact to the Alameda Canal, 38 years after operations at the former bulk fuel distribution facility ceased, suggests the plume is stable and future impact to Alameda Canal is unlikely. Additionally, hydrocarbons detected in MW-1 have been steadily decreasing (Figures 4-6).

No Water Wells, Deeper Drinking Water Aquifers, Surface Water, or Other Sensitive Receptors are Likely to be Impacted

The Alameda Canal is the closest body of water to the site, approximately 50 feet to the northeast. The Alameda Canal is tested on a quarterly basis for the presence of hydrocarbons. Groundwater monitoring reports indicate that the canal has not been impacted by subsurface hydrocarbon conditions. Due to the vicinity of the Alameda Canal, and slight tidal influence, shallow groundwater is not a current or future source of drinking water.

The Site Presents No Significant Risk to Human Health or the Environment

To assess the potential health risks to occupants of the site and adjacent properties, as well as aquatic life in the Alameda Canal, Cambria compared hydrocarbon concentrations in soil and groundwater with water quality objectives from environmental screening levels (ESLs) developed by the Regional Water Quality Control Board (RWQCB) San Francisco Bay Region[1]. The following table details concentrations for soil and groundwater based on surface water bodies in an Estuarine Environment.

Table A - Summary of Environmental Screening Levels

Groundwater IS NOT a Current or Potential Source of Drinking Water-Commercial/Industrial Land Use Only

	Ceiling Value ESL Concentrations						
	TPHd	**TPHg**	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylenes**	**MTBE**
Shallow Soils (<3m bgs) in mg/kg	500	400	0.38	9.3	32	11	5.6
Deep Soils (>3m bgs) in mg/kg	500	400	0.51	9.3	32	11	5.6
Groundwater in µg/l	640	500	46	30	40	100	180

ESL = Environmental Screening Level
m bgs = meters below ground surface

Hydrocarbon impacts in soil have been above ESLs in samples collected in 1995 and 1998. Additionally, the site has been paved over and future soil disturbance is likely to be minimal. Hydrocarbons detected in water collected from Alameda Canal were very low and have not been detected since 2002. Hydrocarbon trend graphs of MW-1 show decreasing levels with time and are not currently above ESLs. MTBE has never been detected in water samples. Therefore, the extent of hydrocarbons has been defined to the degree necessary to determine whether the site presents a threat to human health or the environment.

---

1 RWQCB *Application of Risk-Based Screening Levels and Decision Making to Sites With Impacted Soil and Groundwater, Volume 1, Summary Tier 1 Lookup Tables, Interim Final February 2005, for Aquatic Habitat Goal ESLs*

CONCLUSIONS AND RECOMMENDATIONS

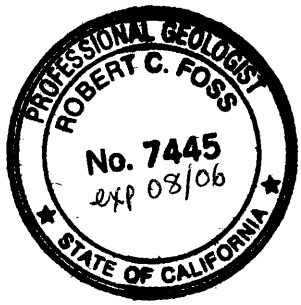
The indication of plume stability and the lack of discharge of petroleum hydrocarbons in the Alameda Canal (38 years after closing the bulk fuel terminal facility) suggest future impact to Alameda Canal is unlikely. Additionally current groundwater monitoring indicates that hydrocarbon contamination is below RWQCB ESLs and trends indicate continued reduction. Therefore Cambria, recommends a case closure from ACEHD.

Chevron will address issues arising from future changes in property use or redevelopment. If you should have questions regarding this report please contact us at 510-420-0700.

Sincerely,
Cambria Environmental Technology, Inc.

Laura Genin
Senior Staff Geologist

Robert Foss, P.G. #7445
Associate Geologist



Figures:
1 – Vicinity Map
2 – Site Map
3 – Subsurface Hydrocarbon Distribution
4 – TPH as Gasoline in Groundwater over Time
5 – TPH as Diesel in Groundwater over Time
6 – Benzene in Groundwater over Time

Tables:
1 – Soil Analytical Data
2 – Groundwater Analytical Data

Appendices:
A – Boring Logs
B – 4th Quarter 2005 Groundwater Monitoring Report

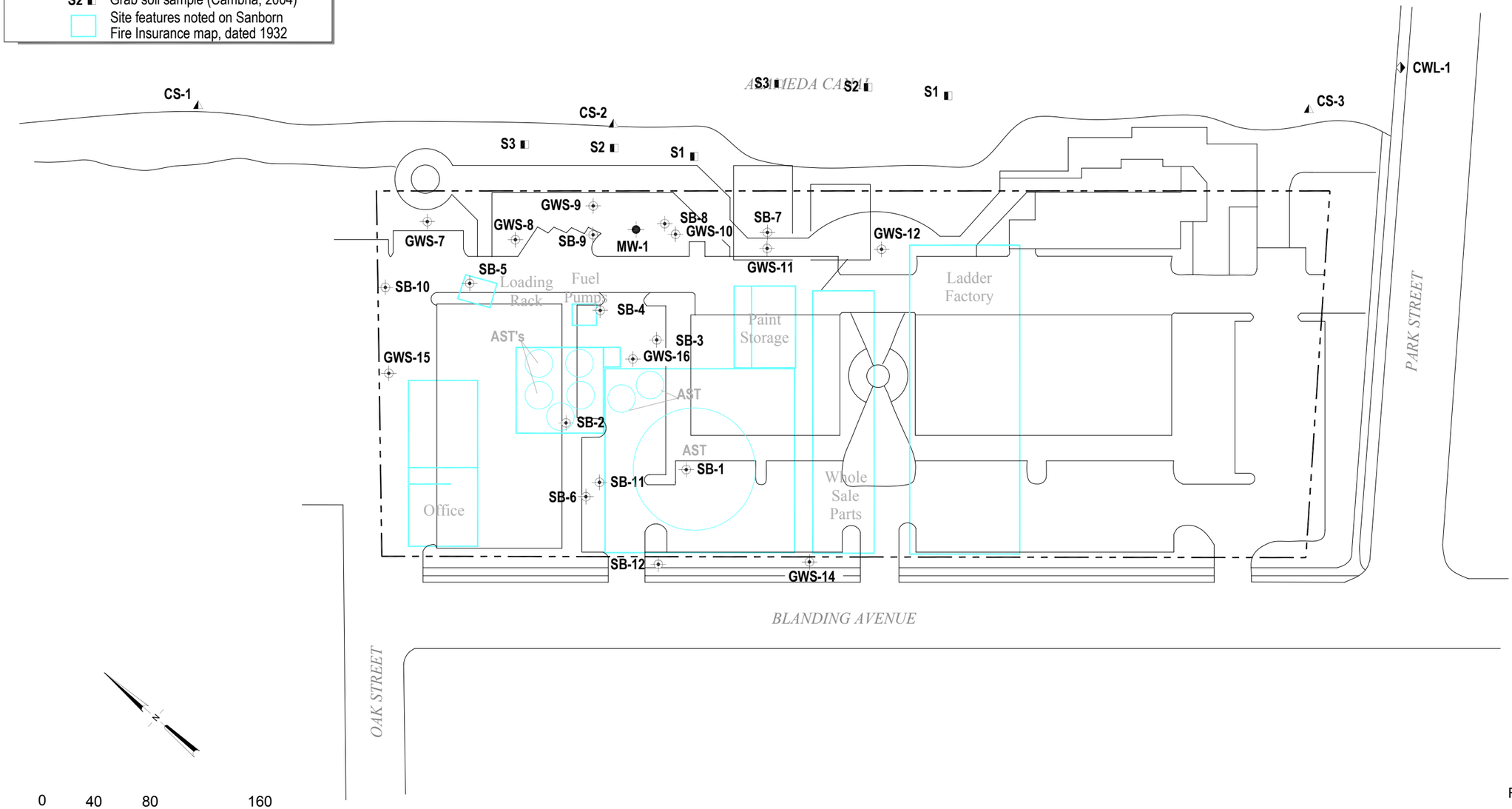
cc: Chevron Strata Database

FIGURES

08/14/03

EXPLANATION

- MW-1 — Monitoring Well Location
- CWL-1 — Canal water level gauging station from Park Street bridge (RRM, October 1998)
- CS-2 — Canal grab surface water sample
- GWS-10 — Shallow groundwater survey point (Geomatrix, April 1995)
- S2 — Grab soil sample (Cambria, 2004)
- Site features noted on Sanborn Fire Insurance map, dated 1932



I:\206127 ALAMEDA\FIGURES\SITEPLAN.DWG

FIGURE

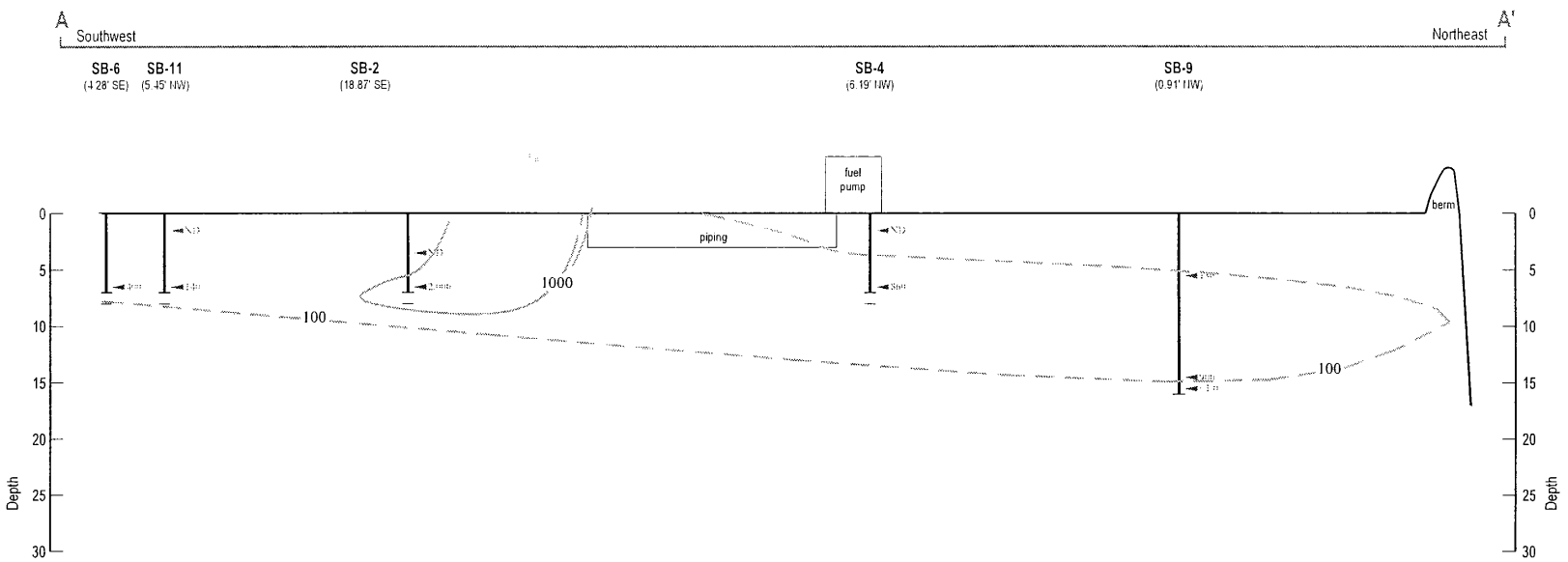
2

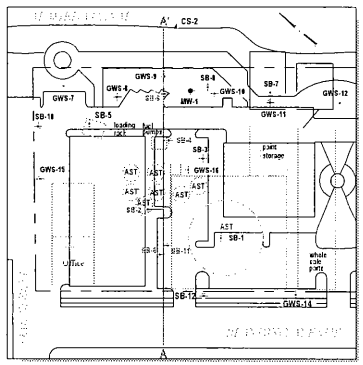
Site Plan

CAMBRIA

Chevron # 206127
Former Signal Oil Bulk Plant
2301-2311 Blanding Avenue
Alameda, California

Total Petroleum Hydrocarbons as Gasoline in the Subsurface





EXPLANATION

- = Low Permeability Soils
  - CH - Inorganic Clay
  - CL - Clay
  - SC - Clayey Sand
- = Moderate Permeability Soils
  - ML - Clayey Silt
  - SM - Silty Sand
- = High Permeability Soils
  - SP - Poorly Graded Sand
  - SW - Well Graded Sand
- = Fill (Tank Pit)
- Approximate sample location
- 100 — 100 ppm contour.
- Total Petrolium Hydrocarbons as Gasoline in Soil, in parts per million

