

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



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

**REMEDIAL ACTION COMPLETION CERTIFICATION**

**RO-025 - 2428 Central Avenue, Alameda, CA  
(4 fuel tanks removed in January 1970)**

December 27, 2001

Mr. Tom Bauhs  
Chevron Products  
P.O. Box 6004  
San Ramon, CA 94583-0904

Mr. Steve Stahl  
Stahl Woodbridge Construction  
2428 Central Avenue  
Alameda, CA 94501

Dear Messrs. Bauhs and Stahl:

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

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

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

Sincerely,

A handwritten signature in black ink that reads "Mee Ling Tung".

Mee Ling Tung, Director

cc: Chuck Headlee, RWQCB  
/ Dave Deaner, SWRCB  
✓ files-ec (chevron0100-3)

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RO0000025

December 27, 2001

Mr. Tom Bauhs  
Chevron Products  
P.O. Box 6004  
San Ramon, CA 94583-0904

Mr. Steve Stahl  
Stahl Woodbridge Construction  
2428 Central Avenue  
Alameda, CA 94501

**Re: Fuel Leak Site Case Closure for 2428 Central Avenue, Alameda, CA**

Dear Messrs. Bauhs and Stahl:

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

**SITE INVESTIGATION AND CLEANUP SUMMARY**

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

- up to 3,000ppm TPH as gasoline, 340ppm TPH as diesel, and 8.0ppm benzene exists in soil beneath the site at 10 feet bgs;
- up to 1,400ppb TPHg, and 94ppb benzene exists in groundwater beneath the site; and,
- a risk management plan was prepared for the protection of construction workers in the event excavation/trenching is proposed in the vicinity of residual soil and groundwater contamination.

If you have any questions, please contact me at (510) 567-6762.

eva chu  
Hazardous Materials Specialist

enclosures: 1. Case Closure Letter 2. Case Closure Summary

c: City of Alameda-Planning Dept., City Hall, 2263 Santa Clara Ave., Alameda, CA  
94501  
files (chevron0100-4)

AUG 28 2001

**CASE CLOSURE SUMMARY**  
**Leaking Underground Fuel Storage Tank Program**

**I. AGENCY INFORMATION**

Date: May 4, 2001

Agency name: **Alameda County-HazMat**  
 City/State/Zip: **Alameda, CA 94502**  
 Responsible staff person: **Eva Chu**

Address: **1131 Harbor Bay Pkwy**  
 Phone: **(510) 567-6700**  
 Title: **Hazardous Materials Spec.**

SEP 04 2001

**II. CASE INFORMATION**

Site facility name: **Former Chevron Service Station 9-0100**  
 Site facility address: **2428 Central Avenue, Alameda, CA 94501**  
 RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **RO0000025/StID 3910**  
 URF filing date: **1/14/98** SWEEPS No: **N/A**

<u>Responsible Parties:</u>	<u>Addresses:</u>	<u>Phone Numbers:</u>
<b>Tom Bauhs</b> <b>Chevron Products</b> <b>P.O. Box 6004</b> <b>San Ramon, CA 94583-0904</b> <b>(925) 842-8898</b>	<b>Steve Stahl</b> <b>Stahl Woodridge Construction</b> <b>2428 Central Avenue</b> <b>Alameda, CA 94501</b>	

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	7,500	Gasoline	Removed	Jan 1970
2	3,000	"	"	"
3	3,000	"	"	"
4	3,000	"	"	"

**III. RELEASE AND SITE CHARACTERIZATION INFORMATION**

Cause and type of release: **Unknown**  
 Site characterization complete? **YES**  
 Date approved by oversight agency: **4/12/2001**  
 Monitoring Wells installed? **Yes** Number: **6**  
 Proper screened interval? **Yes, 5 to 25 feet bgs in well MW-1**  
 Highest GW depth below ground surface: **4.38'** Lowest depth: **8.94'** in well **MW-1**  
 Flow direction: **North to Northeast**  
 Most sensitive current use: **Mixed residential/commercial neighborhood**  
 Are drinking water wells affected? **No** Aquifer name: **Unknown**  
 Is surface water affected? **No** Nearest affected SW name: **NA**  
 Off-site beneficial use impacts (addresses/locations): **None**  
 Report(s) on file? **YES** Where is report(s) filed? **Alameda County, 1131 Harbor Bay Pkwy, Alameda, CA 94502**

**Treatment and Disposal of Affected Material:**

<u>Material</u>	<u>Amount (include units)</u>	<u>Action (Treatment or Disposal w/destination)</u>	<u>Date</u>
Tank	4 USTs	Unknown disposal destination	Jan 1970

**Maximum Documented Contaminant Concentrations - - Before and After Cleanup**

Contaminant	Soil (ppm)		Water (ppb)	
	Before <sup>1</sup>	After <sup>2</sup>	Before <sup>3</sup>	After <sup>4</sup>
TPH (Gas)	3000		9500	1400
TPH (Diesel)	340		NA	
Benzene	8.0		270	94
Toluene	9.1		120	9.4
Ethylbenzene	56		58	1.8
Xylenes	70		72	5.1
MTBE	NA		120	23
Heavy Metals - Organic Pb	ND			

- NOTE: 1 soil samples from exploratory or monitoring well borings at 10 feet bgs, advanced in 6/93 or 2/94  
 2 no soil excavation activities known/documented  
 3 maximum historic groundwater concentrations  
 4 most recent groundwater sampling event, 9/98

**IV. CLOSURE**

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? ( \_\_\_\_\_ )  
 Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? ( \_\_\_\_\_ )  
 Does corrective action protect public health for current land use? **YES**  
 Site management requirements: **A risk management plan has been prepared for construction workers in the event excavation/trenching is proposed in the vicinity of residual soil and groundwater contamination.**  
 Should corrective action be reviewed if land use changes? **YES**  
 Monitoring wells Decommissioned: **None, pending site closure**  
 Number Decommissioned: **0** Number Retained: **6**  
 List enforcement actions taken: **NOV issued in May 1996**  
 List enforcement actions rescinded: **Above, compliance in July 1996**

## V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Eva Chu

Title: Haz Mat Specialist

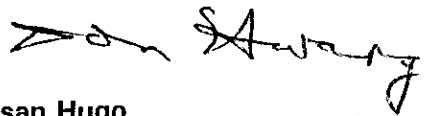
Signature: 

Date: 5/10/01

### Reviewed by

Name: Don Hwang

Title: Haz Mat Specialist

Signature: 

Date: 5/18/01

Name: Susan Hugo

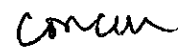
Title: Acting Supervisor

Signature: 

Date: 8/22/01

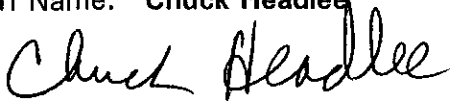
## VI. RWQCB NOTIFICATION

Date Submitted to RB: Aug 24, 2001

RB Response: 

