CAMBRIA

August 14, 2003

Scott Seery
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Well Survey and Site Conceptual Model**
Shell-branded Service Station
29 Wildwood Avenue
Piedmont, California
Incident #98995822
Cambria Project# 245-0687-007

Dear Mr. Seery:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell), Cambria Environmental Technology, Inc. (Cambria) is submitting this *Well Survey and Site Conceptual Model* as requested in the Alameda County Health Care Services Agency (ACHCSA) letter dated May 15, 2003. The well survey was conducted to identify the presence of all wells and potential receptors within ½-mile of the site.

SITE BACKGROUND

This Shell-branded station is located at the intersection of Wildwood and Grand Avenue, in Piedmont, California (Figure 1). Three underground storage tanks (USTs) and one 550-gallon waste oil UST are located at the site. Five groundwater monitoring wells (MW-1, MW-2, MW-3, MW-4, and MW-5) have been installed at the site. Three groundwater monitoring wells are located on site, and two downgradient wells are located in Grand Avenue (Figure 2). The site lies at the confluence of two topographic valleys. One monitoring well (E-1) was installed and later abandoned due to flowing artesian groundwater conditions.

Soil Lithology: The materials underlying the site consist primarily of low to moderate estimated permeability sandy silts, clayey silts, silty clays, and clays interbedded with higher permeability layers or lenses of silty sands and silty gravels to the total explored depth of 35 feet below grade (fbg).

Cambria Environmental Technology, Inc.

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Shell Oil Products US

August 14, 2003

Alameda County

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Environmental Health

Scott Seery
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: **Shell-branded Service Station**
29 Wildwood Avenue
Piedmont, California

Dear Mr. Seery:

Attached for your review and comment is a copy of th[redacted]odel for the above referenced site. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

As always, please feel free to contact me directly at (559) 645-9306 with any questions or concerns.

Sincerely,

Shell Oil Products US

Karen Petryna

Karen Petryna
Sr. Environmental Engineer

P.O. Box 7869 Burbank, CA 91510-7869 Phone (559) 645-9306 Facsimile (559) 645-5643

Groundwater Depth, Elevation and Flow Direction: Monitoring wells MW-1 through MW-5 have well screens that begin from 3.5 to 6.5 fbg and end from 9.5 to 16.5 fbg. Former well E-4 was screened from 23 to 35 fbg. Historical depth to water ranges from 2.1 fbg to 8.8 fbg and current depth to water in the third quarter of 2003 ranges from 3.15 fbg to 4.57 fbg. The groundwater elevation in wells MW-1 through MW-5 has ranged from 24.26 feet above sea level (msl) to 35.8 ft msl. Groundwater in well E-4 was reported to be under artesian conditions, with the water level rising above the top of the well casing. The shallow groundwater flow direction is generally southwest, with a gradient of approximately 0.02 to 0.04 ft/ft. A rose diagram is included on Figure 2.

WELL SURVEY

Cambria reviewed California Department of Water Resources (DWR) records to identify potential receptor wells within a ½-mile radius of the site. Cambria obtained a total of 73 well driller's reports for wells within the four township and range sections that encompass the survey area. From these records, Cambria located one water-producing well within a ½-mile radius of the site. Locations of wells identified in the well survey are shown on Figure 1, and well details are summarized in Table 1. Monitoring wells in the site vicinity are also indicated on the map even though they are not water producing wells and thus are not considered receptors. Given the confidential nature of the DWR well information, copies of the reviewed records are not included in this report. The DWR records will be maintained in Cambria's files and are available for review upon request.

According to DWR records, the closest water producing well (#46) is a 300-foot deep domestic well approximately ½-mile northeast of the site. The address is approximately 500 feet in elevation per the topographic map. The Shell site is at approximately 40 feet in elevation. Cambria was unable to contact the owner to confirm whether the well is still in use. The DWR record indicated that the well was installed in 1977 and is sealed from the surface to 110 fbg.

DWR records also identified a cathodic protection well located approximately 2,400 feet north of the site. There are also two irrigation wells, two domestic wells and one well of unknown use just over ½-mile northeast of the site. In addition to those located on the subject site, DWR records identified eight monitoring wells within ½-mile.

Based on the information provided by DWR records, there are no potential receptor wells located within ½-mile downgradient of the site. Due to distance and location upgradient of the subject site, it is unlikely that any known water producing well would be impacted by hydrocarbons or oxygenates originating from at the site.

SITE CONCEPTUAL MODEL (SCM)

As requested, Cambria has prepared an SCM for the site, presented in Appendix A. Indexed in the SCM are:

1. Hydrocarbon Source
2. Site Characterization
3. Remediation Status
4. Well Survey and Sensitive Receptor Survey
5. Risk Assessment
6. Additional Recommended Data or Tasks

As noted in the SCM, the potential receptors in the site vicinity include Lake Merrit located approximately 4,000 feet south-southwest of the site. According to the San Francisco Regional Water Quality Control Board's June 1999 *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report,* the City of Piedmont does not have any plans to develop local groundwater resources for drinking water purposes, because of existing or potential saltwater intrusion, contamination, or poor or limited quantity.

Impact to any known water-producing wells is not likely, as discussed in the well survey above.

Potential pathways for contaminant migration in groundwater in the site vicinity include subsurface utilities and the natural valley of the former Wildwood creek. As reported in Cambria's January 30, 2003 *Conduit Study,* utility trenches in the site vicinity are deeper than the groundwater table and therefore likely to serve as preferential pathways for contaminant migration in groundwater. Cambria recommends no further investigation of subsurface utilities.

CONCLUSIONS AND RECOMMENDATIONS

There are no known water producing wells within ½-mile downgradient of the site and there are no known plans to develop local groundwater as a drinking water source.

Previous investigations have attempted to install additional monitoring wells downgradient of the site. However, utilities and limitations on street access prevented installation of additional wells.

Natural barriers (former creek channels, topography) limit horizontal and vertical chemical migration downgradient of the site.

The highest concentrations of hydrocarbons and methyl tertiary butyl ether (MTBE) detected in groundwater in the third quarter of 2003 are compared with the California Regional Water Quality Control Board's Environmental Screening Levels (ESL) below.