Boring ID (offset) — Offset from transect line; Soil boring; Bottom of boring

Scale (ft): 0, 10, 20

FIGURE **3**

Former Signal Oil Bulk Plant
2301-2311 Blanding Avenue
Alameda, California

CAMBRIA

I:\2001\27 ALAMEDA\FIGURES\2001027_X_SECTION A-A'.DWG

Figure 4
TPH as Gasoline in Groundwater over Time

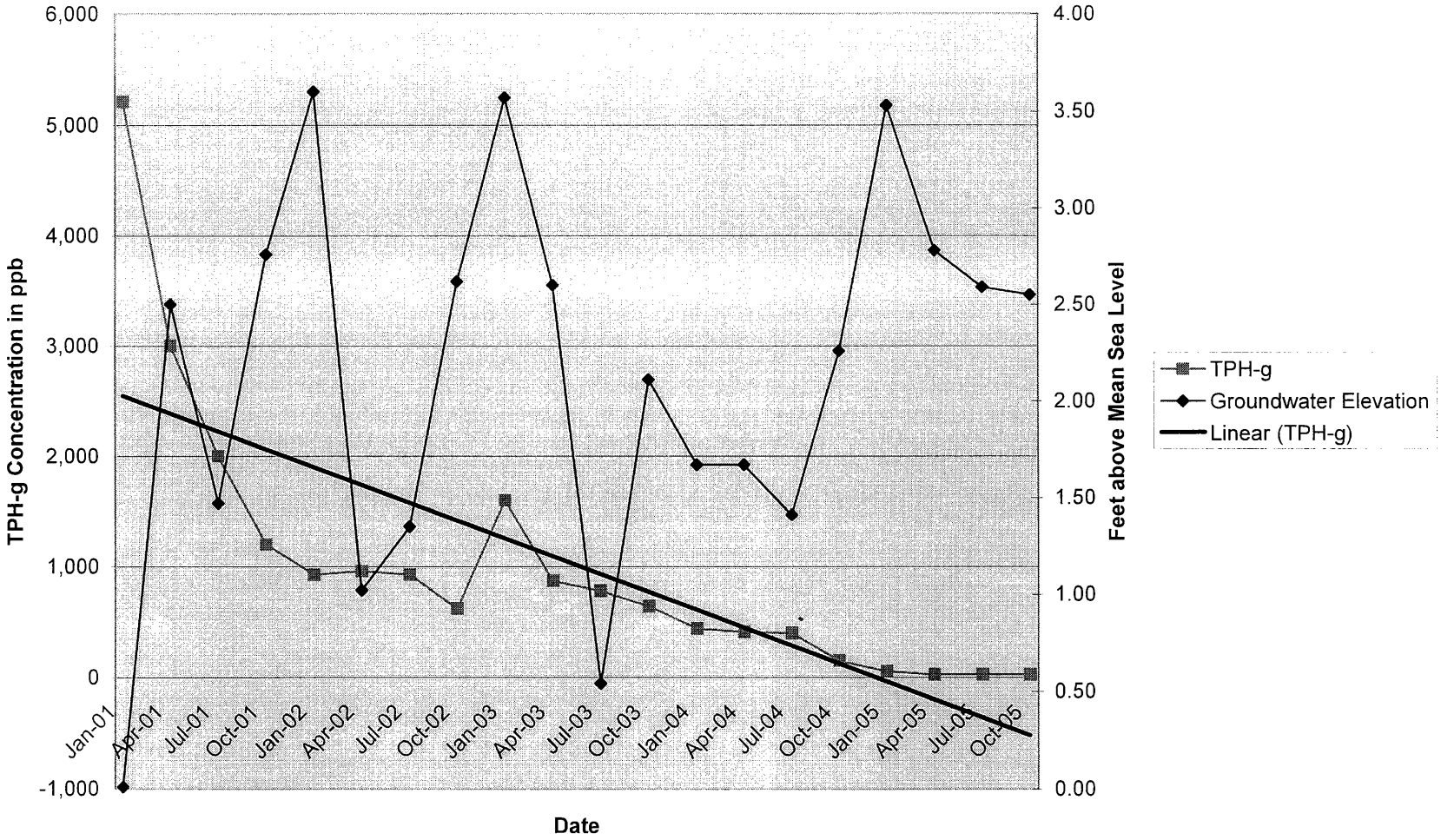


Figure 5
TPH as Diesel in Groundwater over Time

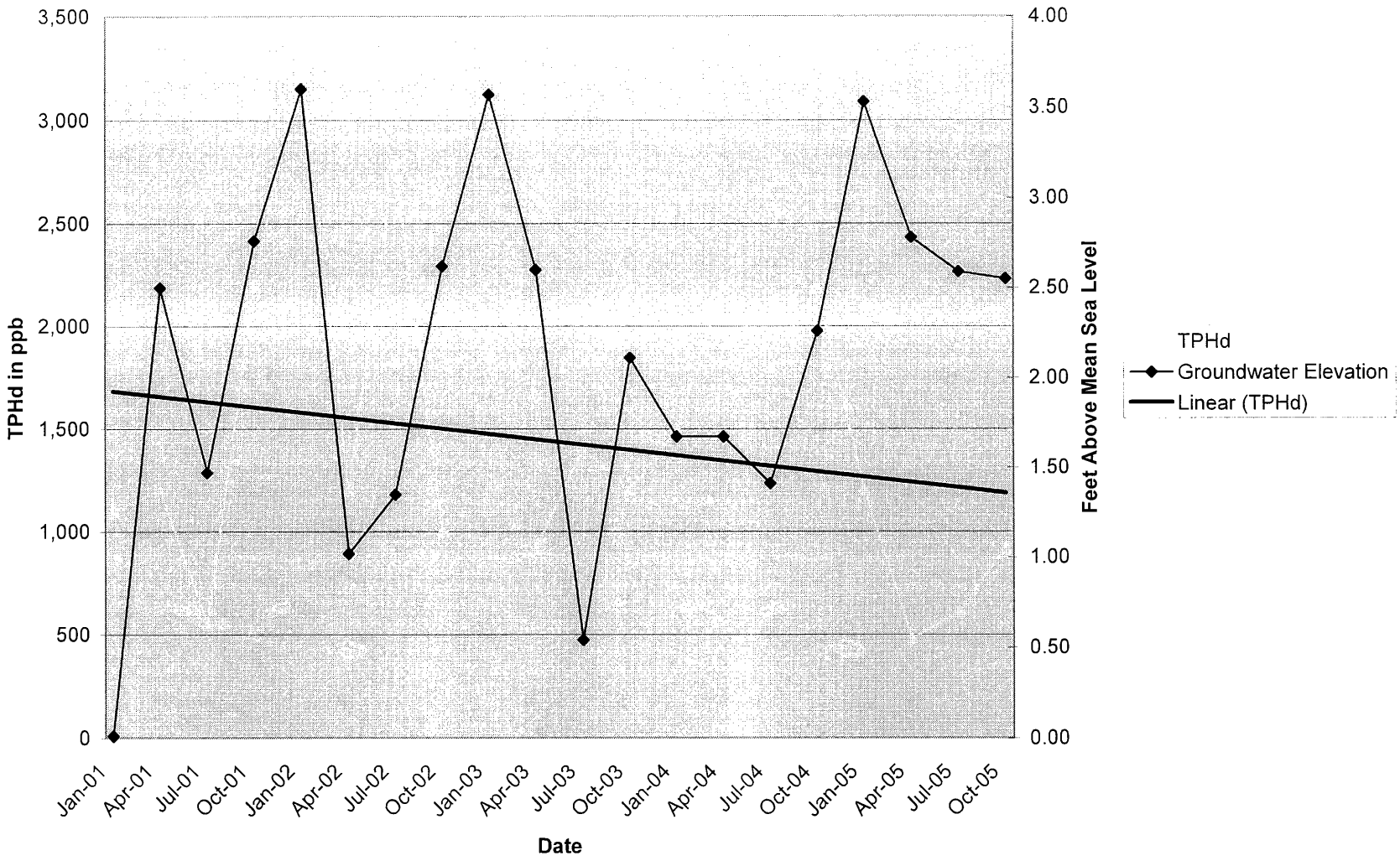
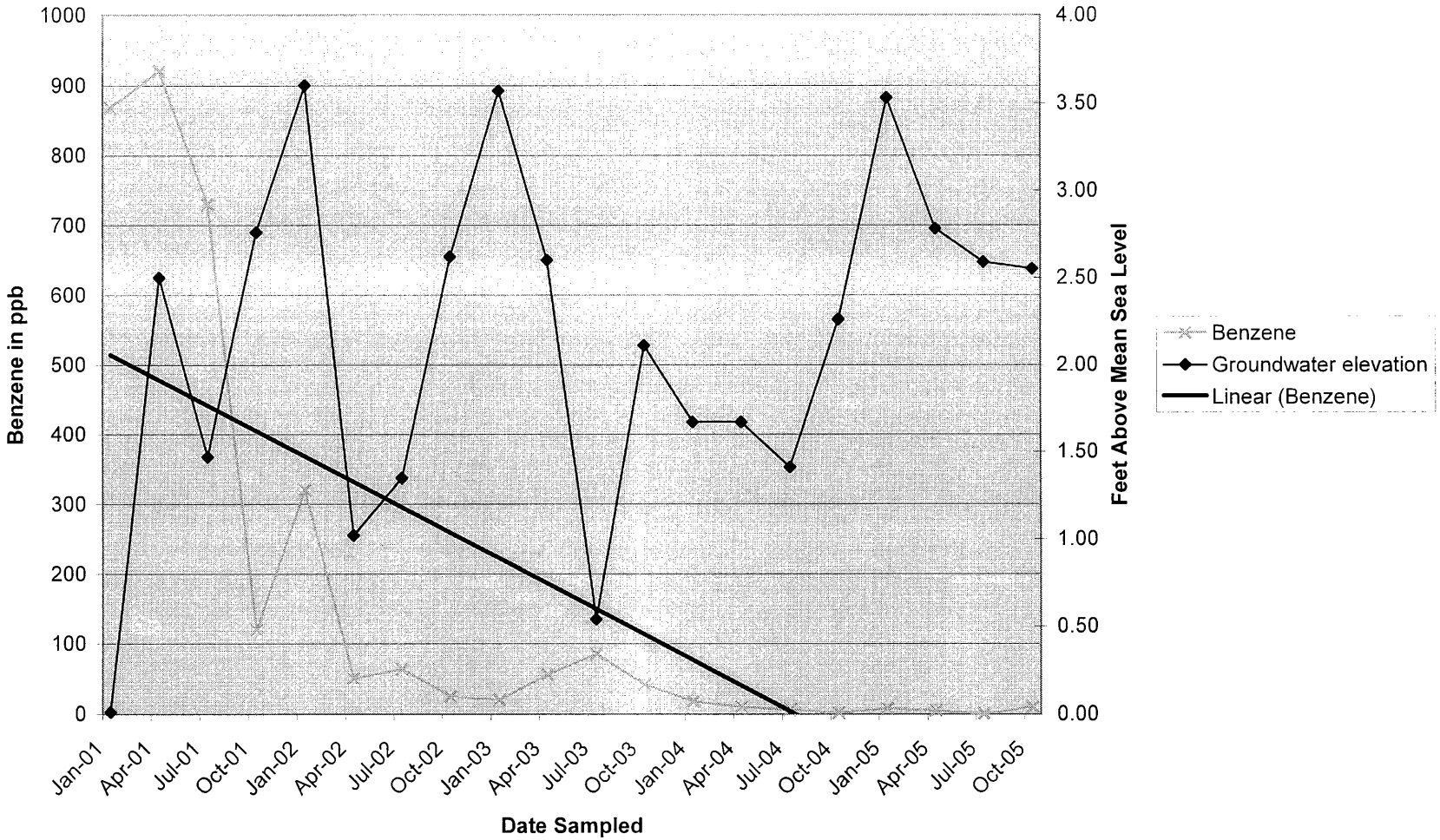


Figure 6
Benzene in Groundwater over Time



TABLES

Table 1
Petroleum Hydrocarbons and Volatile Organic Compounds in Soil

Sample Name	Depth	TPHg	TPHd	Benzene	Toluene	etheylbenze	Xylenes	MTBE
SB-1-3.5	3.5	ND	110	ND	ND	ND	ND	NA
SB-1-5.5	5.5	390	10	0.08	0.2	0.58	0.86	NA
SB-1-9.5	9.5	ND	ND	ND	ND	ND	ND	NA
SB-2-3.5	3.5	ND	40	ND	ND	ND	ND	NA
SB-2-7.0	7	**2000**	35	**3.7**	**34**	14	**46**	NA
SB-3-1.5	1.5	ND	ND	ND	ND	ND	ND	NA
SB-3-7.0	7	150	230	ND	0.46	0.58	0.51	NA
SB-3-10.0	10	ND	ND	ND	ND	ND	ND	NA
SB-4-1.5	1.5	ND	20	ND	ND	ND	ND	NA
SB-4-6.5	6.5	**860**	240	**2**	0.81	3.6	**13**	NA
SB-4-7.0*	7	NA	NA	**2.3**	8.7	3.5	**35**	NA
SB-4-10.0	10	4	ND	0.34	ND	ND	ND	NA
SB-5-1.5	1.5	ND	10	ND	ND	ND	ND	NA
SB-5-5.5	5.5	ND	15	ND	ND	ND	ND	NA
SB-5-6.0	6	NA	NA	NA	NA	NA	NA	NA
SB-6-1.5	1.5	ND	40	ND	ND	ND	ND	NA
SB-6-7.0	7	**400**	170	ND	0.12	0.56	ND	NA
SB-7-1.0	1	ND	110	ND	ND	ND	ND	NA
SB-7-4.0	4	ND	250	ND	ND	ND	ND	NA
SB-8-1.0	1	ND	75	ND	ND	ND	ND	NA
SB-8-6.5	6.5	ND	ND	ND	ND	ND	ND	NA
SB-8-7.0	7	NA	NA	NA	NA	NA	NA	NA
SB-9	5-6	130	**2200****	0.36	<0.12	<0.12	0.28	<0.62
SB-9	13-14	**900**	**620****	**3.3**	<1.2	2.1	**2**	**12**
SB-9	15-16	<1.0	<1.0	0.22	<0.0050	<0.0050	<0.0050	<0.025
SB-10	5.5-6.5	<1.0	80**	<0.0050	<0.0050	<0.0050	<0.0050	<0.025
SB-11	6-7	140	27**	<1.0	0.12	0.24	0.49	<0.50
SB-12	5-6	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025
SB-12	7-8	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025
SB-12	14-15	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025
MW-1-5	5	<1.0	30	<0.0050	<0.0050	<0.0050	0.017	<0.050
MW-1-10	10	320	160	0.4	1.6	0.9	1.1	<1.2
MW-1-15	15	<2.5	<1.0	0.53	0.021	0.028	0.065	<0.12
S1	0.5	<1.0	14	<0.0005	<0.001	<0.001	<0.001	<0.0005
S2	0.5	<20	220	<0.0005	<0.001	<0.001	<0.001	<0.0005
S3	0.5	<10	220	<0.0005	<0.001	<0.001	<0.001	<0.0005
ESL's shallow soil	<10	400	500	0.38	9.3	32	1.1	5.6
ESL's Deep Soil	>10	400	500	0.51	9.3	32	1.1	5.6