RWQCB Staff Name: Chuck Headlee

Title: AEG

Signature: 

Date: 8/29/01

## VII. ADDITIONAL COMMENTS, DATA, ETC.

The site is located at the corner of Central Avenue and Park Avenue in Alameda. It is reported that Chevron operated a service station at this location from 1922 until 1970. The station was abandoned in January 1970 when one 7,500-gallon and three 3,000-gallon underground fuel storage tanks (USTs) were reportedly removed from the site. In February 1971, Chevron sold the property to Stahl Woodridge Construction Company, who, in 1973, constructed a multi-story hotel at the site. The structure occupies approximately 50% of the site. A parking garage is located directly over the location of the former USTs, product piping and dispenser island. (See Fig 1 and 2)

On June 16, 1993, a reconnaissance soil and groundwater assessment was initiated by drilling two exploratory boreholes (EB-1 and EB-2) in the vicinity of the former dispenser island and UST pit. Four soil samples and two water samples were taken and submitted to the laboratory for analysis. The soil samples contained up to 211ppm TPHd and 7.94, 7.91, 8.38, and 7.71ppm BTEX, respectively. TPH as gasoline was not detected. The grab groundwater contained up to 27,870ppb TPHd, and 1,782, 1,093, 176, and 798ppb BTEX, respectively. (See Table 1)

Three groundwater monitoring wells (MW-1, MW-2 and MW-3) were installed in February 1994. Soil samples from the borings contained up to 3,000 ppm, TPH(g), 340 ppm TPH(d), and 8 ppm benzene. It should be noted that the soil sample with the elevated levels of petroleum hydrocarbons was collected at 10 feet bgs, which is below groundwater elevation. Groundwater collected from the monitoring wells

contained up to 7,400 ppb TPH(g), 920 ppb TPH(d), and 120 ppb benzene. No organic lead or ethylene dibromide were detected in any of the groundwater samples. The laboratory chromatogram pattern suggested that the detected diesel was indicative of weathered gasoline, not diesel. Also, Chevron never distributed diesel at this site. (See Table 2)

To further characterize the extent of the elevated contaminant concentrations in groundwater identified in MW-1, three off-site groundwater monitoring wells (MW-4 is crossgradient and MW-5 and MW-6 are downgradient of the site) were installed. Soil and groundwater samples collected from the new borings were tested for the presence of TPH(g), BTEX and MTBE. Petroleum hydrocarbons and MTBE were not detected in the soil or groundwater samples. (See Fig 3, Table 3)

Quarterly groundwater monitoring was initiated at the site in March 1994, and reduced to semi-annual sampling in September 1995. The off-site sentry monitoring wells located in the downgradient direction have always been ND for TPH(g), BTEX and MTBE. Based on the limited extent of impacted groundwater and the lack of any significant migration, the remaining dissolved hydrocarbons should degrade and attenuate overtime. Continued monitoring is not warranted. (See Table 4)

In April 1997, a tier 2 Risk-Based Corrective Action (RBCA) and it's addendum dated March 1998 were prepared for the site. The results of the revised RBCA calculations, specifically for the exposure pathway of groundwater volatilization to indoor air, indicated that the current groundwater contaminant concentrations were below the applicable Site Specific Target Levels (SSTLs). It appears that residual petroleum hydrocarbons in soil and groundwater would not pose a risk to human health. In addition, a risk management plan was prepared that would be protective of construction workers in the event excavation/trenching is performed in the vicinity of residual soil and groundwater contamination.

In summary, case closure is recommended because:

- the leak and ongoing sources have been removed;
- the site has been adequately characterized;
- the dissolved hydrocarbon plume is not migrating;
- no preferential pathways exist at the site;
- 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.

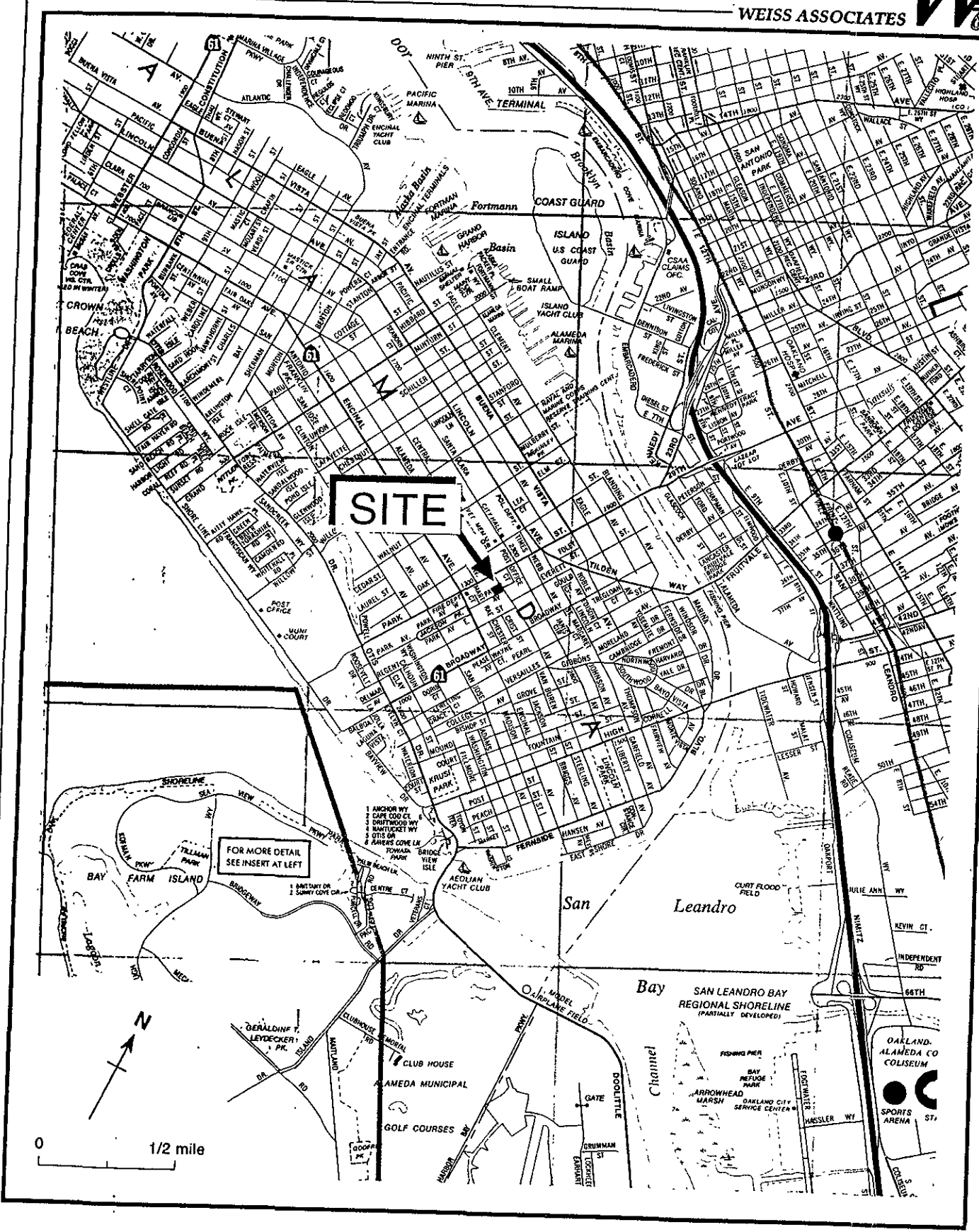


Figure 1. Site Location Map - Former Chevron Service Station #9-0100, 2428 Central Avenue, Alameda, California