Analyte	Well ID	Highest Groundwater Concentration 3q03 (micrograms per liter)	Environmental Screening Level (micrograms per liter)
Benzene	MW-3	20	46
Ethylbenzene	MW-2	1.4	290
Toluene	MW-2	59	130
Xylenes	MW-2	9.8	13
MTBE	MW-3	360	1800
TPHg	MW-3	1,000	500

Only total petroleum hydrocarbon as gasoline (TPHg) exceeds the ESL concentrations. Based on these concentrations and the investigations conducted to date, we believe that the current SCM is unlikely to change with additional investigation and should be considered validated. Concentrations of all constituents of concern are declining with time, indicating that no further release has occurred and that national attenuation processes are remediating the constituents detected in groundwater.

CLOSING

We appreciate the opportunity to work with you on this project. Please contact Matt Derby at mderby@cambria-env.com or (510) 420-3332 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc

Melody Munz
Project Engineer

Matthew W. Derby, P.E.
Senior Project Engineer

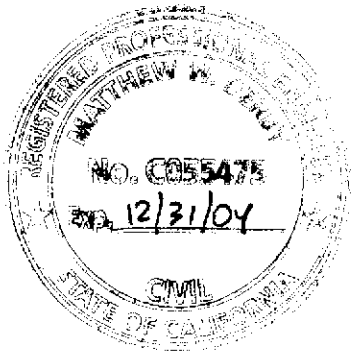

Figure: 1 - Vicinity Map/Well Survey

Table: 1 - Department of Water Resources Well Survey Results

Attachments: A - Site Conceptual Model (with attachments)

cc: Karen Petryna, Shell Oil Products US, P.O. Box 7869, Burbank, CA 91510-7869

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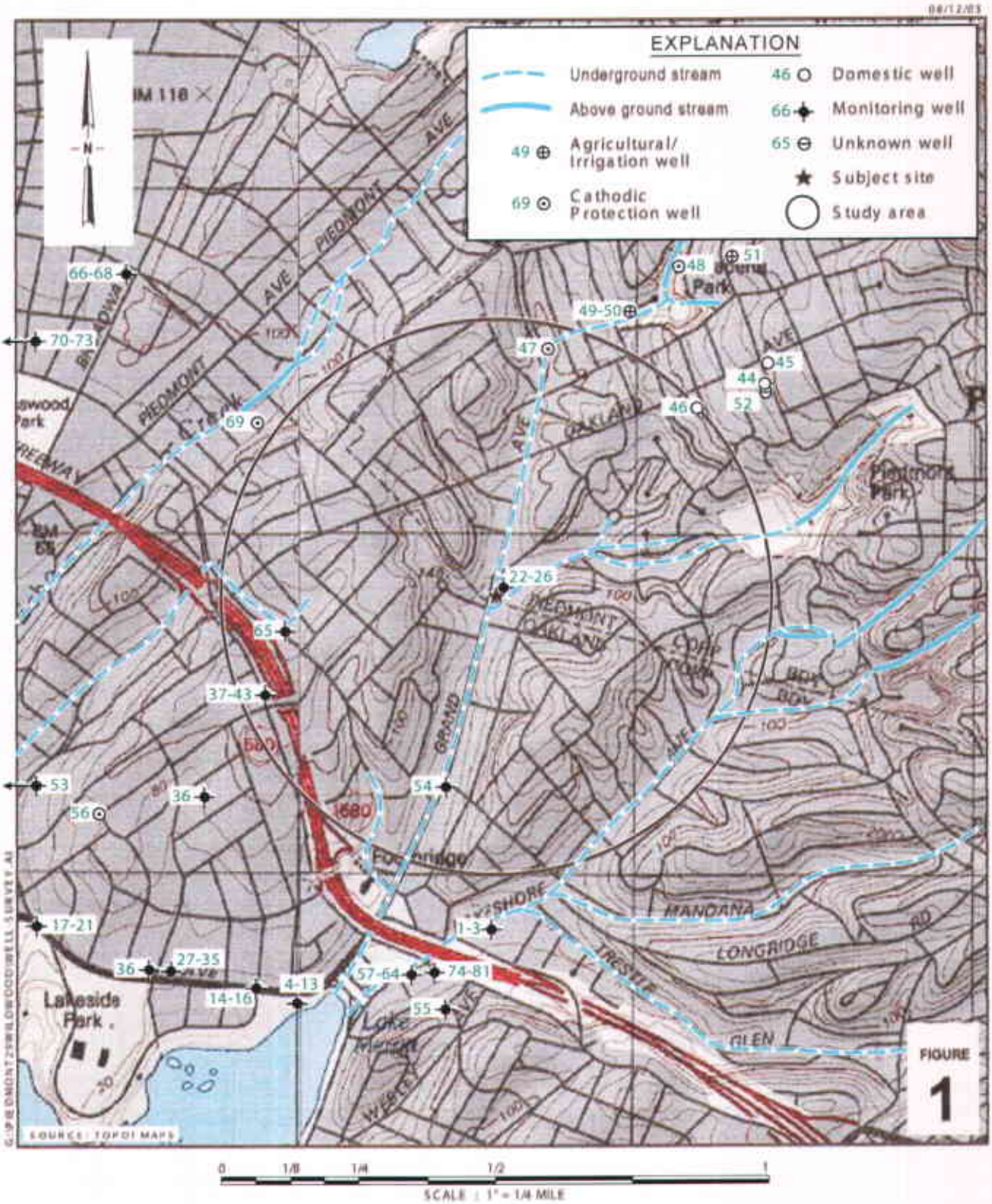


Shell-branded Service Station
29 Wildwood Avenue
Piedmont, California
Incident #98995822

CAMBRIA

Vicinity Map/ Area Well Survey

1/2 Mile Radius

Table 1. Department of Well Resources Well Survey Results

Shell-branded Service Station, 29 Wildwood, Piedmont, California. Incident # 98995822