Table 1
Petroleum Hydrocarbons and Volatile Organic Compounds in Soil

Notes:

* Constituents detected using EPA method 8240

** TPH-d concentrations after 2nd Silica Gel clenup.

Bold concentrations exceed the ESL's

ESL - Environmental Screening Levels

ESL's Based on SHALLOW SOIL SCREENING LEVELS (<3m bgs)
COMMERCIAL / INDUSTRIAL LAND USE
(potentially impacted groundwater IS NOT a current or potential drinking water resource)

TPHg Total petrolium hydrocarbons as gasoline

TPHd Total petrolium hydrocarbons as diesel

Concentrations in milligrams per kilogram

Table 2
Petroleum Hydrocarbons and Volatile Organic Compounds in Water

Sample Name	Date	Depth	TPHg	TPHd	Benzene	Toluene	Etheylbenzene	Xylenes	MTBE
GWS-7	Feb-95	16	ND	ND	ND	ND	ND	ND	--
GWS-8	Feb-95	16	**3700**	60	36	6.9	27	11	--
GWS-9	Feb-95	16	**22000**	**1200**	**6200**	**140**	**1100**	**1200**	--
GWS-10	Feb-95	16	**11000**	240	**880**	**40**	**100**	50	--
GWS-11	Feb-95	16	140	70	ND	1	1.4	8.4	--
GWS-12	Feb-95	16	ND	ND	ND	0.06	ND	ND	--
GWS-13	Feb-95	16	ND	ND	ND	ND	ND	ND	--
GWS-14	Feb-95	16	ND	ND	ND	ND	ND	ND	--
GWS-15	Feb-95	16	ND	ND	ND	ND	ND	ND	--
GWS-16	Feb-95	16	70	ND	ND	ND	2	1.1	--
SB-9	1998	16	**14000**	**62000**	**1400**	--	--	--	<10
SB-10	1998	6.5	<50	<50	<0.50	--	--	--	<2.5
SB-11	1998	7	310	170	<0.50	--	--	--	<2.5
SB-12	1998	15	<50	<50	<0.50	--	--	--	<2.5
MW-1[1]	1/23/01	0.01	**5,210**	**1,100**	**868**	<50	<50	<50	<250
MW-1[1]	4/9/01	2.50	**3,000**	**1,200**	**920**	<20	<20	<20	<100
MW-1[1]	7/30/01	1.47	**2,000**	550	**730**	13	<5	<5	<25
MW-1[1]	10/8/01	2.76	**1,200**	**2,200**	**120**	2.4	5.9	6.4	<2.5
MW-1[1]	1/13/02	3.60	**930**	**3,300**	**320**	0.78	0.87	3.8	<2.5
MW-1[1]	4/8/02	1.02	**960**	**1,200**	**50**	1.4	2.6	9	<2.5
MW-1[1]	7/31/02	1.35	**930**	**2,800**	**64**	1.4	1.9	11	<5.0
MW-1[1]	10/15/02	2.62	**620**	**1,000**	**25**	0.78	1.4	4.3	<2.5
MW-1[1]	1/14/03	3.57	**1,600**	**960**	**20**	1.3	1.3	<1.5	<2.5
MW-1[1]	4/15/03	2.60	**870**	**920**	**56**	1	1.4	3.1	<2.5
MW-1	7/16/03	0.54	**780**	**1,400**	**85**	1	0.8	0.7	<0.5
MW-1	10/18/03	2.11	**640**	**1,200**	42	0.8	<0.5	0.5	<0.5
MW-1	1/22/04	1.67	440	**1,500**	18	<0.5	<0.5	<0.5	<0.5
MW-1	4/23/04	1.67	410	**2,200**	10	<0.5	<0.5	<0.5	<0.5
MW-1	7/23/04	1.41	400	**1,800**	6	<0.5	<0.5	<0.5	<0.5
MW-1	10/22/04	2.26	150	**2,200**	2	<0.5	<0.5	<0.5	<0.5
MW-1	1/28/05	3.53	55	**1,200**	8	<0.5	<0.5	<0.5	<0.5
MW-1	4/26/2005	2.78	<50	480	5	<0.5	<0.5	<0.5	<0.5
MW-1	7/15/2005	2.59	<50	610	<0.5	<0.5	<0.5	<0.5	<0.5
MW-1	10/14/2005	2.55	<50	**920**	10	<0.5	<0.5	<0.5	<0.5
CS-1[1]	1998	--	<50	<50	<0.50	--	--	--	<2.5
CS-2[1]	7/30/2001	--	<50	140	<0.5	<0.5	<0.5	<0.5	<2.5
CS-2[1]	10/8/2001	--	<50	53	<0.5	<0.5	<0.5	<1.5	<2.5
CS-2[1]	1/13/2002	--	<50	<50	<0.5	<0.5	<0.5	<1.5	<2.5
CS-2[1]	4/8/2002	--	<50	77	<0.5	<0.5	<0.5	<1.5	<2.5

Table 2
Petroleum Hydrocarbons and Volatile Organic Compounds in Water

Sample Name	Date	Depth	TPHg	TPHd	Benzene	Toluene	Etheylbenzene	Xylenes	MTBE
CS-2[1]	7/31/2002	--	<50	<50	<0.5	<0.5	<0.5	<1.5	<2.5
CS-2[1]	10/15/2002	--	<50	<50	<0.5	<0.5	<0.5	<1.5	<2.5
CS-2[1]	1/14/2003	--	<50	<50	<0.5	<0.5	<0.5	<1.5	<2.5
CS-2	4/15/2003	--	<50	<50	<0.5	<0.5	<0.5	<1.5	<2.5
CS-2	7/16/2003	--	<50	<50	<0.5	0.7	<0.5	0.6	<0.5
CS-2	10/18/2003	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
CS-2	1/22/2004	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
CS-2	4/23/2004	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
CS-2	7/23/2004	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
CS-2	10/22/2004	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
CS-2	1/28/2005	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
CS-2	4/26/2005	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
CS-2	7/15/2005	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
CS-2	10/14/2005	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
CS-3[1]	1998	--	<50	<50	<0.50	--	--	--	<2.5
ESLs			500	640	46	30	40	100	180

Notes:

1 - Constituents detected using EPA method 8240

2 - Laboratory report indicates the observed sample pattern is not typical of #2 fuel/diesel. It elutes in the DRO range later than #2 fuel.

3 - Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional patern which elutes later in the DRO Range

Bold concentrations exceed the ESL's

ESL - Environmental Screening Levels

ESLs Based on Surface Water Bodies in an Estuarine Environment

TPHg Total petrolium hydrocarbons as gasoline

TPHd Total petrolium hydrocarbons as diesel

Concentrations in micrograms per liter

ND: Constituents not detected above method reporting limits

APPENDIX A
Boring Logs

Log of Boring No. SB1

PROJECT: PARK STREET LANDING
Alameda, California

BORING LOCATION:

DRILLING CONTRACTOR: Precision Sampling

DRILLING METHOD: Direct push

DRILLING EQUIPMENT: XD 1

SAMPLING METHOD: Enviro Core System

HAMMER WEIGHT: --- DROP: ---

ELEVATION AND DATUM: Ground surface

DATE STARTED: 2/17/95 DATE FINISHED: 2/17/95

TOTAL DEPTH: 10 feet bgs. MEASURING POINT: Ground surface

DEPTH TO WATER: FIRST --- COMPL. --- 24 HRS. ---

LOGGED BY: T. F. Wood

RESPONSIBLE PROFESSIONAL: A. L. Spencer REG. NO. RG 5713

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	PID Reading (ppm)	DESCRIPTION: NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation:	
0					Asphalt	
1					CLAYEY SAND with GRAVEL (SC) Very dark gray (10YR 3/1); moist; 40% fine to medium sand; 40% fine to coarse subangular gravel; 20% medium plasticity fines; firm	
2						
3	SB1-3.0			7		
	SB1-3.5			7		
4					CLAYEY SAND (SC) Dark greenish gray (5BG 4/1); moist; 60-70% fine to medium sand; 30-40% medium plasticity fines; firm	
5	SB1-5.0			357		
	SB1-5.5			491		
6						
7						
8					Color change to dark gray (5Y 4/1); mottled with dark greenish gray (5BG 4/1)	
9	SB1-9.5			9		
	SB1-10.0			15		
10					Bottom of boring at 10 feet bgs	
11						
12						
13						
14						

B-1 (11/92)

2436.02.002

Geomatrix Consultants | Project No. 2436.02 | Figure ---

Log of Boring No. SB2

PROJECT: PARK STREET LANDING
Alameda, California

BORING LOCATION:

DRILLING CONTRACTOR: Precision Sampling

DRILLING METHOD: Direct push

DRILLING EQUIPMENT: XD 2

SAMPLING METHOD: Enviro Core System

HAMMER WEIGHT: ---

DROP: ---

ELEVATION AND DATUM: Ground surface

DATE STARTED: 2/20/95

DATE FINISHED: 2/20/95

TOTAL DEPTH: 10 feet bgs

MEASURING POINT: Ground surface

DEPTH TO WATER	FIRST	COMPL.	24 HRS.
	---	---	--

LOGGED BY: T. F. Wood

RESPONSIBLE PROFESSIONAL: A. L. Spencer

REG. NO. RG 5713

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	PID Reading (ppm)	DESCRIPTION: NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation:	
		core cut			Concrete - sidewalk	
1					POORLY GRADED SAND with CLAY AND GRAVEL (SP-SC) Dark brown (10YR 3/3); moist; 70% fine to medium sand (trace coarse sand); 20% fine to coarse angular gravel; 10% low to medium plasticity fines; loose	
2	SB2-2.0			0		
3	SB2-3.5			0		
4	SB2-4.0			0		
5					---?---?---?--- SANDY LEAN CLAY (CL) Dark greenish gray (5BG 4/1); moist; 60-65% fines; 35-40% fine to medium sand; medium plasticity; firm	
6						
7	SB2-7.0			848		
8						
9	SB2-9.5			158		
10	SB2-10.0			178	Bottom of boring at 10 feet bgs	
11						
12						
13						
14						

B-1 (11/92)

2436.02.003

Geomatrix Consultants | Project No. 2436.02 | Figure ---

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. SB3

BORING LOCATION:

ELEVATION AND DATUM: Ground surface

DRILLING CONTRACTOR: Precision Sampling

DATE STARTED: 2/17/95 | DATE FINISHED: 2/17/95

DRILLING METHOD: Direct push

TOTAL DEPTH: 10 feet bgs | MEASURING POINT: Ground surface

DRILLING EQUIPMENT: XD 1

DEPTH TO WATER | FIRST --- | COMPL. --- | 24 HRS. --

SAMPLING METHOD: Enviro Core System

LOGGED BY: T. F. Wood

HAMMER WEIGHT: --- | DROP: ---

RESPONSIBLE PROFESSIONAL: A. L. Spencer | REG. NO. RG 5713

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	PID Reading (ppm)	DESCRIPTION: NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation:	
					Asphalt	
1	SB3-1.0			7	CLAYEY SAND with GRAVEL (SC) Very dark gray (10YR 3/1); dry; 40% fine to medium sand; 40% fine to coarse angular gravel; 20% medium plasticity fines; loose	
1	SB3-1.5			36		
2						
3						
4					SANDY LEAN CLAY (CL) Dark greenish gray (5BG 4/1); moist; 60 -65% fines; 35-40% fine sand; medium plasticity; firm	
5						
6	SB3-6.5			244		
7	SB3-7.0			338		
8						
9					Mottled with dark gray (5Y 4/1)	
9	SB3-9.5			11		
10	SB3-10.0			19		
10					Bottom of boring at 10 feet bgs	
11						
12						
13						
14						