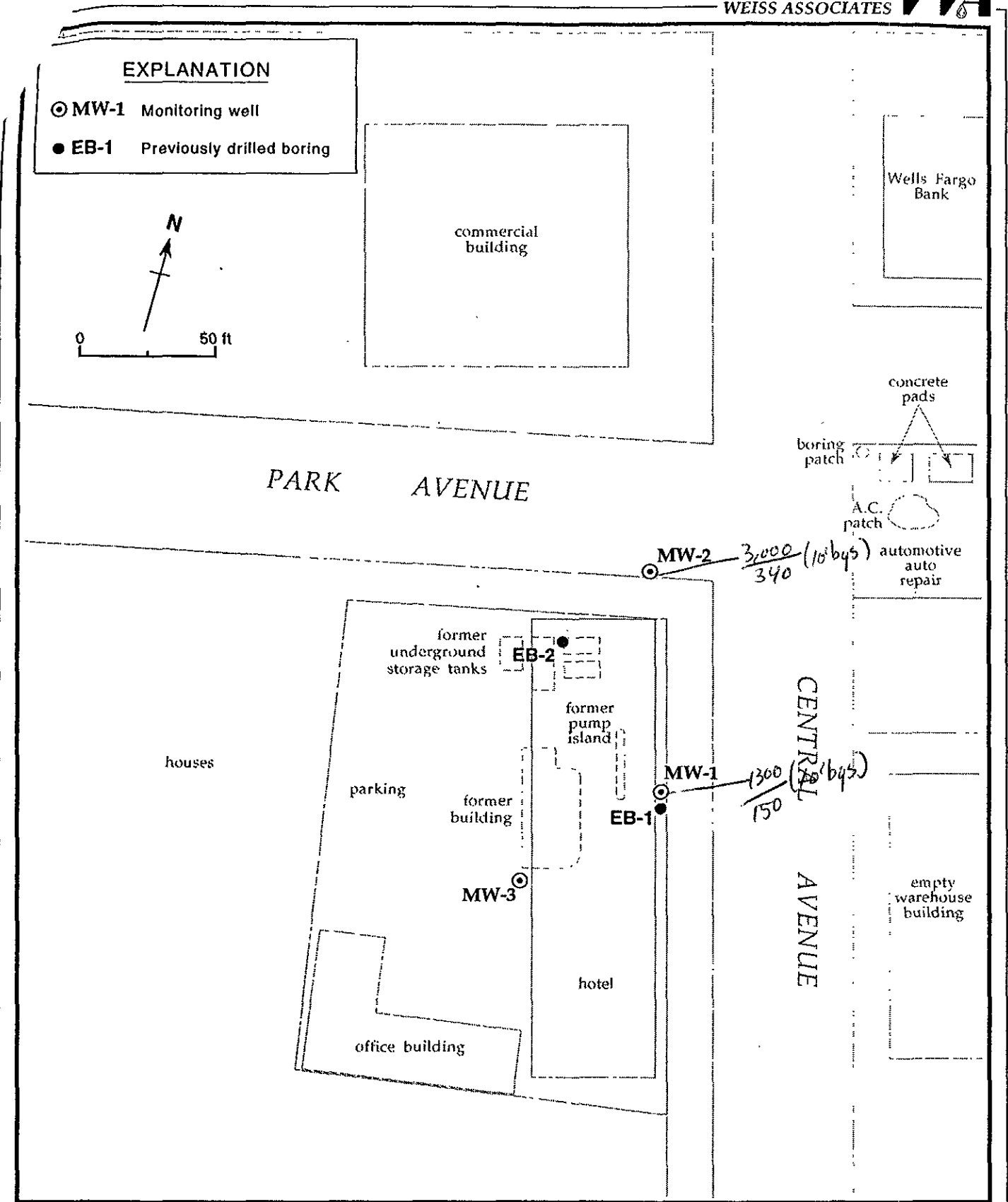


Figure 2. Monitoring Well Locations - Former Chevron Service Station # 9-0100, 2428 Central Avenue, Alameda, California

*TPHg (ppm in soil)*  
*TPHd*





# Geotech ENVIRONMENTAL LABORATORIES

Table 1

Mobile & In-House Laboratories Certified by State of California  
Phone: (408) 955-9988 / FAX: (408) 955-9538

**ANALYTICAL REPORT**

Page: 1 of 1

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*****
Client: Gen-Tech Environmental           Date Sampled: 06/16/93
       1936 Camden Ave., Ste.1         Date Received: 06/16/93
       San Jose, CA 95124              Date Analyzed: 06/21/93
Attn: Eric Lissol                       Batch:SD-210 Matrix: Soil
                                         Conc. Unit mg/kg (ppm)
  
```

Project: Steve Stahl (Proj.#9361)