Map ID	Well ID	Owner Well ID	Install Date	Owner	Well Location	Use	Depth (fbg)	Screened Interval (fbg)	Sealed Interval (fbg)	Well Status	Miles From Site
1	1S4W-25R3	U-1	9/24/90	Unocal	3220 Lakeshore Ave.	MON	20	5-20	0-4	UNK	0.60
2	1S4W-25R2	U-2	9/24/90	Unocal	3220 Lakeshore Ave.	MON	20	5-20	0-4	UNK	0.60
3	1S4W-25R4	U-3	9/24/90	Unocal	3220 Lakeshore Ave.	MON	20	5-20	0-4	UNK	0.60
4	1S4W-25Q1	MW-8F	3/16/89	Texaco	500 Grand Ave.	MON	20	9-15	0-8	UNK	0.83
5	1S4W-25Q2	MW-8G	3/16/89	Texaco	500 Grand Ave.	MON	16.5	5-15	0-4.5	UNK	0.83
6	1S4W-25Q3	MW-8H	1/8/90	Texaco	500 Grand Ave.	MON	16.5	5-15	0-4	UNK	0.83
7	1S4W-25Q4	MW-8I	1/9/90	Texaco	500 Grand Ave.	MON	16.5	5-15	0-4	UNK	0.83
8	1S4W-25Q5	MW-8J	1/9/90	Texaco	500 Grand Ave.	MON	16.5	5-15	0-4	UNK	0.83
9	1S4W-25Q7	MW-8E	8/3/92	Texaco	500 Grand Ave.	MON	20	4.5-15	0-4	DEST	0.83
10	1S4W-25Q8	MW-8B	4/1/93	Texaco	500 Grand Ave.	MON	---	---	---	DEST	0.83
11	1S4W-25Q9	MW-8C	4/1/93	Texaco	500 Grand Ave.	MON	---	---	---	DEST	0.83
12	1S4W-25Q10	MW-8L	5/18/93	Texaco	500 Grand Ave.	MON	19.5	3-18	1.5-2.5	UNK	0.83
13	1S4W-25Q11	MW-8K	5/18/93	Texaco	500 Grand Ave.	MON	19.5	3-18	1.5-2.5	UNK	0.83
14	1S4W-25P13	C-1	12/14/92	Chevron	460 Grand Ave.	MON	20	5-15	0-4.5	UNK	0.84
15	1S4W-25P14	C-2	12/14/92	Chevron	460 Grand Ave.	MON	16.5	5-15	0-4.5	UNK	0.84
16	1S4W-25P15	C-3	12/14/92	Chevron	460 Grand Ave.	MON	15	5-15	0-4.5	UNK	0.84
17	1S4W-25M80	MW-2	---	Chevron	210 Grand Ave.	MON	---	---	---	DEST	1.04
18	1S4W-25M9	MW-6	6/29/90	Chevron	210 Grand Ave.	MON	12	5-10	0-5	UNK	1.04
19	1S4W-25M10	MW-7	6/29/90	Chevron	210 Grand Ave.	MON	12	5-10	0-5	UNK	1.04
20	1S4W-25M11	MW-8	6/29/90	Chevron	210 Grand Ave.	MON	14	5.5-8	0-5.5	UNK	1.04
21	1S4W-25M12	MW-9	6/29/90	Chevron	210 Grand Ave.	MON	12	5-10	0-4.5	UNK	1.04
22	1S4W-25A5	MW-1	7/6/89	Shell	29 Wildwood Ave	MON	20	6-15	0-5.5	UNK	0.00
23	1S4W-25A6	MW-2	7/6/89	Shell	29 Wildwood Ave	MON	20	6-12	0-5.5	UNK	0.00
24	1S4W-25A7	MW-3	7/6/89	Shell	29 Wildwood Ave	MON	20	3.5-10	0-3.5	UNK	0.00
25	1S4W-25A4	MW-4	1/23/90	Shell	29 Wildwood Ave	MON	20	4-16	3-4	UNK	0.00
26	1S4W-25A8	MW-5	1/23/90	Shell	29 Wildwood Ave	MON	16.5	5-16	3.5-4	UNK	0.00
27	1S4W-25P6	MW-6	3/6/90	Quick Stop Markets	363 Grand Ave.	MON	30	15-30	0-15	UNK	0.90

Table 1. Department of Well Resources Well Survey Results

Shell-branded Service Station, 29 Wildwood, Piedmont, California. Incident # 98995822

Map ID	Well ID	Owner Well ID	Install Date	Owner	Well Location	Use	Depth (fbg)	Screened Interval (fbg)	Sealed Interval (fbg)	Well Status	Miles From Site
28	1S4W-25P7	MW-7	3/7/90	Quick Stop Markets	363 Grand Ave.	MON	23.5	13.5-23.5	0-11.5	UNK	0.90
29	1S4W-25P8	MW-8	3/7/90	Quick Stop Markets	363 Grand Ave.	MON	31.5	18.5-28.5	0-16.5	UNK	0.90
30	1S4W-25P5	MW-5	3/5/90	Quick Stop Markets	363 Grand Ave.	MON	31.5	15-30	0-13	UNK	0.90
31	1S4W-25P4	MW-4	3/5/90	Quick Stop Markets	363 Grand Ave.	MON	31.5	15-30	0-13	UNK	0.90
32	1S4W-	MW-1	11/10/88	Quick Stop Markets	363 Grand Ave.	MON	27	27-30.5	0-13	UNK	0.90
33	1S4W-	MW-3	11/16/88	Quick Stop Markets	363 Grand Ave.	MON	36	24-34	0-15	UNK	0.90
34	1S4W-	MW-2	11/11/88	Quick Stop Markets	363 Grand Ave.	MON	35.5	15-35	0-15	UNK	0.90
35	1S4W-25P12	RW-1	8/14/90	Quick Stop Markets	363 Grand Ave.	MON	37	25-35	0-22	UNK	0.90
36	1S4W-25P9	S-1	1/7/91	Shell	350 Grand Ave.	MON	17	7-16	0-5	UNK	0.65
37	1S4W-24P1	S-A	4/14/86	Shell	230 MacArthur Blvd.	MON	13	3-13	1.5-2.0	UNK	0.45
38	1S4W-24P2	S-B	4/14/86	Shell	230 MacArthur Blvd.	MON	13	3-13	1.5-2.0	UNK	0.45
39	1S4W-24P3	S-C	4/14/86	Shell	230 MacArthur Blvd.	MON	13	3-13	1.5-2.0	UNK	0.45
40	1S4W-24P7	MW-4	1/9/90	Shell	230 MacArthur Blvd.	MON	25.5	15-25	0-14	UNK	0.45
41	1S4W-24P?	MW-1	7/11/88	Shell	230 MacArthur Blvd.	MON	31.5	10-30	0-8	UNK	0.45
42	1S4W-24P5	MW-2	7/11/88	Shell	230 MacArthur Blvd.	MON	28	10-28	0-6	UNK	0.45
43	1S4W-24P6	MW-3	7/12/88	Shell	230 MacArthur Blvd.	MON	28.5	11.5-28.5	0-10	UNK	0.45
44	1S3W-19P4		2/5/91	Paul Hertelendy	321 Hillside Ave.	DOM	157	77-157	0-21	UNK	0.60
45	1S3W-19P13		5/30/05	Abbott	304 Hillside Ave.	DOM	220	---	0-75	UNK	0.68
46	1S3W-19P2		1977	Traulsen	326 El Cerrito	DOM	300	---	0-110	UNK	0.50
47	1S3W-19M3		1/27/82	East Bay MUD	Lower Grand Ave & Holly Place	CAT	65	---	5-48	UNK	0.48
48	1S3W-19L?		7/17/74	PG & E	132 Dracena Ave	CAT	120	---	---	UNK	0.70
49	1S3W-19M2		8/29/77	City of Peidmont	Dracena Park	IRR	300	---	---	UNK	0.56
50	1S3W-19M3		10/1977	City of Peidmont	Dracena Park	IRR	300	---	---	UNK	0.56
51	1S3W-19M5	---	12/23/88	John B. Bates, Jr.	125 Hillside Ave.	IRR	100	40-100	0-20	UNK	0.75
52	1S3W-	1137	---	Ernest J. Sweetland	321 Hillside Ave.	UNK	119.5	39.5-119.5	---	UNK	0.60
53	1S4W-25M14	---	2/23/93	Wells Fargo Bank/Sehpard Trust	230 Bay Place	MON	20	5-20	0-4	UNK	1.00
54	1S4W-25H1	MW-1	1/25/91	Martini Company	3509 Grand Ave.	MON	40	10-40	0-8	UNK	0.35