B-1 (11/92)

2436.02.004

Geomatrix Consultants | Project No. 2436.02 | Figure ---

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. SB4

BORING LOCATION:

ELEVATION AND DATUM: Ground surface

DRILLING CONTRACTOR: Precision Sampling

DATE STARTED: 2/17/95 | DATE FINISHED: 2/17/95

DRILLING METHOD: Direct push

TOTAL DEPTH: 10 feet bgs | MEASURING POINT: Ground surface

DRILLING EQUIPMENT: XD 1

DEPTH TO WATER	FIRST	COMPL.	24 HRS.
	---	---	--

SAMPLING METHOD: Enviro Core System

LOGGED BY: T. F. Wood

HAMMER WEIGHT: --- | DROP: ---

RESPONSIBLE PROFESSIONAL: A. L. Spencer | REG. NO. RG 5713

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	PID Reading (ppm)	DESCRIPTION: NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation:	
					Asphalt	
1	SB4-1.0			59	CLAYEY SAND with GRAVEL (SC) Very dark gray (10YR 3/1) to dark yellowish brown (10YR 4/4); dry; 40% fine to coarse sand; 40% fine to coarse angular gravel; 20% medium plasticity fines; loose	
1	SB4-1.5			19		
2						
3						
4					SANDY LEAN CLAY (CL) Dark greenish gray (5BG 4/1); moist; 60-65% fines; 35-40% fine sand; medium plasticity fines; firm	
5						
6	SB4-6.5			726		
7	SB4-7.0			1247	Black mottling	
8						
9	SB4-9.5			270		
10	SB4-10.0			111	Bottom of boring at 10 feet bgs	
11						
12						
13						
14						

B-1 (11/92)

Geomatrix Consultants | Project No. 2436.02 | Figure ---

2436.02.005

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. SB5

BORING LOCATION:

ELEVATION AND DATUM: Ground surface

DRILLING CONTRACTOR: Precision Sampling

DATE STARTED: 2/17/95 | DATE FINISHED: 2/17/95

DRILLING METHOD: Direct push

TOTAL DEPTH: 10 feet bgs | MEASURING POINT: Ground surface

DRILLING EQUIPMENT: XD 1

DEPTH TO WATER | FIRST --- | COMPL. --- | 24 HRS. --

SAMPLING METHOD: Enviro Core System

LOGGED BY: T. F. Wood

HAMMER WEIGHT: --- | DROP: ---

RESPONSIBLE PROFESSIONAL: A. L. Spencer | REG. NO. RG 5713

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
0					Asphalt	
1	SB5-1.0			532	POORLY GRADED SAND with CLAY AND GRAVEL (SP-SC) Dark yellowish brown (10YR4/4); dry, 60% fine to coarse sand; 30% fine to coarse angular gravel; 10% medium plasticity fines; loose	
1	SB5-1.5			1643		
2						
3					Color change to dark brown (7.5YR 3/2)	Brick and plastic pieces present
4					CLAYEY SAND (SC) Black (2.5YR 2.5/0); moist; 60-65% fine sand; 35-40% medium plasticity fines; soft	
5	SB5-5.5			2350		
6	SB5-6.0			1763		
7					Color change to dark greenish gray (5BG 4/1)	
8						
9	SB5-9.5			86		
10	SB5-10.0			240	Bottom of boring at 10 feet bgs	
11						
12						
13						
14						

B-1 (11/92)

2436.02.006

Geomatrix Consultants | Project No. 2436.02 | Figure —

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. SB6

BORING LOCATION:

ELEVATION AND DATUM: Ground surface

DRILLING CONTRACTOR: Precision Sampling

DATE STARTED: 2/17/95

DATE FINISHED: 2/17/95

DRILLING METHOD: Direct push

TOTAL DEPTH: 10 feet bgs

MEASURING POINT: Ground surface

DRILLING EQUIPMENT: XD 1

DEPTH TO WATER	FIRST	COMPL.	24 HRS.
	---	---	–

SAMPLING METHOD: Enviro Core System

LOGGED BY: T. F. Wood

HAMMER WEIGHT: ---

DROP: ---

RESPONSIBLE PROFESSIONAL: A. L. Spencer

REG. NO. RG 5713

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation:	
					Asphalt	
1	SB6-1.0			26	CLAYEY SAND with GRAVEL (SC) Very dark gray (10YR 3/1); dry; 40% fine to medium sand; 40% fine to coarse angular gravel; 20% medium plasticity fines; loose	
1	SB6-1.5			36		
2						
3						
4					SANDY LEAN CLAY (CL) Dark greenish gray (5BG 4/1); moist; 60-65% fines; 35-40% fine sand; medium plasticity; firm	
5						
6						
7	SB6-7.0			248		
8	SB6-8.0			26		
9					Black mottling	
9	SB6-9.5			86		
10	SB6-10.0			32	Bottom of boring at 10 feet bgs	
11						
12						
13						
14						

2436.02.007

B-1 (11/92)

Geomatrix Consultants | Project No. 2436.02 | Figure ---

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. SB7

BORING LOCATION:

ELEVATION AND DATUM: Ground surface

DRILLING CONTRACTOR: Precision Sampling

DATE STARTED: 2/17/95 | DATE FINISHED: 2/17/95

DRILLING METHOD: Direct push

TOTAL DEPTH: 10 feet bgs | MEASURING POINT: Ground surface

DRILLING EQUIPMENT: XD 1

DEPTH TO WATER | FIRST --- | COMPL. --- | 24 HRS. --

SAMPLING METHOD: Enviro Core System

LOGGED BY: T. F. Wood

HAMMER WEIGHT: --- | DROP: ---

RESPONSIBLE PROFESSIONAL: A. L. Spencer | REG. NO. RG 5713

DEPTH (feet)	SAMPLES: Sample No.	Sample	Blows/Foot	PID Reading (ppm)	DESCRIPTION: NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation:	
0					Asphalt	
1	SB7-1.0			13		Poor recovery-- Unable to log
	SB7-1.5			3		
2					?	
3						Concrete in shoe
4	SB7-4.0			15		
5						
6					?	
7	SB7-7.0			17		
8						
9	SB7-9.5			94		
10	SB7-10.0			19	Bottom of boring at 10 feet bgs	
11						
12						
13						
14						

B-1 (11/92)

2436.02.008

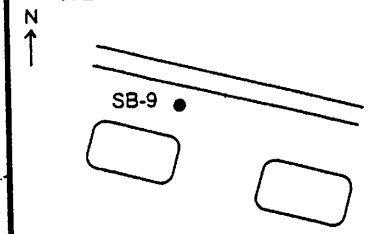
Geomatrix Consultants | Project No. 2436.02 | Figure --

Log of Boring No. SB8

PROJECT: PARK STREET LANDING Alameda, California	
BORING LOCATION: Approx. 15 feet N of North corner of trash house	ELEVATION AND DATUM: Ground surface
DRILLING CONTRACTOR: Precision Sampling	DATE STARTED: 2/20/95 / DATE FINISHED: 2/20/95
DRILLING METHOD: Direct push	TOTAL DEPTH: 10 feet bgs / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD 2	DEPTH TO WATER: FIRST ---, COMPL. ---, 24 HRS. --
SAMPLING METHOD: Enviro Core System	LOGGED BY: T. F. Wood
HAMMER WEIGHT: --- / DROP: ---	RESPONSIBLE PROFESSIONAL: A. L. Spencer / REG. NO. RG 5713

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
0	SB8-0.5			37	POORLY GRADED SAND with CLAY AND GRAVEL (SP-SC) Dark brown (10YR 3/3); moist; 70% fine to medium sand (trace coarse sand); 15-20% fine to coarse angular gravel; 10-15% low to medium plasticity fines; loose	Samples SB8-0.5 and SB8-1.0 collected from new hole approximately 1 foot north of SB8 due to poor recovery. New hole only 18 inches deep -- samples collected with split spoon
1	SB8-1.0			10		
2						
3						
4					? Increase in fine gravel to 40%; decrease in sand to 55% fine to coarse sand; decrease in fines to 5%	
5						
6	SB8-6.5			+9999		
7	SB8-7.0			974	? ? ? CLAYEY SAND (SC) Black (5Y 2.5/1); moist; 80-90% fine to medium sand; 10-20% medium plasticity fines; firm	Rock in shoe One 1 inch subrounded gravel at gradational contact
8						
9	SB8-9.5			451	SANDY LEAN CLAY (CL) Dark greenish gray (5BG 4/1); moist; 60-70% fines; 30-40% fine sand; medium plasticity; firm	
10	SB8-10.0			463	Bottom of boring at 10 feet bgs at 10:40	
11						
12						
13						
14						

WELL/BORING LOCATION MAP



REMEDIATION RISK MANAGEMENT, INC. | WELL/BORING:SB-9

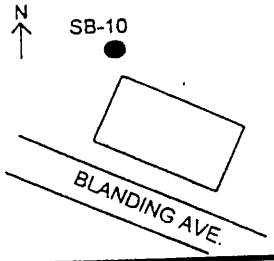
DATE:10/28/98	DRILLING METHOD:GEOPROBE
PROJECT:AA46	SAMPLING METHOD:CONTINUOUS CORE
CLIENT:CHEVRON	BORING DIAMETER:2"
LOCATION:BLANDING AVE.	BORING DEPTH:16'
CITY:ALAMEDA	WELL CASING:Temporary 1" sch 40 PVC
CO./STATE:ALAMEDA	WELL SCREEN:
DRILLER:ECA	SAND PACK:

WATER LEVEL:	6.59	6.60'	
TIME:	13:55	14:10	
DATE:	10/28/98	10/28/98	

DESCRIPTION/LOGGED BY:DR

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	DENSITY BLOWS / ft.	FIELD TEST HNU	SAMPLE NUMBER	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	USCS SYMBOL	DESCRIPTION
CEMENTGROUT				P			2				Fill	0-3": Asphalt 3"-3':Fill Material; native clayey sandy soil with debris
			D			SB-9 4-5'	4				CL	3'-13.5':Sandy Clay; greenish gray; 80% low to moderate plasiticity clayey fines; 20% fine sand;roots common
		▼	D		162	SB-9 5-6'	6					
					137		8					
			M			SB-9 9-10.5'	10					
					287		12					@13': 40% fine sand
			M		323	SB-9 13-14'						
					158		14				SP	13.5-16': Sand; greenish gray; trace clayey silty fines; fine sand
			W		4.4		16					16': Bottom of Boring
							18					
							20					
							22					
							24					
							26					
							28					
							30					
							32					
							34					
							36					
							38					
							40					
							42					
							44					

WELL/BORING LOCATION MAP



REMEDIATION RISK MANAGEMENT, INC. | WELL/BORING:SB-10

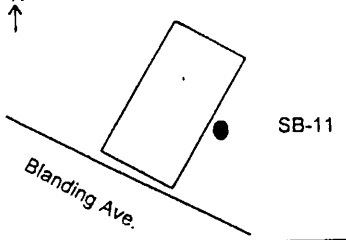
DATE:10/28/98	DRILLING METHOD:GEOPROBE
PROJECT:AA46	SAMPLING METHOD:CONTINUOUS CORE
CLIENT:CHEVRON	BORING DIAMETER:2"
LOCATION:BLANDING AVE.	BORING DEPTH:18'
CITY:ALAMEDA	WELL CASING:Temporary 1" sch 40 PVC
CO./STATE:ALAMEDA	WELL SCREEN:
DRILLER:ECA	SAND PACK:

WATER LEVEL:	9.60'		
TIME:	14:05		
DATE:	10/28/98		

DESCRIPTION/LOGGED BY:DR

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	DENSITY BLOWS / ft.	FIELD TEST HNU	SAMPLE NUMBER	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	USCS SYMBOL	DESCRIPTION
CEMENT GROUT				P			0					
			D			SB-10 3-4'	2				Fill	0-3":Asphalt; 3"-3':fill is a siltiy to clayey sand; olive brown
							4					
			D			SB-10 5.5-6.5'	6				SC	3-7':Clayey Sand: dark brown; 20% clayey fines; 80% fine sand; organic matter; dark brown to black
		▼			1.0		8					
			M		1.0	SB-10 6.5-7'	10				CL	7-14':Sandy Clay:dark brown; low plasticity clayey fines; 25% fine sand; roots common
			M				12					
					1.7		14					14-16': No Recovery
			W			SB-10 17-18'	16					16-18':Sand: greenish gray; trace fines; fine sand
					1.0		18				SP	18': Bottom of Boring
							20					
							22					
							24					
							26					
							28					
							30					
							32					
							34					
							36					
							38					
							40					
							42					
							44					