```

*****
"ND" means "not detected" at indicated detection limit.
B:benzene, T:toluene, E:ethylbenzene & X:total xylenes.
Samples recieved chilled with a chain of custody record.
  
```

SAMPLE I.D.	8015M/TPH	8015M/TPH	8020			
	Gasoline	Diesel	B /	T /	E /	X
DETECTION LIMIT	0.05 ppm	0.05 ppm	0.0005 ppm			
EB-1@5'	ND	ND	ND /	ND /	ND /	ND
EB-1@10'	ND	211.94	7.9414/	7.9068/	8.3755/	7.7143
EB-2@5'	ND	ND	ND /	ND /	ND /	ND
EB-2@10'	ND	ND	ND /	ND /	ND /	ND

Reviewed and approved by George Tsai, June 22, 1993  
George Tsai, Laboratory Director

TABLE 2. Analytic Results for Soil - Former Chevron Service Station #9-0100, 2428 Central Avenue, Alameda, California

Soil Boring (Well ID)	Sample Depth (ft)	Date Sampled	Static Ground Water Depth (ft)	parts per million (mg/kg)					
				TPH-G <----->	TPH-D	B	T	E	X
BH-A (MW-1)	5.0 10.0	02-24-94	9.8	<1 1300	<1 150 <sup>a</sup>	<0.005 <2.5	<0.005 9.1	<0.005 13	<0.005 19
BH-B (MW-2)	5.0 10.0	02-25-94	7.3	<1 3000	<1 340 <sup>a</sup>	<0.005 8	<0.005 5	<0.005 56	<0.005 70
BH-C (MW-3)	5.0 10.0	02-25-94	7.8	<1 <1	<1 <1	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005

Abbreviations:

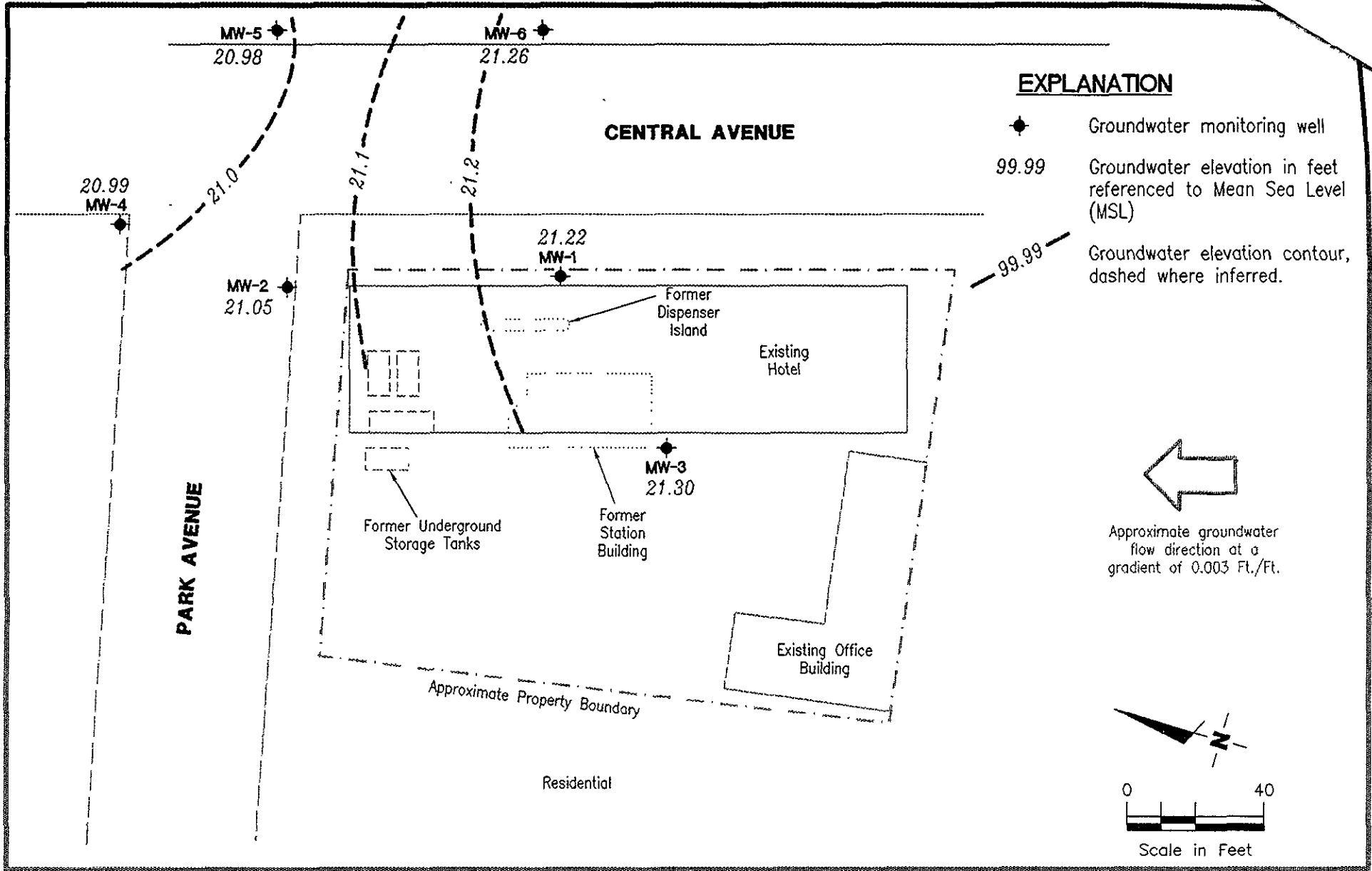
TPH-G = Total Petroleum Hydrocarbons as Gasoline by Modified EPA Method 8015  
 TPH-D = Total Petroleum Hydrocarbons as Diesel by Modified EPA Method 8015  
 B = Benzene by EPA Method 8020  
 E = Ethyl benzene by EPA Method 8020  
 T = Toluene by EPA Method 8020  
 X = Xylenes by EPA Method 8020  
 <n = Not detected at detection limits of n ppm

Analytical Laboratory:

Superior Precision Analytic, Inc of San Francisco, California

Notes:

a = Does not match typical Diesel pattern



**Gettler - Ryan Inc.**

6747 Sierra Ct., Suite J (510) 551-7555  
Dublin, CA 94568

**POTENTIOMETRIC MAP**

Former Chevron Service Station No. 9-0100  
2428 Central Avenue  
Alameda, California

FIGURE 3

2

JOB NUMBER  
5178.02

REVIEWED BY  
*[Signature]*

DATE  
August 30, 1996

REVISED DATE

Table 03 Soil Analytical Results - Chevron Service Station #9-0100, 2428 Central Avenue, Alameda, California.

Sample ID	Depth (ft)	Date	Analytic Method	BTEX					MTBE	Organic Carbon %	Bulk Density		Porosity %	Moisture %
				TPHg	B	T	E	X			Dry gm/cc	Wet gm/cc		
<u>Soil Samples</u>														
MW4-4	4	08/26/96	API RP-40	—	—	—	—	—	—	0.073	1.69	1.76	37.0	4.0
MW4-6	6	08/26/96	8015/8020	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	—	—	—	—	—
MW4-16	16	08/26/96	API RP-40	—	—	—	—	—	—	0.030	1.70	2.01	37.0	—
MW5-6	6	08/26/96	8015/8020	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	—	—	—	—	—
MW6-6	6	08/26/96	8015/8020	<1.0	<0.0050	<0.0050	<0.0050	<0.050	<0.025	—	—	—	—	—
SP-(A-D)COMP	—	08/26/96	8015/8020	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	—	—	—	—	—	—

EXPLANATION:

TPHg - Total Petroleum Hydrocarbons as gasoline  
 B - Benzene  
 T - Toluene  
 E - Ethylbenzene  
 X - Xylenes  
 MTBE - Methyl t-Butyl Ether  
 ppm - Parts per million  
 gm/cc - Grams per cubic centimeter  
 — - Not analyzed/not applicable

ANALYTICAL METHODS:

8015 - EPA Method 8015Mod for TPHg.  
 8020 - EPA Method 8020 for BTEX and MTBE  
 API RP-40 - API Recommended Practice for Core-Analysis Procedure, 1960.

ANALYTICAL LABORATORY:

Sequoia Analytical of Redwood City, California.