Table 1. Department of Well Resources Well Survey Results

Shell-branded Service Station, 29 Wildwood, Piedmont, California. Incident # 98995822

Map ID	Well ID	Owner Well ID	Install Date	Owner	Well Location	Use	Depth (fbg)	Screened Interval (fbg)	Sealed Interval (fbg)	Well Status	Miles From Site
55	1S4W-25R1	MW-1	10/10/89	Ranger Pipeline	637 Beacon	MON	35.5	15-35.5	0-15	UNK	0.75
56	1S4W-25L1	---	8/7/74	PG & E	Adams and Lee Streets	Cathodic	120	---	0-95	UNK	0.81
57	1S4W-25R5	MW-A	---	Chevron	3026 Lakeshore Ave	MON	---	---	---	DEST	0.70
58	1S4W-25R6	MW-B	---	Chevron	3026 Lakeshore Ave	MON	---	---	---	DEST	0.70
59	1S4W-25R7	MW-C	---	Chevron	3026 Lakeshore Ave	MON	---	---	---	DEST	0.70
60	1S4W-25R8	MW-D	---	Chevron	3026 Lakeshore Ave	MON	---	---	---	DEST	0.70
61	1S4W-25R9	MW-G	---	Chevron	3026 Lakeshore Ave	MON	---	---	---	DEST	0.70
62	1S4W-25R10	MW-H	---	Chevron	3026 Lakeshore Ave	Extraction	---	---	---	DEST	0.70
63	1S4W-25R11	MW-I	---	Chevron	3026 Lakeshore Ave	Extraction	---	---	---	DEST	0.70
64	1S4W-25R12	MW-J	---	Chevron	3026 Lakeshore Ave	Extraction	---	---	---	DEST	0.70
65	1S4W-25B1	1	6/7/89	City of Oakland (Fire Station 10)	172 Santa Clara Ave	MON	25	10-25	0-9.5	UNK	0.38
66	1S4W-24L4	MW-1	10/17/89	Unocal	3943 Broadway	MON	20	5-20	0-4	UNK	0.90
67	1S4W-24L14	MW-10	2/6/92	Unocal	3943 Broadway	MON	---	---	---	UNK	0.90
68	1S4W-24L15	MW-11	2/6/92	Unocal	3943 Broadway	MON	---	---	---	UNK	0.90
69	1S4W-24Q1	---	6/26/74	PG & E	Moutell St, 75' w/o Robley Terrace	CAT	120	---	0-95	UNK	0.55
70	1S4W-24M1	MW-1	9/7/89	Unocal	411 W. MacArthur Blvd.	MON	29	5-29	0-4	UNK	1.00
71	1S4W-24M2	MW-2	9/6/89	Unocal	411 W. MacArthur Blvd.	MON	30.5	3.5-28.5	0-3	UNK	1.00
72	1S4W-24M3	MW-3	9/7/89	Unocal	411 W. MacArthur Blvd.	MON	29	5-29	0-4	UNK	1.00
73	1S4W-24M4	MW-4	9/6/89	Unocal	411 W. MacArthur Blvd.	MON	29	5-29	0-4	UNK	1.00
74	1S4W-25R13	MW-1	8/7/91	Chevron	3026 Lakeshore Ave	MON	14	4-14	0-3	DEST	0.69
75	1S4W-25R14	MW-2	8/7/91	Chevron	3026 Lakeshore Ave	MON	12	2-12	0-2	UNK	0.69
76	1S4W-25R15	MW-3	8/13/91	Chevron	3026 Lakeshore Ave	MON	18	8-18	0-5	UNK	0.69
77	1S4W-25R16	MW-4	8/13/91	Chevron	3026 Lakeshore Ave	MON	15	5-15	0-4	UNK	0.69
78	1S4W-25R17	MW-1	6/19/92	Chevron	3026 Lakeshore Ave	MON	19	4-19	0-3	UNK	0.69
79	1S4W-25R18	MW-5	6/12/92	Chevron	3026 Lakeshore Ave	MON	24	15-35	0-13	UNK	0.69
80	1S4W-25R19	MW-6	6/12/92	Chevron	3026 Lakeshore Ave	MON	19	4-19	0-3	UNK	0.69
81	1S4W-25R13	MW-7	6/12/92	Chevron	3026 Lakeshore Ave	MON	19	4-19	0-3	UNK	0.69

Table 1. Department of Well Resources Well Survey Results

Shell-branded Service Station, 29 Wildwood, Piedmont, California. Incident # 98995822

Map ID	Well ID	Owner Well ID	Install Date	Owner	Well Location	Use	Depth (fbg)	Screened Interval (fbg)	Sealed Interval (fbg)	Well Status	Miles From Site

Notes and Abbreviations:

Well information provided by the Alameda County Water District.