WELL/BORING LOCATION MAP



REMEDIATION RISK MANAGEMENT, INC. | WELL/BORING:SB-11

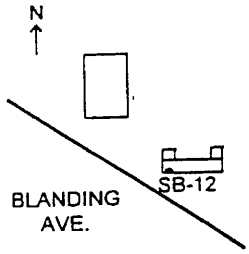
DATE:10/28/98	DRILLING METHOD:GEOPROBE
PROJECT:AA46	SAMPLING METHOD:CONTINUOS CORE
CLIENT:CHEVRON	BORING DIAMETER:2"
LOCATION:BLANDING AVE	BORING DEPTH:~15'
CITY:ALAMEDA	WELL CASING:Temporary 1" sch 40 PVC
CO./STATE:ALAMEDA	WELL SCREEN:
DRILLER:ECA	SAND PACK:

WATER LEVEL:	8.19'	7.57'	6.50'
TIME:	09:30	09:47	10:10
DATE:	10/28/98	10/28/98	10/28/98

DESCRIPTION/LOGGED BY:DR

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	DENSITY BLOWS / ft.	FIELD TEST HNU	SAMPLE NUMBER	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	USCS SYMBOL	DESCRIPTION
CEMENT GROUT				P			0					0-3":Asphalt
			D		16.8	SB-11 2.5-3.5'	2				Fill	3"-5.5':Fill: baserock-native-debris; silty to clayey sand; olive brown; 15% silty to clayey fines; 85% sand
			D				4					
			M		0.3	SB-11 6-7'	6				CL	5.5-14': Sandy Clay: greenish gray; 85% moderate plasticity clayey fines; 15% sand; some iron-oxide staining as veinlets
						SB-11 7-8'	8					
			W		1.0	SB-11 10-11'	10					@11':Increase in sand content to 20-25%; fine sand
					0.3		12					@13':25% fine sand; occasional sand stringers and root holes
			W		0.3	SB-11 14-15'	14				SP	@14': Sand; greenish gray; trace clayey to silty fines; fine sand
							15					15': Bottom of Boring
							16					
							18					
							20					
							22					
							24					
							26					
							28					
							30					
							32					
							34					
							36					
							38					
							40					
							42					
							44					

WELL/BORING LOCATION MAP



REMEDIATION RISK MANAGEMENT, INC. | WELL/BORING:SB-12

DATE:10/28/98	DRILLING METHOD:GEOPROBE
PROJECT:AA46	SAMPLING METHOD:CONTINUOS CORE
CLIENT:CHEVRON	BORING DIAMETER:2"
LOCATION:BLANDING AVE.	BORING DEPTH:~15'
CITY:ALAMEDA	WELL CASING:Temporary 1" sch 40 PVC
CO./STATE:ALAMEDA	WELL SCREEN:
DRILLER:CA	SAND PACK:

WATER LEVEL:	4.63'		
TIME:	11:35		
DATE:	10/28/98		
DESCRIPTION/LOGGED BY:DR			

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	DENSITY BLOWS / ft.	FIELD TEST HNU	SAMPLE NUMBER	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	USCS SYMBOL	
CEMENTGROUT			D	P		SB-12 2-3'	2				Fill	Planter Fill Top Soil; silty to clayey sand; olive brown
			M		1.0	SB-12 6-7'	4				CL	4-12.5':Sandy Clay: dark grayish brown; low plasticity 80% fines; 20% fine sand
					1.0	SB-12 7-8'	6					
			M		1.0		8					@9':Sandy Clay: olive yellow;; low plasticity 80% fines; 25% fine sand
			VM				10					@11':Sandy Clay: greenish gray; low plasticity 80% fines; 20% fine sand
						SB-12 14-15'	12				SC	12.5-14.5': Clayey Sand: greenish gray; 25% fines; 75% sand
					1.0		14				SP	14.5-15': Sand; greenish gray; trace fines
							16					15': Bottom of Boring
							18					
							20					
							22					
							24					
							26					
							28					
							30					
							32					
							34					
							36					
							38					
							40					
							42					
							44					

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-7A

BORING LOCATION: Northwest corner by canal

ELEVATION AND DATUM: Gravel sidewalk

DRILLING CONTRACTOR: Precision Sampling

DATE STARTED: 4/24/95

DATE FINISHED: ---

DRILLING METHOD: Direct push

TOTAL DEPTH: 6 feet

MEASURING POINT: Ground surface

DRILLING EQUIPMENT: XD-3

DEPTH TO WATER	FIRST	COMPL.	24 HRS.
	---	---	--

SAMPLING METHOD: Enviro Core System

LOGGED BY: S. L. Anich

HAMMER WEIGHT: ---

DROP: ---

RESPONSIBLE PROFESSIONAL: A. L. Spencer

REG. NO. RG 5713

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation:	
0					Gravel sidewalk	
1						
2					CLAYEY SAND (SC) Very dark grayish brown (10Y 3/2), dry, 60% medium sand, 30% low plasticity fines, 10% small gravel, loose	
3					Gray concrete and brick fragments	
4					GRANULAR MATERIAL Black (7.5YR 2.5/1), moist, 60% fine to medium grains, 35% low plasticity fines, 5% small gravel, loose	
5						
6					Refusal at 6 feet bgs	
7						
8						
9						
10						
11						
12						
13						
14						

B-1 (11/92)

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-7B

BORING LOCATION: Northwest corner by canal

ELEVATION AND DATUM: Gravel sidewalk

DRILLING CONTRACTOR: Precision Sampling

DATE STARTED: 4/24/95

DATE FINISHED: ---

DRILLING METHOD: Direct push

TOTAL DEPTH: 6 feet

MEASURING POINT: Ground surface

DRILLING EQUIPMENT: XD-3

DEPTH TO WATER: FIRST ---; COMPL. ---; 24 HRS. --

SAMPLING METHOD: Enviro Core System

LOGGED BY: S. L. Anich

HAMMER WEIGHT: ---

DROP: ---

RESPONSIBLE PROFESSIONAL: A. L. Spencer

REG. NO. RG 5713

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	PID Reading (ppm)	DESCRIPTION (NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.)	REMARKS
					Surface Elevation:	
0					Gravel sidewalk	
1						
2					CLAYEY SAND (SC) Very dark grayish brown (10Y 3/2), dry, 60% medium sand, 30% low plasticity fines, 10% small gravel, loose	
3					Gray concrete / brick	
4					GRANULAR MATERIAL Black (7.5YR 2.5/1), moist, 60% fine to medium grains, 35% low plasticity fines, 5% small gravel, loose	
5	GWS7 5'					
6					Refusal at 6 feet bgs	
7						
8						
9						
10						
11						
12						
13						
14						

B-1 (11/92)

Geomatrix Consultants

Project No. 2436.02

Figure ---

2436 02 039

PROJECT: PARK STREET LANDING Alameda, California	**Log of Boring No. GWS-7**
BORING LOCATION: Northwest corner of property	ELEVATION AND DATUM: Gravel sidewalk
DRILLING CONTRACTOR: Precision Sampling	DATE STARTED: 4/24/95 / DATE FINISHED: 4/24/95 1000 hrs.
DRILLING METHOD: Direct push	TOTAL DEPTH: 15 feet / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-3	DEPTH TO WATER bgs: FIRST 9 feet; COMPL. 9.6 feet; 24 HRS. --
SAMPLING METHOD: Enviro Core System	LOGGED BY: S. L. Anich
HAMMER WEIGHT: --- / DROP: ---	RESPONSIBLE PROFESSIONAL: A. L. Spencer / REG. NO. RG 5713

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
1					CLAYEY SAND (SC) Very dark grayish brown (10YR 3/2), dry, 60% medium sand, 30% low plasticity fines, 10% small gravel, loose	
2						
3					GRANULAR MATERIAL Black (7.5YR 2.5/1), loose, dry	
4					CLAYEY SAND (SC) Light olive brown (2.5Y 5/3), dry, 60% fine to medium sand, 35% low plasticity fines, 5% small gravel, loose	
5						
6					CLAYEY SAND (SC) Light olive brown (2.5Y 5/3) with brick fragments, moist, 60% fine sand, 35% low plasticity fines, 5% small gravel, loose	
7						
8					LEAN CLAY with SAND (CL) Black (10YR 2/1), moist, 80% fines, 20% sand, low plasticity, soft	
9						
10					▽	
11					1-inch lense of coarse gravel	
12					LEAN CLAY (CL) Black (10YR 4/1), wet, 95% fines, 5% sand, high plasticity, hard	
13					LEAN CLAY (CL) Greenish gray gley (5G 5/1), moist, 95% fines, 5% sand, medium plasticity	
14						

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-7 (cont.)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM Reading	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
15					LEAN CLAY (CL) (continued) Orange mottling Bottom of boring at 15 feet bgs	
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

B-2 (11/92)

PROJECT: PARK STREET LANDING Alameda, California	**Log of Boring No. GWS-8**
BORING LOCATION: Sidewalk, northwest corner	ELEVATION AND DATUM: Grassy area
DRILLING CONTRACTOR: Precision Sampling	DATE STARTED: 4/24/95 / DATE FINISHED: 4/24/95 - 1130 hrs
DRILLING METHOD: Direct push	TOTAL DEPTH: 16 feet / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-3	DEPTH TO WATER: FIRST ---, COMPL. 9' 0", 24 HRS. --
SAMPLING METHOD: Enviro Core System	LOGGED BY: S. L. Anich
HAMMER WEIGHT: --- / DROP: ---	RESPONSIBLE PROFESSIONAL: A. L. Spencer / REG. NO. RG 5713

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
0						No recovery in upper 2 feet
2					CLAYEY SAND (SC) Very dark gray (10YR 3/1) with abundant organics (roots, grass), moist, 65% medium sand, 25% low plasticity fines, 10% fine to coarse gravel, loose	
6					Increased sand content to 80%, 20% low plasticity fines ▽	
8					LEAN CLAY with SAND (CL) Black (10YR 2/1), moist, 75% fines, 25% fine sand, low plasticity	
9					LEAN CLAY (CL) Greenish gray (10GY 5/1), moist, 95% fines, 5% fine sand, low plasticity	
12						
14						

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-8 (cont.)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM Reading	DESCRIPTION: NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
15					LEAN CLAY (CL) (continued) Increase sand content to 20%	
16					CLAYEY SAND (SC) Light olive brown (2.5Y 5/4) with green and brown mottling, moist, 60% fine sand, 40% low plasticity fines Bottom of boring at 16 feet bgs	
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

B-2 (11/92)

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-9

BORING LOCATION: Along canal - middle

ELEVATION AND DATUM: Sidewalk (gravel)

DRILLING CONTRACTOR: Precision Sampling

DATE STARTED: 4/24/95

DATE FINISHED: 4/24/95 - 1330 hrs

DRILLING METHOD: Direct push

TOTAL DEPTH: 16 feet

MEASURING POINT: Ground surface

DRILLING EQUIPMENT: XD-3

DEPTH TO WATER: FIRST ---; COMPL. ---; 24 HRS. --

SAMPLING METHOD: Enviro Core System

LOGGED BY: S. L. Anich

HAMMER WEIGHT: ---

DROP: ---

RESPONSIBLE PROFESSIONAL: A. L. Spencer

REG. NO. RG 5713

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
1						No recovery in upper 3 feet
2						
3					SANDY LEAN CLAY with GRAVEL (CL) Very dark gray (10YR 3/1), dry, 60% fines, 25% fine to medium sand, 15% medium gravel, low plasticity	
4					CLAYEY SAND with GRAVEL (SC) Very dark gray (10YR 3/1), calcium deposits, dry, 60% fine to medium sand, 25% low plasticity fines, 15% fine gravel, loose	
5						
6					Increase sand content to 80% ▽	
7					LEAN CLAY with SAND (CL) Black (10YR 2/1), moist, 85% fines, 15% fine sand, low plasticity	
8					Increase sand content to 30%	
9					LEAN CLAY (CL) Greenish gray (10GY 5/1), moist, 95% fines, 5% fine sand, low plasticity	
10					Orange mottling	
11						
12						
13					Increase sand content to 30%	
14						

8-1 (11/92)

2436.02.020 | Geomatrix Consultants | Project No. 2436.02 | Figure ---

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-9 (cont.)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM Reading	DESCRIPTION: NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					LEAN CLAY (CL) (continued)	
15					CLAYEY SAND (SC) Greenish gray (10Y 5/1) with orange mottling, moist, 60% fine sand, 40% low plasticity fines	
16					Bottom of boring at 16 feet bgs	
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-10

BORING LOCATION: Along canal - middle

ELEVATION AND DATUM: Gravel sidewalk

DRILLING CONTRACTOR: Precision Sampling

DATE STARTED: 4/24/95

DATE FINISHED: 4/24/95 - 1430 hrs

DRILLING METHOD: Direct push

TOTAL DEPTH: 16 feet

MEASURING POINT: Ground surface

DRILLING EQUIPMENT: XD-3

DEPTH TO WATER	FIRST	COMPL.	24 HRS.
	---	---	--

SAMPLING METHOD: Enviro Core System

LOGGED BY: S. L. Anich

HAMMER WEIGHT: ---

DROP: ---

RESPONSIBLE PROFESSIONAL: A. L. Spencer

REG. NO. RG 5713

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
1						No recovery in upper 2 feet
2					CLAYEY SAND (SC) Very dark gray (10YR 3/1), moist, 70% fine sand, 25% low plasticity fines, 5% fine to coarse subangular gravel	
3						
4						
5					Increase gravel content to 15%	
6				>1200		
7					SANDY LEAN CLAY (CL) Black (5Y 2.5/1), moist, 60-70% fines, 30-40% fine to coarse sand, low plasticity, soft	
8					Increase moisture	
9					LEAN CLAY (CL) Dark greenish gray (5G 4/1), moderate amount yellow to brown organics, moist, 80-90% fines, 10-20% fine to coarse sand, trace fine gravel, low plasticity, firm	
10						
11					Organics and orange mottling	
12						
13						
14						