**Table 4 - Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-0100, 2428 Central Avenue, Alameda, California**

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	TPH(G) <----->	B	T	E	X	MTBE
MW-1/ 29.23	3/10/94 <sup>1,2</sup>	6.79	22.44	0	7,400	120	120	33	72	---
	6/21/94	7.74	21.49	0	5,300	140	60	21	43	---
	9/26/94	8.94	20.29	0	9,500	<250 <sup>5</sup>	<250 <sup>5</sup>	<250 <sup>5</sup>	<250 <sup>5</sup>	---
	12/16/94	6.57	22.66	0	4,700	<0.5	46	15	48	---
	3/22/95	5.16	24.07	0	8,800	55	14	11	<10	---
	6/13/95	5.84	23.39	0	2,100	130	29	9.5	15	---
	9/15/95	7.65	21.58	0	8,100	110	26	6.0	13	---
	3/8/96	5.36	23.87	0	5,600	250	<5.0	<5.0	<5.0	60
	9/3/96	8.03	21.22	0	7,600	270	5.6	3.4	4.9	120
	3/5/97	5.33	23.92	0	5,000	130	5.2	3.7	5.7	31
	9/30/97	8.86	20.39	0	3,500	53	2.4	2.8	6.4	26
	3/31/98	4.38	24.87	0	2,200	210	<5.0	<5.0	14	60
	◆ 5/21/98	---	---	---	---	---	---	---	---	---
	9/16/98 <sup>6</sup>	7.17	22.08	0	1,200 <sup>7</sup>	94	<0.50	<0.50	<0.50	<2.5
9/26/98	7.30	21.95	0	1,400	75	<1.0	1.1	2.2	<5.0	
MW-2/ 29.18	3/10/94 <sup>2,3</sup>	6.94	22.24	0	6,400	<5	64	58	17	---
	6/21/94	7.89	21.29	0	1,800	23	12	6.9	32	---
	9/26/94	8.98	20.20	0	8,400	<100 <sup>5</sup>	<100 <sup>5</sup>	<100 <sup>5</sup>	<100 <sup>5</sup>	---
	12/16/94	6.65	22.53	0	2,300	<0.5	29	8.9	33	---
	3/22/95	5.15	24.03	0	1,500	0.6	4.5	<0.5	2.5	---
	6/13/95	6.06	23.12	0	880	<0.5	<0.5	2.2	10	---
	9/15/95	7.72	21.46	0	2,700	<0.5	17	4.8	13	---
	3/8/96	5.38	23.80	0	1,300	42	2.0	0.7	2.2	10
	9/3/96	8.14	21.05	0	2,700	64	4.6	1.6	4.6	35
	3/5/97	5.43	23.76	0	1,200	25	3.0	<0.5	3.6	<5.0
	9/30/97	9.01	20.18	0	2,400	12	1.0	1.4	5.8	6.9
	3/31/98	4.66	24.53	0	490	12	1.2	<1.0	1.2	<5.0
	◆ 5/21/98	---	---	---	---	---	---	---	---	---
	9/16/98 <sup>6</sup>	7.35	21.84	0	820	44	9.4	1.8	5.1	23
9/26/98	8.20	20.99	0	610 <sup>8</sup>	18	0.58	<0.50	1.1	10	
MW-3/ 30.09	3/10/94 <sup>2,4</sup>	7.30	22.79	0	<50	<0.5	<0.5	<0.5	<0.5	---
	6/21/94	8.53	21.56	0	<50	<0.5	<0.5	<0.5	<0.5	---
	9/26/94	9.80	20.29	0	<50	<0.5	<0.5	<0.5	<0.5	---
	12/16/94	7.11	22.98	0	<50	<0.5	<0.5	<0.5	<0.5	---
	3/22/95	5.54	24.55	0	<50	<0.5	<0.5	<0.5	<0.5	---
	6/13/95	6.48	23.61	0	<50	<0.5	<0.5	<0.5	<0.5	---
	9/15/95	8.40	21.69	0	<50	<0.5	<0.5	<0.5	<0.5	---
	3/8/96	5.69	24.40	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/3/96	8.80	21.30	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/5/97	5.89	24.21	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0

Cont. Table 4 Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-0100, 2428 Central Avenue, Alameda, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	TPH(G) <-----	-----ppb----->				
						B	T	E	X	MTBE
MW-3 (cont)	9/30/97	9.68	20.42	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/31/98	4.87	25.23	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	9/16/98	8.13	21.97	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
MW-4 29.31**	9/3/96	8.32	20.99	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/5/97	5.80	23.51	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/30/97	9.18	20.13	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/31/98	4.87	24.44	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	9/16/98	7.45	21.86	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