Map ID number refers to map location on Figure 1.

Well ID = California State well identification number as recorded by the Department of Water Resources in Sacramento, California

fbg = feet below grade

AG = Agricultural

DOM = Domestic

GEO = Geotechnical

IND = Industrial

MON = Monitoring

UNK = Unknown

CAT = Cathodic Protection

DEST = destroyed

"---" = no data available

G:\Piedmont 29 Wildwood\2003 Preferential Pathway Study and SCM\Well Survey\[29 Wildwood Well Survey Aug 03.xls]DWR 2003

ATTACHMENT A

SITE CONCEPTUAL MODEL

SITE CONCEPTUAL MODEL

August 14, 2003

Cambria Environmental Technology, Inc.

Site Address:	29 Wildwood Avenue	**Incident Number:**	98995822
City:	Pied+B23mont, CA	**Regulator:**	Alameda County Health Care Services Agency

Item	Evaluation Criteria	Comments/Discussion
1	**Hydrocarbon Source**	
1.1	Identify/Describe Release Source and Volume (if known)	Release source and volume is unknown. Hydrocarbons were detected in the vicinity of the former underground storage tanks (USTs), and current dispensers and piping.
1.2	Discuss Steps Taken to Stop Release	The previous USTs at the site were removed and replaced in 1984. In March 1998, Shell Shell voluntarily initiated upgrades at the service station. Paradiso Mechanical of San Leandro added secondary containment to the existing dispensers and the turbine sumps, and removed the waste oil remote fill piping. MTBE-containing gasoline is no longer dispensed at the station, effective 1/1/03.
2	**Site Characterization**	
2.1	Current Site Use/Status	This Shell-branded station is located at the intersection of Wildwood and Grand Avenue, in Piedmont, California (Figure 1). Three underground storage tanks (USTs) and one 550-gallon waste oil UST are located at the site. Three groundwater monitoring wells are located onsite, and two downgradient wells are located in Grand Avenue (Figure 2). The site lies at the confluence of two topographic valleys. Five groundwater monitoring wells have been installed at the site (MW-1, MW-2, MW-3, MW-4, and MW-5). One monitoring well (E-1) was installed and later abandoned due to flowing artesian groundwater conditions.
2.2	Soil Definition Status	No soil samples collected at the site have been analyzed for MTBE. The highest concentration of TPHg detect in soil at the site was 6,500 ppm in boring B-3 at 10 fbg collected in 1988. According to the boring log, this sample was likely saturated. The highest concentration of benzene detected at the site was 6.3 ppm in sample D-2 at 2.0 fbg, collected in 1998.
2.3	Separate-Phase Hydrocarbon Definition Status	No SPH has been detected at the site.

2.4	Groundwater Definition Status (BTEX)	Groundwater monitoring has been conducted at the site since 1989. The west and southwest downgradient extent of BTEX is defined by non-detect results in monitoring wells MW-2, MW-4 and MW-5. The east upgradient extent of BTEX is defined by non-detect concentrations in MW-1. Benzene concentrations in well MW-3 have been in the range of 50 ppb since the fourth quarter of 2001. The vertical extent of BTEX in groundwater has not been defined.
2.5	BTEX Plume Stability and Concentration Trends	Currently, BTEX concentrations exhibit a decreasing trend in MW-3. BTEX is not detected in any other on- or offsite wells.
2.6	Groundwater Definition Status (MTBE)	The southwest downgradient extent of MTBE in groundwater is defined by non-detection in monitoring wells MW-4 and MW-5. The east upgradient extent of MTBE in groundwater is defined by non-detection in well MW-1. In the third quarter of 2003, MTBE concentrations were 410 ppb and 540 ppb in wells MW-2 and MW-3, respectively. The vertical extent of MTBE in groundwater has not been defined in these wells.
2.7	MTBE Plume Stability and Concentration Trends	MTBE concentrations currently shows a stable to decreasing trend. MTBE concentrations in MW-3 have decreased from 4,100 ppb to 540 ppb since the second quarter of 2002.
2.8	Groundwater Flow Direction, Depth Trends and Gradient Trends	Monitoring wells MW-1 through MW-5 have well screens that begin from 3.5 to 6.5 fbg and end from 9.5 to 16.5 fbg. Former well E-4 was screened from 23 to 35 fbg. Historical depth to water ranges from 2.1 fbg to 8.8 fbg and current depth to water in the fourth quarter of 2002 ranges from 3.3 fbg to 4.3 fbg. The groundwater elevation in wells MW-1 through MW-5 has ranged from 24.26 feet above sea level (msl) to 35.8 ft msl. Groundwater in well E-4 was reported to be under artesian conditions, with the water level rising above the top of the well casing. The shallow groundwater flow direction is generally southwest, with a gradient of approximately 0.02 to 0.04 ft/ft.
2.9	Stratigraphy and Hydrogeology	The materials underlying the site consist primarily of low to moderate estimated permeability sandy silts, clayey silts, silty clays, and clays interbedded with higher permeability layers or lenses of silty sands and silty gravels to the total explored depth of 35 feet below grade (fbg).

2.10	Preferential Pathways Analysis	Utility lines run adjacent to two sides of the site. Identified utilities include sanitary sewer, water, electrical and gas lines, as well as storm drain lines. The utility lines downgradient from the site run approximately north to south, which approximates the natural groundwater flow direction at the site. Groundwater elevations in the shallow water-bearing zone were calculated using surveyed top of well casing elevations and depths to groundwater measured since 1989. Groundwater elevations have ranged from approximately 24.3 to 35.8 feet msl. Since accurate depth information could not be obtained for the water mains, electrical conduits and gas piping, their locations relative to the water table cannot be established with certainty. However, since typical burial depths for these utilities is at least 3 fbg, and groundwater depths have been as shallow as 2.1 feet below top of casing, it is very likely that the water, electric and gas pipes and their trenches have intersected the water table. In that event, these utility trenches would likely act as preferentail pathways for groundwater flow. Similarly, based on inferred depths of sanitary sewer lines, it is likely that these utility trenches also act as preferential pathways for groundwater flow.
2.11	Other Pertinent Issues	The now buried former creek channels adjacent to two sides of the site likely act as natural barriers and conduits for groundwater flow. It is likely that any shallow or deep groundwater leaving the site will be contained within the confines of the former creek channels. Groundwater is expected to flow within the natural valley of the former Wildwood Creek towards Lake Merritt, consistent with groundwater monitoring results. Together, these findings, and the consistently observed groundwater flow direction, indicate that groundwater will flow within the confines of the natural valley of the former Wildwood Creek, regardless of the presence of man-made conduits or preferential pathways.
3	**Remediation Status**	
3.1	Remedial Actions Taken	Oxygen releasing compound (ORC) installed in wells MW-1, MW-2 and MW-3 in the second quarter of 1998. ORCs were removed from MW-1 in the fourth quarter of 2001, however they are still in use in wells MW-2 and MW-3 and changed semi-annually.
3.2	Area Remediated	Remediation at the site has concentrated on groundwater downgradient of the the current and former tank pit.
3.3	Remediation Effectiveness	Hydrocarbon concentrationss in groundwater decreased moderately following addition of ORCs and continue to decline and/or remain non-detect.