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-10 (cont.)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION: NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
				>1200	LEAN CLAY (CL) (continued)	
15					POORLY GRADED SAND WITH CLAY (SP - SC) Gray (N5/), moist, 90% fine to medium sand, 10% low plasticity fines, loose	
16					Bottom of boring at 16 feet bgs	
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

PROJECT: PARK STREET LANDING Alameda, California	**Log of Boring No. GWS-11**	
BORING LOCATION: Along canal - southeast side	ELEVATION AND DATUM: Gravel sidewalk	
DRILLING CONTRACTOR: Precision Sampling	DATE STARTED: 4/24/95	DATE FINISHED: 4/24/95 - 1530 hrs
DRILLING METHOD: Direct push	TOTAL DEPTH: 16 feet	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-3	DEPTH TO WATER / FIRST: --- / COMPL.: --- / 24 HRS.: --	
SAMPLING METHOD: Enviro Core System	LOGGED BY: S. L. Anich	
HAMMER WEIGHT: --- / DROP: ---	RESPONSIBLE PROFESSIONAL: A. L. Spencer	REG. NO. RG 5713

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
0					GRAVEL SIDEWALK	No recovery in upper 1 1/2 feet
1						
2					SANDY LEAN CLAY (CL) Very dark grayish brown (10YR 3/2), moist, 60% fines, 30% fine to coarse sand, 10% subangular gravel, low plasticity, soft	
3					Increase organic content, wood fragments	
4						
5				1300		
6					LEAN CLAY with SAND (CL) Black (10YR 2/1) with tan mottling, moist, 85% fines, 15% fine to coarse sand, trace fine to coarse gravel, low plasticity, medium hard	
7				50		
8					LEAN CLAY (CL) Bluish gray (10B 6/1), moist, 90% fines, 10% medium to coarse sand, low plasticity, firm	
9						
10					Color change to pale olive with green and orange mottling	
11				50		
12					Increase sand content to 25%	
13						
14						

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-11 (cont.)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
15				100	SANDY LEAN CLAY (CL) Greenish gray (10Y 5/1), moist, 60% fines, 40% fine to coarse sand, low plasticity, firm	
16					CLAYEY SAND (SC) Dark bluish gray (10B 4/1), moist, 70% fine to coarse sand, 30% low plasticity fines, dense	
					Bottom of boring at 16 feet bgs	
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-12

BORING LOCATION: Along canal - southeast side

ELEVATION AND DATUM: Gravel sidewalk

DRILLING CONTRACTOR: Precision Sampling

DATE STARTED: 4/24/95

DATE FINISHED: 4/24/95 - 1630 hrs

DRILLING METHOD: Direct push

TOTAL DEPTH: 16 feet

MEASURING POINT: Ground surface

DRILLING EQUIPMENT: XD-3

DEPTH TO WATER: FIRST ---; COMPL. ---; 24 HRS. --

SAMPLING METHOD: Enviro Core System

LOGGED BY: S. L. Anich

HAMMER WEIGHT: ---

DROP: ---

RESPONSIBLE PROFESSIONAL: A. L. Spencer

REG. NO. RG 5713

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
1						No recovery in upper 2 1/2 feet
2						
3					CLAYEY SAND (SC) Dark gray (7.5YR 4/1), moist, 70% fine to coarse sand, 25% low plasticity fines, 5% rounded and subangular gravel, medium density, glass fragments	
4					Increase in low plasticity fines to 30%	
5					White "chalky" mottling or inclusions	
6					WELL-GRADED SAND (SW) Light olive brown (2.5Y 5/3), moist, 95% fine to coarse sand, 5% low plasticity fines, loose	
7				700		
8						
9					Color change to very dark gray (2.5Y 3/1), increase low plasticity fines to 20%	
10						
11				50	LEAN CLAY with SAND (CL) Olive (5Y 5/4) with green mottling, moist, 85% fines, 15% fine to medium sand, low plasticity , soft	
12					Increase sand content to 30% with orange mottling	
13					CLAYEY SAND (SC) Olive (5Y 5/4) with green and orange mottling, very moist, 65% fine to coarse sand, 35% low plasticity fines	
14						

B-1 (11/92)

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-12 (cont.)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM Reading	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
15					CLAYEY SAND (SC) (continued) Increase sand content to 80% and color change to greenish gray (10GY 5/1)	
16					Bottom of boring at 16 feet bgs	
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-13

BORING LOCATION: Along Blanding Ave., N side of driveway, next to bldg

ELEVATION AND DATUM: Vegetated area

DRILLING CONTRACTOR: Precision Sampling

DATE STARTED: 4/25/95

DATE FINISHED: 4/25/95 - 1045 hrs

DRILLING METHOD: Direct push

TOTAL DEPTH: 16 feet

MEASURING POINT: Ground surface

DRILLING EQUIPMENT: XD-3

DEPTH TO WATER	FIRST	COMPL.	24 HRS.
	---	---	--

SAMPLING METHOD: Enviro Core System

LOGGED BY: S. L. Anich

HAMMER WEIGHT: ---

DROP: ---

RESPONSIBLE PROFESSIONAL: A. L. Spencer

REG. NO. RG 5713

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation:	
1						Did not encounter petroleum-like odors; however, PID readings were measured. No recovery in upper 2 1/2 feet.
2					CLAYEY SAND (SC) Black (2.5Y 2.5/1), orange organic nodules, very moist, 60-70% fine to coarse sand, 30-40% low plasticity fines, loose	
3					Color change to olive brown (2.5Y 4/3)	
4					LEAN CLAY (CL) Dark grayish brown (2.5Y 4/2), organic nodules (roots, black nodules), moist, 80-90% fines, 10-20% fine to medium sand, low plasticity, firm	
5					Gravel content to 5% (medium, angular)	
6				162	CLAYEY SAND (SC) Dark greenish gray (10GY 4/1), moist, 70% fine to coarse sand, 30% low plasticity fines, dense	
7					ATD ▽	
8				120	CLAYEY SILT (ML) Greenish gray (5GY 5/1), moist, 90-95% fines, 5-10% fine to medium sand, low plasticity, firm	
9				120		
10				170	Orange mottling and organic nodules, increasing clay content	
11				190		
12				380	CLAYEY SAND (SC) Dark greenish gray (10Y 4/1), moist, 60 % fine to coarse sand, 40% low plasticity fines, including 10% silt, medium dense	
13					LEAN CLAY (CL) Olive gray (5Y 4/2), moist, 80% fines, 20% fine to coarse sand, low plasticity	
14				650		

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-13 (cont.)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM Reading	DESCRIPTION: NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
15					WELL-GRADED SAND with CLAY (SW-SC) Dark greenish gray (10GY 4/1), moist, 90% fine to coarse sand, 40% low plasticity fines, loose Color change to olive brown (2.5Y 4/4)	
16					Bottom of boring at 16 feet bgs	
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-14

BORING LOCATION: Along Blanding Ave., south side of driveway

ELEVATION AND DATUM: Vegetated area

DRILLING CONTRACTOR: Precision Sampling

DATE STARTED: 4/25/95

DATE FINISHED: 4/25/95 - 930 hrs

DRILLING METHOD: Direct push

TOTAL DEPTH: 16 feet

MEASURING POINT: Ground surface

DRILLING EQUIPMENT: XD-3

DEPTH TO WATER	FIRST	COMPL.	24 HRS.
	---	---	--

SAMPLING METHOD: Enviro Core System

LOGGED BY: S. L. Anich

HAMMER WEIGHT: ---

DROP: ---

RESPONSIBLE PROFESSIONAL: A. L. Spencer

REG. NO. RG 5713

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
1						Did not encounter petroleum-like odors; however, PID readings were measured. No recovery in upper 2 1/2 feet.
2						
3					CLAYEY SAND (SC) Reddish black (10R 2.5/1), moist, 60-70% fine to coarse sand, 30-40% low plasticity fines, loose	
4					Increased sand content to 80-85%, color change to brown (10YR 5/3)	
				80		
5					SANDY LEAN CLAY (CL) Light yellowish brown (2.5Y 6/4), moist, 60% fines, 30% fine to coarse sand, 10% fine gravel, low plasticity, firm	
6						
					Color change to pale olive (5Y 6/4)), increase fines to 75%	
7						
8					CLAYEY SAND (SC) Greenish gray (5G 5/1) with orange mottling and black organic pockets, moist, 60-70% fine to coarse sand, 30-40% low plasticity fines, medium dense to dense	
				160		
9					LEAN CLAY with SAND (CL) Olive (5Y 5/3) with orange mottling and black organic pockets (some roots), moist, 80% fines (including silt), 20% fine to medium sand, low plasticity, firm	
10				271		
11					▽	
12				600	CLAYEY SAND (SC) Olive (5Y 5/6) with orange and black mottling, very moist, 60-70% fine to coarse sand, 30-40% low plasticity fines, medium dense	
13						
14				25		

8-1 (11/92)

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-14 (cont.)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM Reading	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
15					SANDY LEAN CLAY (CL) Dark greenish gray (5G 3/1), moist, 70% fines, 30% fine to coarse sand, low plasticity, dense	
16					WELL-GRADED SAND with CLAY (SW-SC) Olive (5Y 4/3), moist, 90% fine to coarse sand, 10% low plasticity fines, loose	
17					Bottom of boring at 16 feet bgs	
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-15

BORING LOCATION: North side of property--driveway

ELEVATION AND DATUM: Asphalt driveway

DRILLING CONTRACTOR: Precision Sampling

DATE STARTED: 4/25/95

DATE FINISHED: 4/25/95 - 1200 hrs

DRILLING METHOD: Direct push

TOTAL DEPTH: 16 feet

MEASURING POINT: Ground surface

DRILLING EQUIPMENT: XD-3

DEPTH TO WATER	FIRST	COMPL.	24 HRS.
	---	---	--

SAMPLING METHOD: Enviro Core System

LOGGED BY: S. L. Anich

HAMMER WEIGHT: ---

DROP: ---

RESPONSIBLE PROFESSIONAL: A. L. Spencer

REG. NO. RG 5713

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation:	
1						No recovery in upper 2 1/2 feet
2						
3					GRAVEL	
				300	CLAYEY SAND (SC) Very dark grayish brown (10YR 3/2), moist, 70-80% fine to coarse sand, 20-30% low plasticity fines, loose	
4						
5				8700	LEAN CLAY with SAND (CL) Black (10YR 2/1), some orange organic nodules, moist, 60-70% fines (5-10% silt), 30-40% fine to coarse sand, low plasticity, soft	
6				250		
7					CLAYEY SAND (SC) Dark yellowish brown (10YR 4/4), moist to very moist, 75-85% fine to coarse sand, 15-25% low plasticity fines, loose to medium dense	
8				50	SANDY LEAN CLAY (CL) Olive (5Y 5/3), moist, 70% fines, 30% fine to coarse sand, low plasticity, firm	
9				122	Decreasing sand content to 20%	
10					Black organic nodules, greenish gray (5G 5/1) pockets, orange mottling	
11				200		
12				+9000		
13					Increasing sand content to 30-40%, color change to yellowish brown (10YR 5/6)	
				1200		
14						

B-1 (11/92)

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-15 (cont.)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION (NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.)	REMARKS
15			470		SANDY LEAN CLAY (CL) (Continued) CLAYEY SAND (SC) Light olive brown (2.5Y 5/4) black organic nodules, green mottling, moist, 60% fine to coarse sand, 40% low plasticity fines, soft to firm, Increase sand content to 70-80%	
16					Bottom of boring at 16 feet bgs	
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

B-2 (11/92)

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-16

BORING LOCATION: Main driveway

ELEVATION AND DATUM: Asphalt driveway

DRILLING CONTRACTOR: Precision Sampling

DATE STARTED: 4/25/95

DATE FINISHED: 4/25/95 - 1415 hrs

DRILLING METHOD: Direct push

TOTAL DEPTH: 21.5 feet

MEASURING POINT: Ground surface

DRILLING EQUIPMENT: XD-3

DEPTH TO WATER	FIRST	COMPL.	24 HRS.
	---	---	--

SAMPLING METHOD: Enviro Core System

LOGGED BY: S. L. Anich

HAMMER WEIGHT: ---

DROP: ---

RESPONSIBLE PROFESSIONAL: A. L. Spencer

REG. NO. RG 5713

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/Foot	PID Reading (ppm)	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
1						No recovery in upper 2 1/2 feet
2						
					GRAVEL	
3				1000	CLAYEY SAND (SC) Black (7.5YR 2.5/1), moist, 70% fine to coarse sand, 30% low plasticity fines, loose to medium dense	
4					Increased sand content to 80%	
5						
6				200	SANDY LEAN CLAY (CL) Dark greenish gray (5GY 4/1), moist, 60-70 % fines, 30-40% fine to coarse sand, low plasticity, medium hard	
7						
8						
9					Orange organic nodules	
10						
11				14	LEAN CLAY with SAND (CL) Olive (5Y 5/4), with green and orange mottling, moist, 70-80% fines, 20-30% fine to coarse sand, low plasticity, hard	
12						
13				8	WELL-GRADED SAND with CLAY (SW-SC) Greenish gray (5G 5/1), moist, 85-90% fine to coarse sand, 10-15% low plasticity fines, loose to medium dense	
14						

B-1 (11/92)

PROJECT: PARK STREET LANDING
Alameda, California

Log of Boring No. GWS-16 (cont.)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM Reading	DESCRIPTION NAME (USCS Symbol): color, moist, % by wt., plast., density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
15					WELL-GRADED SAND with CLAY (SW-SC) (Continued) Increase sand content to 90-95%	
16						
17					Color change to olive (5Y 4/3)	
18						
19					Orange mottling	
20						
21						
22					Bottom of boring at 21.5 feet bgs	
23						
24						
25						
26						
27						
28						
29						
30						
31						

APPENDIX B
4th Quarter 2005 Groundwater Monitoring Report

GETTLER-RYAN INC.