MW-5 28.88**	9/3/96	7.90	20.98	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/5/97	5.70	23.18	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/30/97	8.73	20.15	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/31/98	4.89	23.99	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	9/16/98	6.72	22.16	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
MW-6 29.24**	9/3/96	7.98	21.26	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/5/97	5.61	23.63	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/30/97	8.88	20.36	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/31/98	5.07	24.17	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	9/16/98	7.05	22.19	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
Trip Blank TB-LB	3/10/94	---	---	---	<50	<0.5	0.7	<0.5	<0.5	---
	6/21/94	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
	9/26/94	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
	12/16/94	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
	3/22/95	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
	6/13/95	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
	9/15/95	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
	3/8/96	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
	9/3/96	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/5/97	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/30/97	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/31/98	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	9/16/98	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	9/26/98	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	<2.5

Table #1 Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-0100, 2428 Central Avenue, Alameda, California (continued)

EXPLANATION:

TOC = Top of casing elevation  
(ft) = feet  
DTW = Depth to water  
GWE = Groundwater elevation  
msl = Measurements referenced relative to mean sea level  
TPH(G) = Total Purgeable Petroleum Hydrocarbons as Gasoline  
TPH(D) = Total Petroleum Hydrocarbons as Diesel  
B = Benzene  
T = Toluene  
E = Ethylbenzene  
X = Xylenes  
MTBE = Methyl tertiary butyl ether  
EDB = Ethylene Dibromide  
ppb = Parts per billion  
--- = Not analyzed/Not applicable  
◆ = ORC installed in well.

ANALYTICAL METHODS:

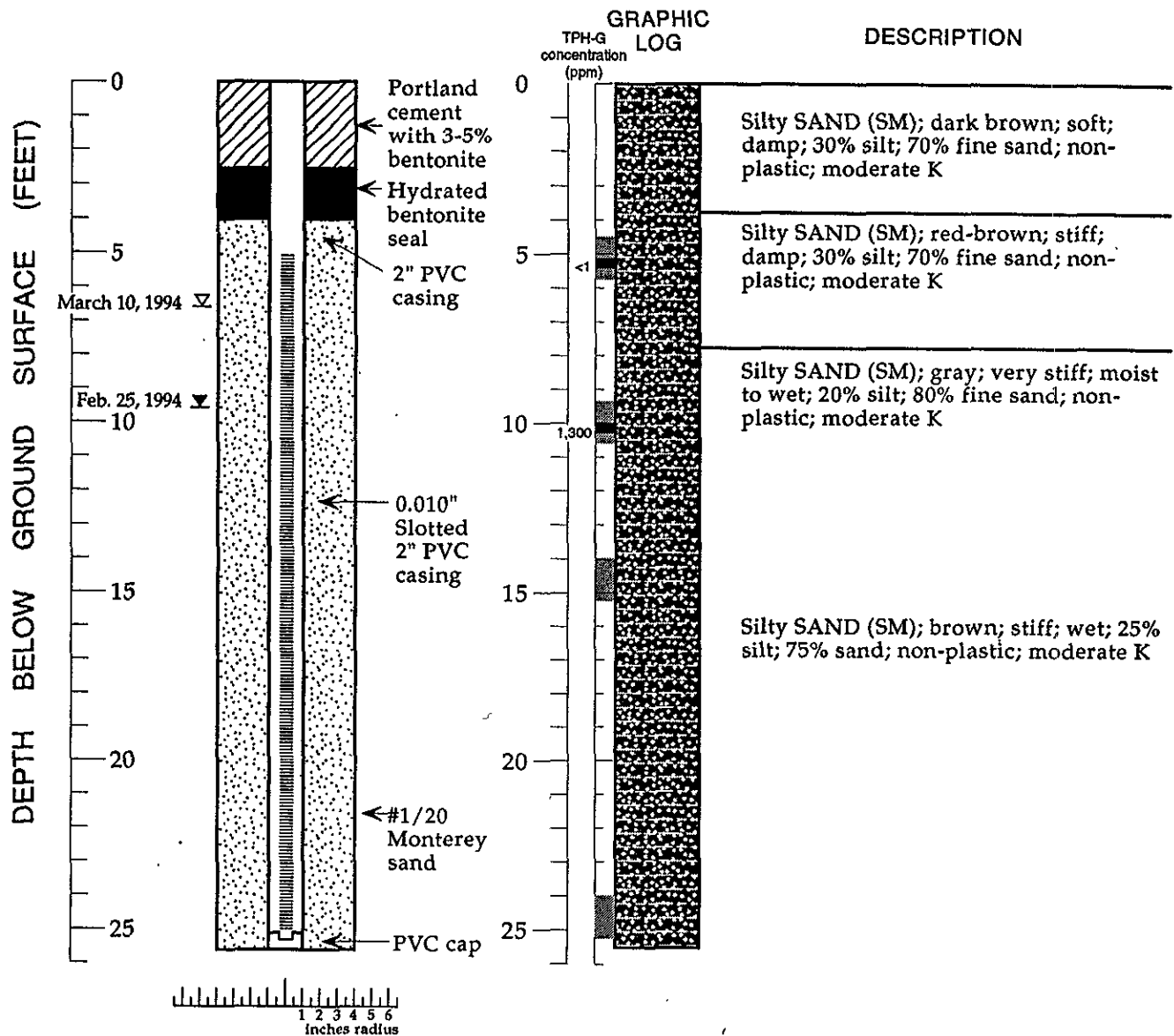
EPA Method 8015/5030 for TPH(G)  
EPA Method 8020 for BTEX & MTBE

NOTES:

Water level elevation data and laboratory analytic results prior to March 22, 1995, were compiled from Quarterly Monitoring Reports prepared for Chevron by Sierra Environmental Services.

- \* Product thickness was measured on and after June 21, 1994 with a MMC Flexi-Dip interface probe.
- \*\* Wells MW-1 through MW-6 were surveyed on September 17, 1996, by Virgil Chavez of Vallejo, California (PLS #6323).
- <sup>1</sup> TPH(D) was also analyzed and detected at 840 ppb. However, chromatogram does not match typical diesel pattern.
- <sup>2</sup> Organic lead and EDB were also analyzed but not detected at detection limits of 4 and 0.02 ppb, respectively.
- <sup>3</sup> TPH(D) was also analyzed and detected at 920 ppb. However, chromatogram does not match typical diesel pattern.
- <sup>4</sup> TPH(D) was also analyzed but not detected at detection limits of 50 ppb.
- <sup>5</sup> Detection limits raised due to the dilution required by a high amount of foaming in the sample.