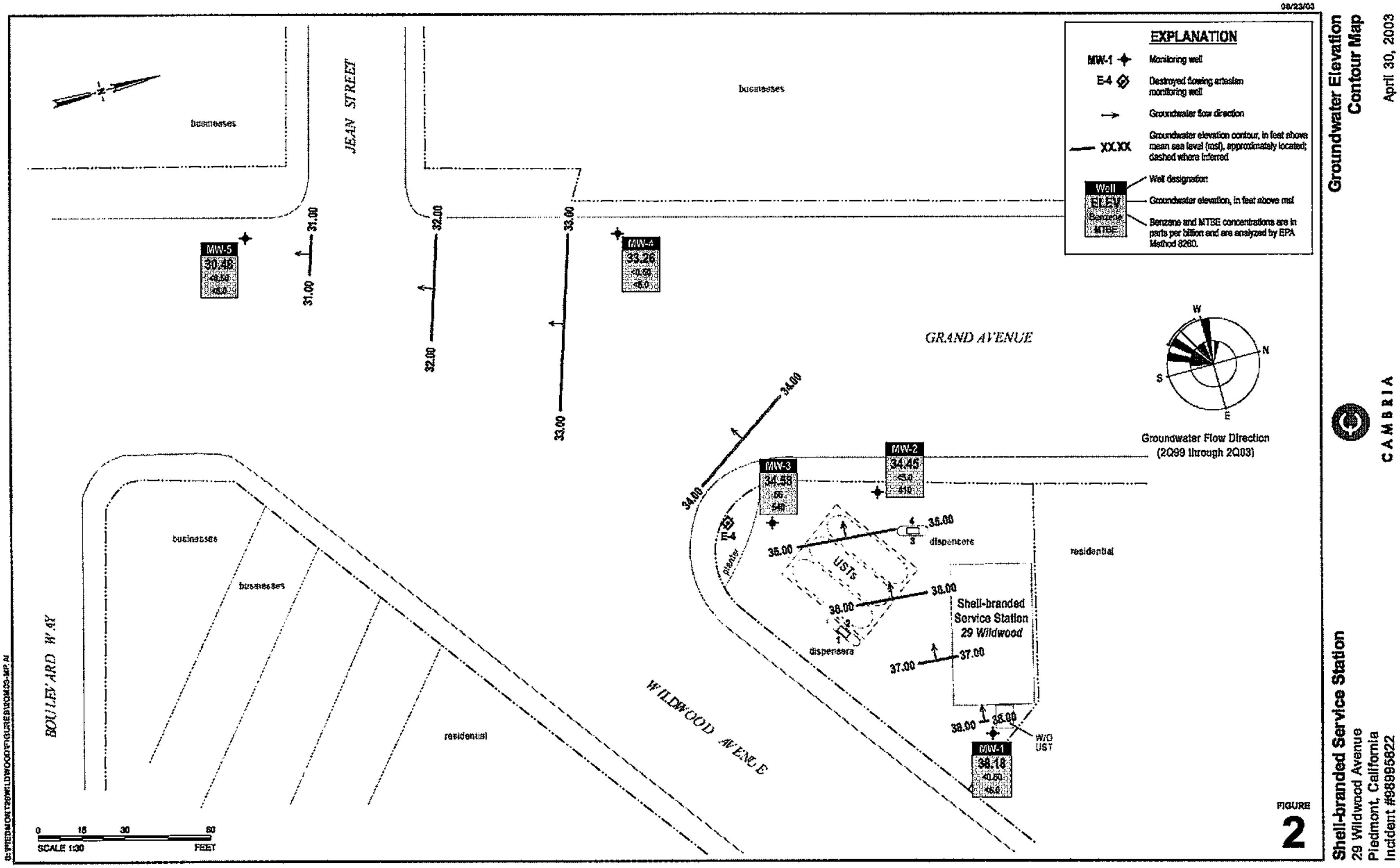
4	**Well and Sensitive Receptor Survey**	
4.1	Designated Beneficial Groundwater Use	San Francisco Bay Region RWQCB Basin Plan identifies the following existing beneficial uses for groundwater in this region: Municipal and domestic water supply, Industrial process water supply, Industrial service water supply, and Agricultural water supply. However, the June 1999 East Bay Plain Groundwater Basin Beneficial Use Evaluation Report indicates that the City of Piedmont does not have any plans to develop local groundwater resources for drinking water purposes, because of existing or potential saltwater intrusion, contamination, or poor or limited quantity.
4.2	Shallow Groundwater Use	No pumping wells that draw from shallow groundwater were identified within a half-mile radius of the site.
4.3	Deep Groundwater Use	A 300-foot deep domestic well, installed in 1977 and sealed from 0-110 feet below grade, has been identified approximately 1/2-mile upgradient of the site. The current status of the well is unknown.
4.4	Well Survey Results	An August 2003 well survey conducted by Cambria identified one water-producing well, one cathodic protection well and eight monitoring wells within 1/2-mile of the site. The water-producing well is located approximately 1/2-mile upgradient of the site.
4.5	Likelihood of Impact to Wells	Due to distance and location upgradient of the subject site, it is unlikely that any known water producing well would be impacted by hydrocarbons or oxygenates originating from at the site.
4.6	Likelihood of Impact to Surface Water	The former creek channels adjacent to the site were likely to have been filled to construct the existing streets, and the creeks were routed into storm drains. The now buried, former creek channels are likely to act as natural barriers and conduits for groundwater flow. It is likely that any shallow or deep groundwater leaving the site will be contained within the confines of the former creek channels. From this, groundwater is expected to flow towards Lake Merritt, which is consistent with groundwater monitoring results.
5	**Risk Assessment**	
5.1	Site Conceptual Exposure Model (current and future uses)	Onsite land use is commercial. There is an operating Shell-branded service station with an enclosed station building onsite. Offsite land use in the immediate vicinity is commercial. Residential use land is located southeast of the site.
5.2	Exposure Pathways	Soil and/or groundwater volatilization to outdoor and/or indoor air, commercial exposure.
5.3	Risk Assessment Status	No formal risk assessment has been performed.