TRANSMITTAL

November 23, 2005
G-R #386498

TO: Ms. Laura Genin
Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A
Emeryville, CA 94608

CC: Mr. Mark Inglis
ChevronTexaco Company
P.O. Box 6012, Room K2256
San Ramon, California 94583

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

RE: Chevron #206127
2301-2337 Blanding Avenue
Alameda, California
(Former Signal Oil Marine Terminal)

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	November 23, 2005	Groundwater Monitoring and Sampling Report Fourth Quarter - Event of October 14, 2005

COMMENTS:

This report is being sent for your review. Please provide any comments/changes and propose any groundwater monitoring modifications for the next event prior to ***December 7, 2005***, at which time the final report will be distributed to the following:

cc: Mr. Barney Chan, Alameda County Health Care Services, Dept. of Environmental Health, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577

Enclosures

trans/206127-MI

GETTLER-RYAN INC.

November 23, 2005
G-R Job #386498

Mr. Mark Inglis
ChevronTexaco Company
P.O. Box 6012, Room K2256
San Ramon, CA 94583

RE: Fourth Quarter Event of October 14, 2005
Groundwater Monitoring & Sampling Report
Chevron #206127 (Former Signal Oil Marine Terminal)
2301-2337 Blanding Avenue
Alameda, California

Dear Mr. Inglis:

This report documents the most recent groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached).

Static groundwater level was measured and the well was checked for the presence of separate-phase hydrocarbons. Static water level data, groundwater elevation, and separate-phase hydrocarbon thickness (if any) are presented in the attached Table 1. A Groundwater Elevation Map is included as Figure 1.

Groundwater samples were collected from the monitoring well and submitted to a state certified laboratory for analyses. The field data sheet for this event is attached. Analytical results are presented in the table(s) listed below. The chain of custody document and laboratory analytical report are also attached.

Please call if you have any questions or comments regarding this report. Thank you.

Sincerely,

Deanna L. Harding
Project Coordinator

Robert A. Lauritzen
Senior Geologist, P.G. No. 7504

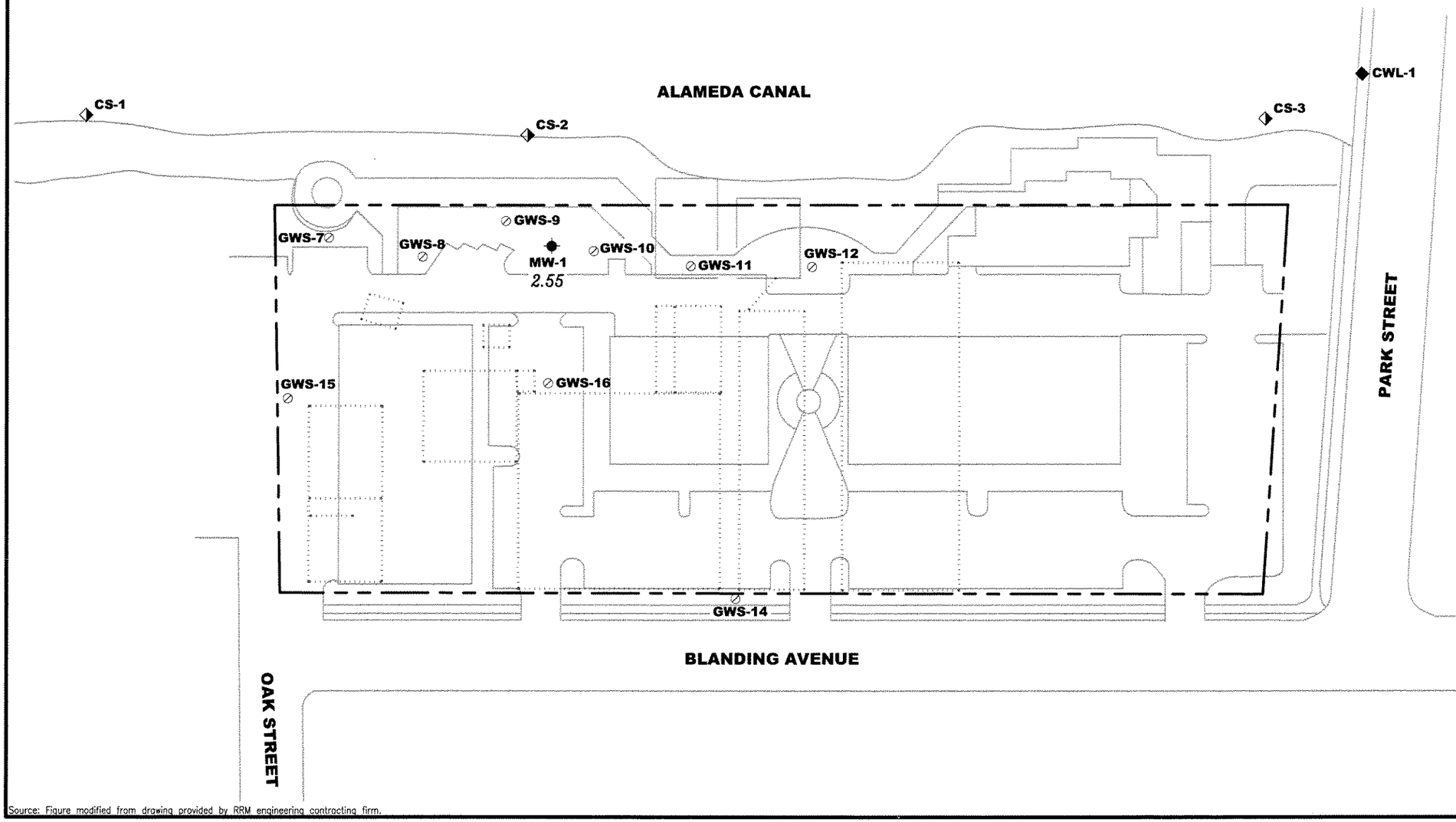
PROFESSIONAL GEOLOGIST • ROBERT A. LAURITZEN No. 7504 • STATE OF CALIFORNIA

Figure 1: Groundwater Elevation Map
Table 1: Groundwater Monitoring Data and Analytical Results
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

6747 Sierra Court, Suite J • **Dublin**, CA 94568 • (925) 551-7555 • Fax (925) 551-7888
3140 Gold Camp Drive, Suite 170 • **Rancho Cordova**, CA 95670 • (916) 631-1300 • Fax (916) 631-1317
1364 N. McDowell Blvd., Suite B2 • **Petaluma**, CA 94954 • (707) 789-3255 • Fax (707) 789-3218

EXPLANATION

- Groundwater monitoring well — *99.99* Groundwater elevation in feet referenced to Mean Sea Level
- Canal water level gauging station from Park Street Bridge (RRM, October 1998)
- Canal grab surface water sample
- Shallow groundwater survey point (Geomatrix, April 1995)
- Site features noted on Sanborn Fire Insurance map, dated 1932



Source: Figure modified from drawing provided by RRM engineering contracting firm.

FIGURE 1

GROUNDWATER ELEVATION MAP
Chevron #206127 (Former Signal Oil Marine Terminal)
2301-2337 Blanding Avenue
Alameda, California

REVISED DATE

DATE
October 14, 2005

REVIEWED BY

PROJECT NUMBER
386498

GETTLER - RYAN INC.
6747 Sierra Court, Suite J
Dublin, CA 94568
(925) 551-7555

FILE NAME: P:\Enviro\Chevron\206127\005-20-6127.dwg | Layout Tab: Plot4

Table 1

Groundwater Monitoring Data and Analytical Results

Chevron #206127 (Former Signal Oil Marine Terminal)

2301-2337 Blanding Avenue

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)
MW-1										
01/23/01[1]	--	7.16	--	1,100[2,3]	5,210[4]	868	<50.0	<50.0	<50.0	<250
04/09/01	10.62	8.12	2.50	1,200[6]	3,000[5]	920	<20	<20	<20	<100
07/30/01	10.62	9.15	1.47	550[3,8]	2,000[7]	730	13	<5.0	<5.0	<25
10/08/01	10.62	7.86	2.76	2,200[9]	1,200	120	2.4	5.9	6.4	<2.5
01/13/02	10.62	7.02	3.60	3,300[3]	930	320	0.78	0.87	3.8	<2.5
04/08/02	10.62	9.60	1.02	1,200[3]	960	50	1.4	2.6	9.0	<2.5
07/31/02	10.62	9.27	1.35	2,800[3]	930	64	1.4	1.9	11	<5.0
10/15/02	10.62	8.00	2.62	1,000[3]	620	25	0.78	1.4	4.3	<2.5
01/14/03	10.62	7.05	3.57	960[3]	1,600	20	1.3	1.3	<1.5	<2.5
04/15/03	10.62	8.02	2.60	920[3]	870	56	1	1.4	3.1	<2.5
07/16/03[10]	10.62	10.08	0.54	1,400[3]	780	85	1	0.8	0.7	<0.5
10/18/03[10]	10.62	8.51	2.11	1,200[3]	640	42	0.8	<0.5	0.5	<0.5
01/22/04[10]	10.62	8.95	1.67	1,500[3]	440	18	<0.5	<0.5	<0.5	<0.5
04/23/04[10]	10.62	8.95	1.67	2,200[3]	410	10	<0.5	<0.5	<0.5	<0.5
07/23/04[10]	10.62	9.21	1.41	1,800[3]	400	6	<0.5	<0.5	<0.5	<0.5
10/22/04[10]	10.62	8.36	2.26	2,200[3]	150	2	<0.5	<0.5	<0.5	<0.5
01/28/05[10]	10.62	7.09	3.53	1,200[3]	55	8	<0.5	<0.5	<0.5	<0.5
04/26/05[10]	10.62	7.84	2.78	480[3]	<50	5	<0.5	<0.5	<0.5	<0.5
07/15/05[10]	10.62	8.12	2.50	610[3,11]	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/14/05[10]	**10.62**	**8.07**	**2.55**	**920[3,12]**	**<50**	**10**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
CS-2										
07/30/01	--	--	--	140[3,5]	<50	<0.50	<0.50	<0.50	<0.50	<2.5
10/08/01	--	--	--	53[9]	<50	<0.50	<0.50	<0.50	<1.5	<2.5
01/13/02	--	--	--	<50[3]	<50	<0.50	<0.50	<0.50	<1.5	<2.5
04/08/02	--	--	--	77[3]	<50	<0.50	<0.50	<0.50	<1.5	<2.5
07/31/02	--	--	--	<50[3]	<50	<0.50	<0.50	<0.50	<1.5	<2.5
10/15/02	--	--	--	<50[3]	<50	<0.50	<0.50	<0.50	<1.5	<2.5
01/14/03	--	--	--	<50[3]	<50	<0.50	<0.50	<0.50	<1.5	<2.5
04/15/03	--	--	--	<50[3]	<50	<0.5	<0.5	<0.5	<1.5	<2.5
07/16/03[10]	--	--	--	<50[3]	<50	<0.5	0.7	<0.5	0.6	<0.5
10/18/03[10]	--	--	--	<50[3]	<50	<0.5	<0.5	<0.5	<0.5	<0.5

Table 1

Groundwater Monitoring Data and Analytical Results

Chevron #206127 (Former Signal Oil Marine Terminal)

2301-2337 Blanding Avenue

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)
CS-2 (cont)										
01/22/04[10]	--	--	--	<50[3]	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/23/04[10]	--	--	--	<50[3]	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/23/04[10]	--	--	--	<50[3]	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/22/04[10]	--	--	--	<50[3]	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/28/05[10]	--	--	--	<50[3]	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/26/05[10]	--	--	--	<50[3]	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/15/05[10]	--	--	--	<50[3]	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/14/05[10]	--	--	--	**<50[3]**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
TRIP BLANK										
TB-LB										
01/23/01	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50
04/09/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
07/30/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
QA										
10/08/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
01/13/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
04/08/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
07/31/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
10/15/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
01/14/03	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
04/15/03	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5
07/16/03[10]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/18/03[10]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/22/04[10]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/23/04[10]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/23/04[10]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/22/04[10]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/28/05[10]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/26/05[10]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/15/05[10]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/14/05[10]	--	--	--	--	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

Table 1

Groundwater Monitoring Data and Analytical Results

Chevron #206127 (Former Signal Oil Marine Terminal)
2301-2337 Blanding Avenue
Alameda, California

EXPLANATIONS:

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
(ppb) = Parts per billion
-- = Not Measured/Not Analyzed
CS-2 = Creek Sample
QA = Quality Assurance/Trip Blank

* TOC elevations were surveyed on January 25, 2001, by Virgil Chavez Land Surveying. The benchmark used for the survey was a City of Alameda benchmark being a cut square at the centerline return, south corner of Oak and Blanding. (Benchmark Elevation = 8.236 feet, NGVD 29).