- <sup>6</sup> No purge sampling.
- <sup>7</sup> Laboratory report indicates unidentified hydrocarbons C6-C12.
- <sup>8</sup> Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.

# WELL MW-1



## EXPLANATION

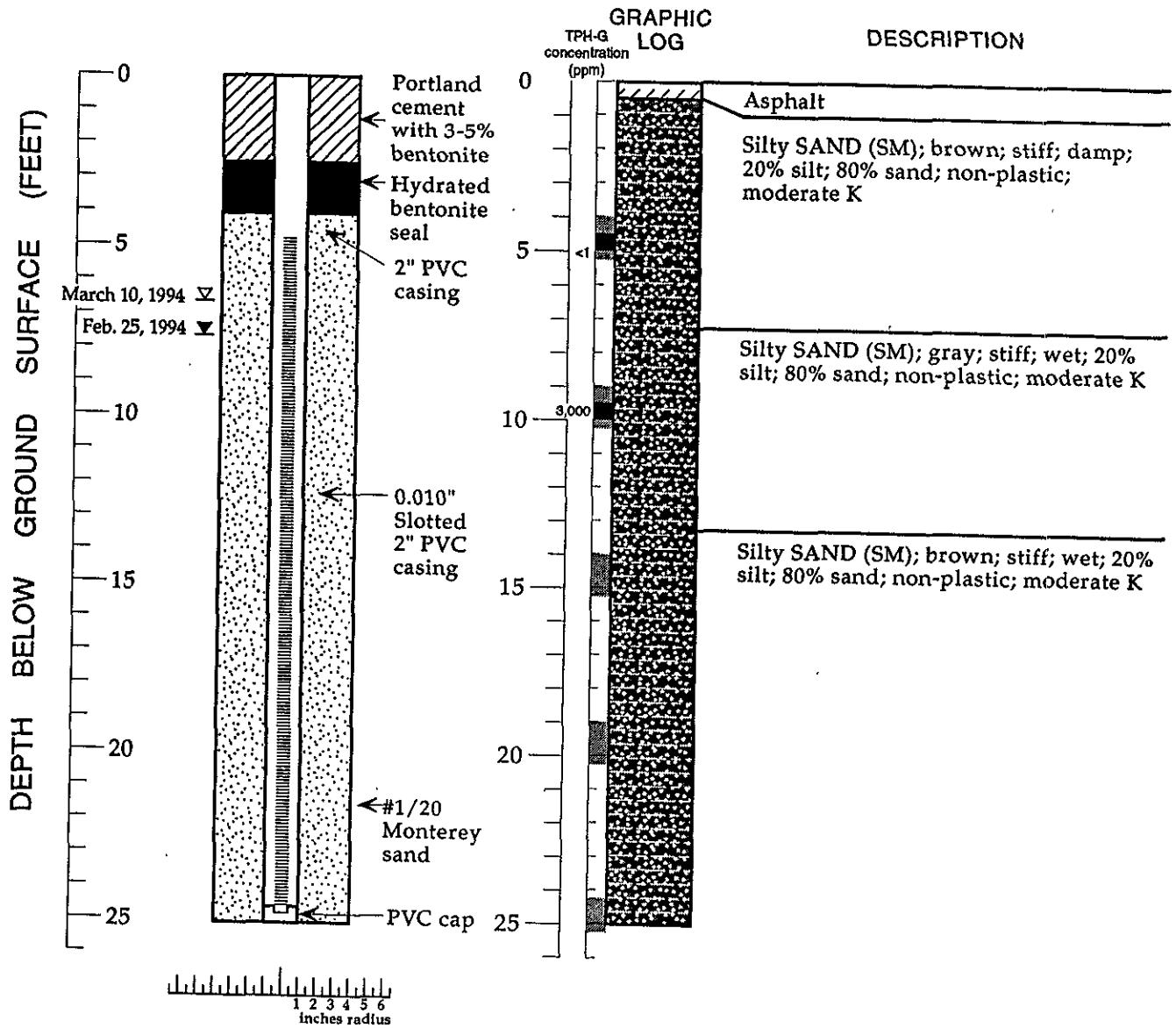
- ▼ Water level during drilling (date)
- ▽ Water level (date)
- ..... Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Joyce Adams  
 Supervisor: James W. Carmody; CEG 1576  
 Drilling Company: Soils Exploration Services, Vacaville, CA  
 License Number: #C57-582696  
 Driller: Tim Dunne  
 Drilling Method: Hollow-stem auger  
 Date Drilled: February 24, 1994  
 Well Head Completion: 2" locking well-plug, traffic-rated vault  
 Type of Sampler: Split barrel (2" ID)  
 Ground Surface Elevation: 29.54 feet above mean sea level  
 TPH-G: Total petroleum hydrocarbon as gasoline in soil by modified EPA Method 8015

Boring Log and Well Construction Details - Well MW-1 - Former Chevron Service Station #9-0100, 2428 Central Street, Alameda, California



# WELL MW-2



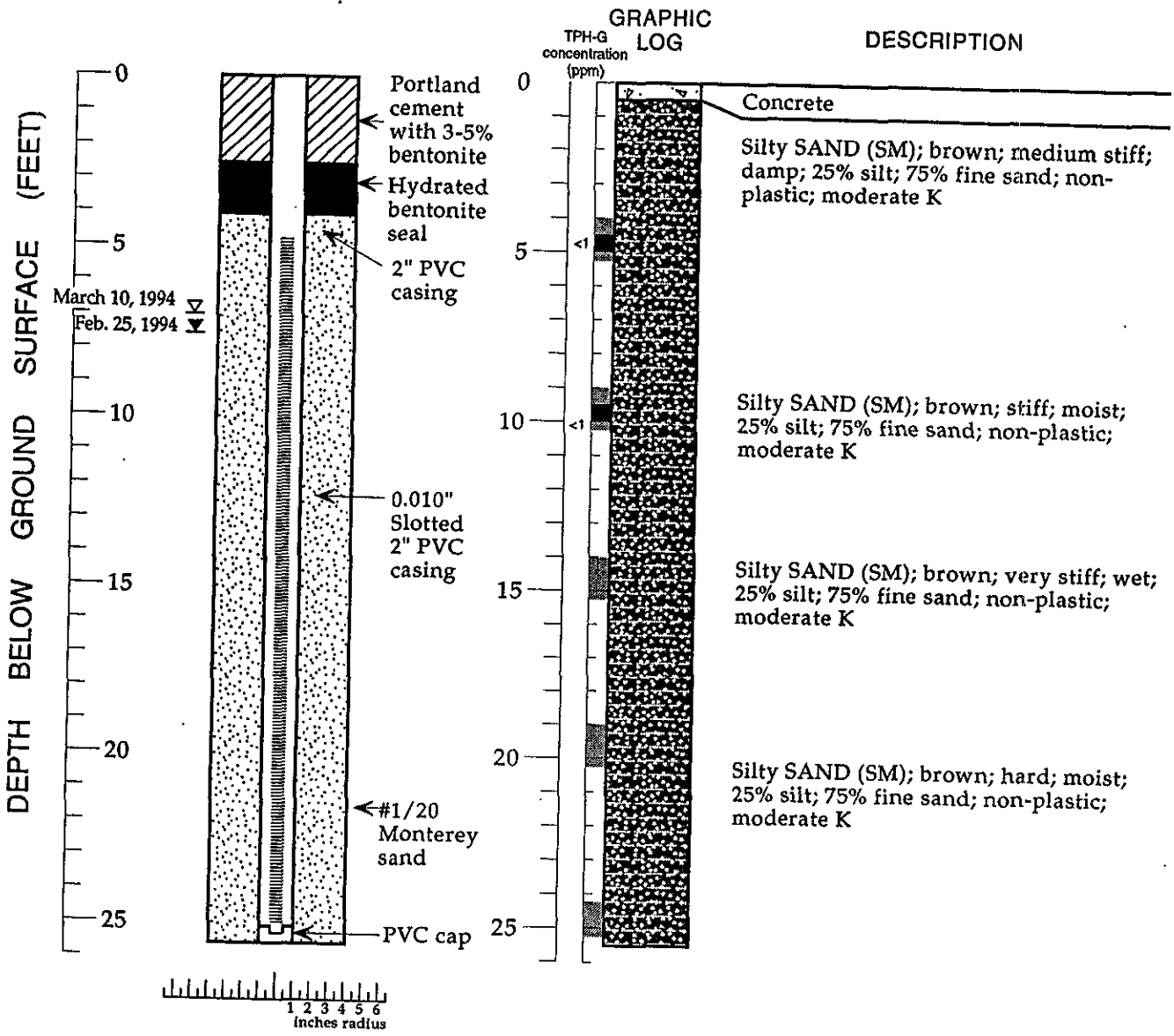
## EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- ..... Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- ▨ Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Joyce Adams  
 Supervisor: James W. Carmody; CEG 1576  
 Drilling Company: Soils Exploration Services, Vacaville, CA  
 License Number: C57-582696  
 Driller: Tim Dunne  
 Drilling Method: Hollow-stem auger  
 Date Drilled: February 25, 1994  
 Well Head Completion: 2" locking well-plug, traffic-rated vault  
 Type of Sampler: Split barrel (2" ID)  
 Ground Surface Elevation: 29.44 feet above mean sea level  
 TPH-G: Total petroleum hydrocarbon as gasoline in soil by modified EPA Method 8015

Boring Log and Well Construction Details - Well MW-2 - Former Chevron Service Station #9-0100, 2428 Central Street, Alameda, California

# WELL MW-3



## EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- ..... Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Joyce Adams  
 Supervisor: James W. Carmody; CEG 1576  
 Drilling Company: Soils Exploration Services, Vacaville, CA  
 License Number: #C57-582696  
 Driller: Tim Dunne  
 Drilling Method: Hollow-stem auger  
 Date Drilled: February 25, 1994  
 Well Head Completion: 2" locking well-plug, traffic-rated vault  
 Type of Sampler: Split barrel (2" ID)  
 Ground Surface Elevation: 30.36 feet above mean sea level  
 TPH-G: Total petroleum hydrocarbon as gasoline in soil by modified EPA Method 8015

Boring Log and Well Construction Details - Well MW-3 - Former Chevron Service Station #9-0100, 2428 Central Street, Alameda, California

Gettler-Ryan, Inc.

Log of Boring MW-4

PROJECT: Former Chevron SS# 9-0100

LOCATION: 2428 Central Avenue, Alameda, CA

G-R PROJECT NO.: 5178.02

SURFACE ELEVATION: 29.31 feet MSL

DATE STARTED: 08/26/96

WL (ft. bgs): 8.0 DATE: 08/26/96 TIME: 10:10

DATE FINISHED: 08/26/96

WL (ft. bgs): 8.0 DATE: 08/26/96 TIME: 12:00

DRILLING METHOD: 8 in. Hollow Stem Auger

TOTAL DEPTH: 21.5 Feet

DRILLING COMPANY: Bay Area Exploration, Inc.

GEOLOGIST: B. Sieminski

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
							PAVEMENT - concrete over baserock.	