1 Well development performed.
2 Laboratory report indicates unidentified hydrocarbons <C16.
3 TPH-D with silica gel cleanup.
4 Laboratory report indicates weathered gasoline C6-C12.
5 Laboratory report indicates discrete peaks.
6 Laboratory report indicates diesel C9-C24 + unidentified hydrocarbons <C16.
7 Laboratory report indicates gasoline C6-C12.
8 Laboratory report indicates unidentified hydrocarbons C9-C24.
9 Analysis performed without silica gel cleanup although was requested on the Chain of Custody.
10 BTEX and MTBE by EPA Method 8260.
11 Laboratory report indicates the observed sample pattern is not typical of #2 fuel/diesel. It elutes in the DRO range later than #2 fuel.
12 Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes later in the DRO range.

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by ChevronTexaco Company, the purge water and decontamination water generated during sampling activities is transported by IWM to McKittrick Waste Management located in McKittrick, California.

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #206127 Job Number: 386498
Site Address: 2301-2337 Blanding Avenue Event Date: 10-14-05 (inclusive)
City: Alameda, CA Sampler: Joe

Well ID MW-1 Date Monitored: 10-14-05 Well Condition: o.k
Well Diameter 2 in.
Total Depth 17.16 ft.
Depth to Water 8.07 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

9.09 xVF 0.17 = 1.55 x3 case volume= Estimated Purge Volume: 5 gal.

Purge Equipment:
Disposable Bailer ✓
Stainless Steel Bailer
Stack Pump
Suction Pump
Grundfos
Other:

Sampling Equipment:
Disposable Bailer ✓
Pressure Bailer
Discrete Bailer
Other:

Time Started: (2400 hrs)
Time Completed: (2400 hrs)
Depth to Product: ft
Depth to Water: ft
Hydrocarbon Thickness: 0 ft
Visual Confirmation/Description:
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: gal
Amt Removed from Well: gal
Water Removed:
Product Transferred to:

Start Time (purge): 0847 Weather Conditions: Clear
Sample Time/Date: 0915 10-14-05 Water Color: Clear Odor: Some
Purging Flow Rate: 0.5 gpm. Sediment Description:
Did well de-water? If yes, Time: Volume: gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
0855	1.5	7.12	935	64.2		
0859	3	7.16	932	63.8		
0904	5	7.20	938	63.6		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	6 x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)
	2 x Amber	YES	NP	LANCASTER	TPH-Dw/sg

COMMENTS:

Add/Replaced Lock: Add/Replaced Plug: Size:

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #206127 Job Number: 386498
Site Address: 2301-2337 Blanding Avenue Event Date: 10-14-05 (inclusive)
City: Alameda, CA Sampler: Joe

Well ID CS-2 Date Monitored: 0 Well Condition: Creek Sample
Well Diameter in.
Total Depth ft.
Depth to Water ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

xVF _____ = _____ x3 case volume= Estimated Purge Volume: _____ gal.

Purge Equipment:
Disposable Bailer
Stainless Steel Bailer
Stack Pump
Suction Pump
Grundfos
Other:

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Discrete Bailer
Other:

Time Started: _____ (2400 hrs)
Time Completed: _____ (2400 hrs)
Depth to Product: _____ ft
Depth to Water: _____ ft
Hydrocarbon Thickness: 0 ft
Visual Confirmation/Description:
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: _____ gal
Amt Removed from Well: _____ gal
Water Removed:
Product Transferred to:

Start Time (purge): _____ Weather Conditions: clear
Sample Time/Date: 0835 / 10-14-05 Water Color: clear Odor: none
Purging Flow Rate: _____ gpm. Sediment Description:
Did well de-water? _____ If yes, Time: _____ Volume: _____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
CS-2	6 x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)
	2 x Amber	YES	NP	LANCASTER	TPH-Dw/sg

COMMENTS:

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Size: _____

Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories — Where quality is a science.

101405-02

For Lancaster Laboratories use only — Acct. #: 10904 Sample #: 4625706-09 SCR#: 963405

Facility #: SS#206127-OML G-R#386498 Global ID#

Site Address: 2301-2337 BLANDING AVENUE, ALAMEDA, CA

Chevron PM: MI Lead Consultant: CAMBRIARF

Consultant/Office: G-R, Inc., 6747 Sierra Court, Suite J, Dublin, Ca. 94568

Consultant Prj. Mgr.: Deanna L. Harding (deanna@grinc.com)

Consultant Phone #: 925-551-7555 Fax #: 925-551-7899

Sampler: JOE ASEMIAN

Service Order #: ☐ Non SAR:

Analyses Requested

Preservation Codes

Preservative Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 O = Other

☐ J value reporting needed
☒ Must meet lowest detection limits possible for 8260 compounds

8021 MTBE Confirmation
☐ Confirm highest hit by 8260
☐ Confirm all hits by 8260
☐ Run ____ oxy s on highest hit
☐ Run ____ oxy s on all hits

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Water	Oil ☐ Air ☐	Total Number of Containers	BTEX + MTBE 8260 ☒ 8021 ☐	TPH 8015 MOD GRO	TPH 8015 MOD DRO ☒ Silica Gel Cleanup	8260 full scan	Oxygenates ___	Lead 7420 ☐ 7421 ☐
QA	—	—	✓			✓			✓	✓				
MW-1	10-14-05	0915	"			"			✓	✓	✓			
CS-2	"	0830	"			"			✓	✓	✓			

Comments / Remarks

Turnaround Time Requested (TAT) (please circle)
STD. TAT | 72 hour | 48 hour | 24 hour | 4 day | 5 day

Data Package Options (please circle if required)
QC Summary | Type I — Full | Type VI (Raw Data) | ☐ Coelt Deliverable not needed | WIP (RWQCB) | Disk | EDF/EDD

	Date	Time		Date	Time
Relinquished by:	10.14.05	1000	Received by:	10/14/05	1005
Relinquished by:	10/14/05	1530	Received by: Fed Ex	10/14/05	
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS FedEx Other			Received by:	10/15/05	0955
Temperature Upon Receipt 16, 25 °C			Custody Seals Intact? Yes No		

Lancaster Laboratories
2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

925-842-8582

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 963405. Samples arrived at the laboratory on Saturday, October 15, 2005. The PO# for this group is 99011184 and the release number is INGLIS.

Client Description			Lancaster Labs Number
QA-T-051014	NA	Water	4625706
MW-1-W-051014	Grab	Water	4625707
CS-2-W-051014	Grab	Water	4625708

1 COPY TO	Cambria C/O Gettler- Ryan	Attn: Deanna L. Harding
ELECTRONIC COPY TO	Gettler-Ryan	Attn: Cheryl Hansen

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Questions? Contact your Client Services Representative
Lynn M Frederiksen at (717) 656-2300

Respectfully Submitted,

Jenifer E. Hess
Manager

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Lancaster Laboratories Sample No. WW 4625706

QA-T-051014 NA Water
Facility# 206127 Job# 386498 GRD
2301-2337 Blanding-Alamed 206127 QA
Collected:10/14/2005

Account Number: 10904

Submitted: 10/15/2005 09:55
Reported: 10/21/2005 at 22:20
Discard: 11/21/2005

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

BAAQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO - Waters	n.a.	N.D.	50.	ug/l	1
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time.					
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	N. CA LUFT Gasoline Method	1	10/18/2005 09:59	K. Robert Caulfeild-James	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	10/18/2005 12:14	Ginelle L Feister	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/18/2005 09:59	K. Robert Caulfeild-James	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/18/2005 12:14	Ginelle L Feister	n.a.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Lancaster Laboratories Sample No. WW 4625707

MW-1-W-051014 Grab Water
Facility# 206127 Job# 386498 GRD
2301-2337 Blanding-Alamed 206127 MW-1
Collected:10/14/2005 09:15 by JA

Account Number: 10904

Submitted: 10/15/2005 09:55
Reported: 10/21/2005 at 22:20
Discard: 11/21/2005

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

BAAM1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO - Waters	n.a.	N.D.	50.	ug/l	1
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time.					
06610	TPH-DRO CALUFT(Water) w/Si Gel	n.a.	920.	50.	ug/l	1
	The observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes later in the DRO range.					
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	10.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	N. CA LUFT Gasoline Method	1	10/18/2005 10:57	K. Robert Caulfeild-James	1
06610	TPH-DRO CALUFT(Water) w/Si Gel	CALUFT-DRO/8015B, Modified	1	10/18/2005 19:16	Tracy A Cole	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	10/18/2005 12:38	Ginelle L Feister	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/18/2005 10:57	K. Robert Caulfeild-James	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/18/2005 12:38	Ginelle L Feister	n.a.
02135	Extraction - DRO Water Special	TPH by CA LUFT	1	10/18/2005 07:45	Joseph S Feister	1

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Lancaster Laboratories Sample No. WW 4625708

CS-2-W-051014 Grab Water
Facility# 206127 Job# 386498 GRD
2301-2337 Blanding-Alamed 206127 CS-2
Collected:10/14/2005 08:35 by JA

Account Number: 10904

Submitted: 10/15/2005 09:55
Reported: 10/21/2005 at 22:20
Discard: 11/21/2005

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

BAAC2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO - Waters	n.a.	N.D.	50.	ug/l	1
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time.					
06610	TPH-DRO CALUFT(Water) w/Si Gel	n.a.	N.D.	50.	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	N. CA LUFT Gasoline Method	1	10/18/2005 11:26	K. Robert Caulfeild-James	1
06610	TPH-DRO CALUFT(Water) w/Si Gel	CALUFT-DRO/8015B, Modified	1	10/18/2005 19:40	Tracy A Cole	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	10/18/2005 13:02	Ginelle L Feister	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/18/2005 11:26	K. Robert Caulfeild-James	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/18/2005 13:02	Ginelle L Feister	n.a.
02135	Extraction - DRO Water Special	TPH by CA LUFT	1	10/18/2005 07:45	Joseph S Feister	1

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: ChevronTexaco
Reported: 10/21/05 at 10:21 PM

Group Number: 963405

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 052900006A	Sample number(s): 4625707-4625708							
TPH-DRO CALUFT(Water) w/Si Gel	N.D.	50.	ug/l	90	86	49-120	4	20
Batch number: 05290A16A	Sample number(s): 4625706-4625708							
TPH-GRO - Waters	N.D.	50.	ug/l	108	108	70-130	1	30
Batch number: Z052912AA	Sample number(s): 4625706-4625708							
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	102		77-127		
Benzene	N.D.	0.5	ug/l	99		85-117		
Toluene	N.D.	0.5	ug/l	100		85-115		
Ethylbenzene	N.D.	0.5	ug/l	100		82-119		
Xylene (Total)	N.D.	0.5	ug/l	101		83-113		

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 05290A16A	Sample number(s): 4625706-4625708								
TPH-GRO - Waters	117		63-154						
Batch number: Z052912AA	Sample number(s): 4625706-4625708								
Methyl Tertiary Butyl Ether	103	102	69-134	2	30				
Benzene	108	104	83-128	3	30				
Toluene	111	105	83-127	5	30				
Ethylbenzene	110	105	82-129	4	30				
Xylene (Total)	109	105	82-130	3	30				

Surrogate Quality Control

Analysis Name: TPH-DRO CALUFT(Water) w/Si Gel
Batch number: 052900006A

	Orthoterphenyl
4625707	107
4625708	106
Blank	105
LCS	123
LCSD	122

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 10/21/05 at 10:21 PM

Group Number: 963405

Surrogate Quality Control

Limits: 59-131

Analysis Name: TPH-GRO - Waters
Batch number: 05290A16A

	Trifluorotoluene-F
4625706	92
4625707	94
4625708	93
Blank	93
LCS	95
LCSD	97
MS	93

Limits: 63-135

Analysis Name: BTEX+MTBE by 8260B
Batch number: Z052912AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
4625706	103	103	106	101
4625707	101	100	107	102
4625708	102	102	105	100
Blank	102	100	106	100
LCS	101	102	106	102
MS	104	101	107	102
MSD	104	103	107	103
Limits:	80-116	77-113	80-113	78-113

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.