5	42	16	MW4-4			SP	SAND (SP) - yellowish brown (10YR 5/6), damp, medium dense; 100% fine sand.	
			MW4-6				Becomes moist; with up to 5% silt.	
	3.5	26	MW4-7.5				▽▽ Becomes saturated.	
10		26						
15	1.1	34	MW4-16				Becomes dense; color change to light olive brown (2.5Y 5/6); flowing sand.	
20	0	38	MW4-21					
25							(* = converted to equivalent standard penetration blows/ft.)	
30								
35								

Gettler-Ryan, Inc.

Log of Boring MW-5

PROJECT: <i>Former Chevron SS# 9-0100</i>	LOCATION: <i>2428 Central Avenue, Alameda, CA</i>
G-R PROJECT NO.: <i>5178.02</i>	SURFACE ELEVATION: <i>28.88 feet MSL</i>
DATE STARTED: <i>08/26/96</i>	WL (ft. bgs): <i>7.5</i> DATE: <i>08/26/96</i> TIME: <i>15:10</i>
DATE FINISHED: <i>08/26/96</i>	WL (ft. bgs): <i>7.5</i> DATE: <i>08/26/96</i> TIME: <i>16:30</i>
DRILLING METHOD: <i>8 in. Hollow Stem Auger</i>	TOTAL DEPTH: <i>21.5 Feet</i>
DRILLING COMPANY: <i>Bay Area Exploration, Inc.</i>	GEOLOGIST: <i>B. Sieminski</i>

DEPTH feet	PTD (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
0							PAVEMENT - concrete over baserock.	<p>The well diagram shows a vertical cross-section of the boring. At the top is a cap. Below it is a 2-inch machine slotted PVC (0.01 inch) with a filter sock. The casing is labeled '2" blank pvc Sch 40'. The soil layers are shown with different patterns: concrete over baserock (stippled), sand (SP) (dotted), and native sand (horizontal lines). A bentonite seal is shown between the casing and the soil. The diagram also indicates the water level (WL) at 7.5 feet below ground surface (bgs).</p>
5	25	13	MW5-5.5 MW5-6			SP	SAND (SP) - yellowish brown (10YR 5/6), damp, medium dense; 95% fine sand, 5% silt.  Becomes moist.	
10	111	25	MW5-7				∇∇∇ Becomes saturated.	
15	8.3	26	MW5-11				Color change to light olive brown (2.5Y 5/4); 100% fine to medium sand; flowing sand.	
20	9.7	26	MW5-16				Becomes dense.	
25	0	36	MW5-21				(* = converted to equivalent standard penetration blows/ft.)	

Gettler-Ryan, Inc.

Log of Boring MW-6

PROJECT: Former Chevron SS# 9-0100

LOCATION: 2428 Central Avenue, Alameda, CA

G-R PROJECT NO.: 5178.02

SURFACE ELEVATION: 29.24 feet MSL

DATE STARTED: 08/26/96

WL (ft. bgs): 7.9 DATE: 08/26/96 TIME: 12:30

DATE FINISHED: 08/26/96

WL (ft. bgs): 7.9 DATE: 08/26/96 TIME: 14:55

DRILLING METHOD: 8 in. Hollow Stem Auger

TOTAL DEPTH: 21.5 Feet

DRILLING COMPANY: Bay Area Exploration, Inc.

GEOLOGIST: B. Sieminski

DEPTH feet	PTD (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
							PAVEMENT - concrete over baserock.	
5	45	10	MW6-5,5			SP	SAND (SP) - yellowish brown (10YR 5/6), damp, medium dense; 95% fine sand, 5% silt.	<p>The well diagram shows a vertical cross-section of the boring. At the top is a cap. Below it is a 2-inch blank PVC section (Sch. 40). Further down is a 2-inch machine slotted PVC section (0.01 inch) with a filter sock. The soil layers are labeled as #2/12 sand and native bentonite. A cement layer is also indicated.</p>
	48	20	MW6-6 MW6-7				Becomes moist.	
							▼▼ Becomes saturated.	
10	35	36	MW6-11				Becomes dense.	
15	25	38	MW6-16				Color changes to light olive brown (2.5Y 5/4); 100% fine to medium sand; flowing sand.	
20	0	34	MW6-21					
25							(* = converted to equivalent standard penetration blows/ft.)	
30								
35								