5.4	Identified Human Exceedances	No exceedances have been identified or evaluated.
5.5	Identified Ecological Exceedances	No exceedances have been identified or evaluated.
6	**Additional Recommended Data or Tasks**	
6.1		None recommended

Attached:
List of environmental documents
Quarterly groundwater monitoring map (2Q03)
Quarterly groundwater monitoring table (3Q03)
Historical soil analytical tables and boring location maps
Well and boring logs
Cross section diagrams
2003 well survey map and table
2003 utility location map

G:\Piedmont 29 Wildwood\2003 Preferential Pathway Study and SCM\SCM\SITE CONCEPTUAL MODEL.doc

Environmental Documents Available to Cambria Environmental		
Date	Title/Subject	Company
09/20/84	Subsurface Hydrogeologic Investigation	Emcon Associates
06/16/87	Sampling Report	Blaine Tech Services
10/03/88	Soil Investigation	Ensco Environmental Services
09/12/89	Well Construction Report	Weiss Associates
09/19/89	Subsurface Investigation	Weiss Associates
06/21/90	Subsurface Investigation and Groundwater Monitoring Report	Weiss Associates
08/11/92	Letter to Alameda County Department of Environmental Health	Weiss Associates
12/22/92	Letter to Alameda County Department of Environmental Health	Weiss Associates
02/14/94	Quarterly Groundwater Sampling Report 940120-G-1	Blaine Tech Services
05/03/94	Quarterly Groundwater Sampling Report 940412-F-2	Blaine Tech Services
10/26/94	Quarterly Groundwater Sampling Report 941006-F-2	Blaine Tech Services
03/10/95	First Quarter 1995 Monitoring Report	Weiss Associates
09/14/95	Third Quarter 1995 Monitoring Report	Weiss Associates
04/09/96	First Quarter 1996 Monitoring Report	Weiss Associates
11/07/96	Third Quarter 1996 Monitoring Report	Cambria Environmental
05/15/97	First Quarter 1997 Monitoring Report	Cambria Environmental
09/17/97	Soil Dispenser Confirmation	Cambria Environmental
03/19/98	Fourth Quarter 1997 Monitoring Report	Cambria Environmental
04/06/98	Dispenser Soil Sampling Report	Cambria Environmental
07/28/98	Second Quarter 1998 Monitoring Report	Cambria Environmental
01/21/99	Fourth Quarter 1998 Monitoring Report	Cambria Environmental
09/28/99	Second Quarter 1999 Monitoring Report	Cambria Environmental
01/13/00	Fourth Quarter 1999 Monitoring Report	Cambria Environmental
06/06/00	Second Quarter 2000 Monitoring Report	Cambria Environmental
01/11/01	Fourth Quarter 2000 Monitoring Report	Cambria Environmental
07/12/01	Second Quarter 2001 Moniotirng Report	Cambria Environmental
02/01/02	Fourth Quarter 2001 Moniotirng Report	Cambria Environmental
07/16/02	Second Quarter 2002 Moniotirng Report	Cambria Environmental
09/27/02	Third Quarter 2002 Moniotirng Report	Cambria Environmental
01/30/03	Fourth Quarter 2003 Moniotirng Report	Cambria Environmental
05/05/03	First Quarter 2003 Monitoring Report	Cambria Environmental
07/09/03	Second Quarter 2003 Monitoring Report and Agency Response	Cambria Environmental



EXPLANATION
MW-1 Monitoring well
E-4 Destroyed flowing artesian monitoring well
Groundwater flow direction
XX.XX Groundwater elevation contour, in feet above mean sea level (msl), approximately located; dashed where inferred
Well designation
Groundwater elevation, in feet above msl
Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8260.
Well
ELEV
Benzene
MTBE
businesses
JEAN STREET
GRAND AVENUE
WILDWOOD AVENUE
BOULEVARD WAY
residential
dispensers
USTs
planter
E-4
Shell-branded Service Station 29 Wildwood
W/O UST
MW-1 38.18 <0.50 <5.0
MW-2 34.45 <5.0 410
MW-3 34.58 55 540
MW-4 33.26 <0.50 <5.0
MW-5 30.48 <0.50 <5.0
31.00
32.00
33.00
34.00
35.00
36.00
37.00
38.00
Groundwater Flow Direction (2Q99 through 2Q03)
W
N
S
E
SCALE 1:30
0 15 30 60
FEET
FIGURE
2
CAMBRIA
Groundwater Elevation Contour Map
April 30, 2003
Shell-branded Service Station
29 Wildwood Avenue
Piedmont, California
Incident #98995822

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
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(408) 573-0555 PHONE
CONTRACTOR'S LICENSE #746684
www.blainetech.com

July 31, 2003

Karen Petryna
Shell Oil Products US
P.O. Box 7869
Burbank, CA 91510-7869

Third Quarter 2003 Groundwater Monitoring at
Shell-branded Service Station
29 Wildwood Avenue
Piedmont, CA

Monitoring performed on July 14, 2003

Groundwater Monitoring Report **030714-SS-2**

This report covers the routine monitoring of groundwater wells at this Shell-branded facility. In accordance with standard procedures that conform to Regional Water Quality Control Board requirements, routine field data collection includes depth to water, total well depth, thickness of any separate immiscible layer, water column volume, calculated purge volume (if applicable), elapsed evacuation time (if applicable), total volume of water removed (if applicable), and standard water parameter instrument readings. Sample material is collected, contained, stored, and transported to the laboratory in conformance with EPA standards. Purgewater (if applicable) is, likewise, collected and transported to the Martinez Refining Company.

Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL CONCENTRATIONS**. The full analytical report for the most recent samples and the field data sheets are attached to this report.

At a minimum, Blaine Tech Services, Inc. field personnel are certified on completion of a forty-hour Hazardous Materials and Emergency Response training course per 29 CFR 1910.120. Field personnel are also enrolled in annual eight-hour refresher courses. Blaine Tech Services, Inc. conducts sampling and documentation assignments of this type as an independent third party. Our activities at this site consisted of objective data and sample collection only. No interpretation of analytical results, defining of hydrological conditions or formulation of recommendations was performed.

Please call if you have any questions.

Yours truly,

Leon Gearhart
Project Coordinator

LG/ad

attachments: Cumulative Table of WELL CONCENTRATIONS
Certified Analytical Report
Field Data Sheets

cc: Anni Kreml
Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A
Oakland, CA 94608

WELL CONCENTRATIONS
Shell-branded Service Station
29 Wildwood Avenue
Piedmont, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-1	07/12/1989	<50	<0.5	<1	<1	<3	NA	NA	37.96	2.76	35.20	NA
MW-1	01/30/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	3.10	34.86	NA
MW-1	04/27/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	3.24	34.72	NA
MW-1	07/31/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	4.26	33.70	NA
MW-1	10/30/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	4.25	33.71	NA
MW-1	01/31/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	3.66	34.30	NA
MW-1	04/30/1991	<50	0.8	<0.5	0.6	1.2	NA	NA	37.96	3.46	34.50	NA
MW-1	07/30/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	4.14	33.82	NA
MW-1	10/29/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	3.96	34.00	NA
MW-1	01/20/1992	<30	<0.3	<0.3	<0.3	<0.3	NA	NA	37.96	3.59	34.37	NA
MW-1	04/14/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	3.18	31.71	NA
MW-1	07/21/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	4.17	33.79	NA
MW-1	10/02/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	4.29	33.67	NA
MW-1	01/20/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	2.32	35.64	NA
MW-1	05/03/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	3.50	34.46	1.9
MW-1	06/28/1993	NA	NA	NA	NA	NA	NA	NA	37.96	3.76	34.20	NA
MW-1	07/21/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	4.09	33.87	4.6
MW-1	10/19/1993	50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	3.58	34.38	4.3
MW-1	01/20/1994	Well inaccessible		NA	NA	NA	NA	NA	37.96	NA	NA	NA
MW-1	04/12/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	3.60	34.36	7.5
MW-1	07/20/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	4.10	33.86	3.2
MW-1	10/06/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	4.30	33.66	3.2
MW-1	01/20/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	2.94	35.02	10.6
MW-1	07/06/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	3.68	34.28	NA
MW-1	01/24/1996	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	37.96	2.12	35.84	NA
MW-1	07/12/1996	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	37.96	3.58	34.38	2.7

WELL CONCENTRATIONS
Shell-branded Service Station
29 Wildwood Avenue
Piedmont, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft)	GW Elevation (MSL)	DO Reading (ppm)
MW-1	01/16/1997	120	14	10	3.6	14	<2.5	NA	37.96	2.30	35.66	3
MW-1	10/24/1997	<50	<0.50	<0.50	<0.50	<0.50	8.6	NA	37.96	3.66	34.30	4.5
MW-1	05/13/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	37.96	2.81	35.15	5.1
MW-1	10/01/1998	<50	<0.50c	<0.50c	<0.50c	<0.50c	<2.5c	NA	37.96	3.75	34.21	5.0
MW-1	04/29/1999	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	37.96	3.52	34.44	4.1
MW-1	11/01/1999	<50.0	<0.500	<0.500	<0.500	<0.500	5.03	NA	37.96	4.05	33.91	3.6
MW-1	04/05/2000	<50.0	<0.500	<0.500	<0.500	<0.500	3.22	NA	37.96	3.74	34.22	4.2
MW-1	10/30/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	37.96	2.19	35.77	4.1
MW-1	04/27/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	37.96	4.43	33.53	1.9
MW-1	10/31/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	37.96	4.34	33.62	2.4
MW-1	05/09/2002	Well inaccessible		NA	NA	NA	NA	NA	37.96	NA	NA	NA
MW-1	07/25/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	37.96	3.53	34.43	1.2
MW-1	10/23/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	40.94	3.68	37.26	3.5
MW-1	01/22/2003	Well inaccessible		NA	NA	NA	NA	NA	40.94	NA	NA	NA
MW-1	01/29/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	40.94	3.25	37.69	3.7
MW-1	04/30/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<5.0	40.94	2.76	38.18	3.6
MW-1	**07/14/2003**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**NA**	**<1.4**	**40.94**	**3.15**	**37.79**	**0.5**
MW-2	07/12/1989	60	2.7	<1	<1	<3	NA	NA	34.89	3.66	31.23	NA
MW-2	01/30/1990	<50	6.6	<0.5	0.54	0.93	NA	NA	34.89	3.49	31.40	NA
MW-2	04/27/1990	60	2.1	<0.5	<0.5	<0.5	NA	NA	34.89	3.79	31.10	NA
MW-2	07/31/1990	70	1.5	<0.5	<0.5	<0.5	NA	NA	34.89	4.03	30.86	NA
MW-2	10/30/1990	70	<0.5	0.7	<0.5	1.6	NA	NA	34.89	4.21	30.68	NA
MW-2	01/31/1991	80	<0.5	<0.5	0.9	1.9	NA	NA	34.89	4.09	30.80	NA
MW-2	04/30/1991	100	5.9	0.6	0.7	2	NA	NA	34.89	3.95	30.94	NA
MW-2	07/30/1991	<50	<0.5	<0.7	<0.5	<0.5	NA	NA	34.89	4.07	30.82	NA
MW-2	10/29/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.89	4.11	30.78	NA

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MW-2	01/20/1992	<30	0.84	<0.3	<0.41	<0.48	NA	NA	34.89	3.86	31.03	NA
MW-2	04/14/1992	70	16	<0.5	3.1	2.1	NA	NA	34.89	3.66	34.30	NA
MW-2	07/21/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.89	3.92	30.97	NA
MW-2	10/02/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.89	4.45	30.44	NA
MW-2	01/20/1993	<50	3.8	<0.5	0.52	<0.5	NA	NA	34.89	3.74	31.15	NA
MW-2	05/03/1993	680a	2.8	<0.5	<0.5	<0.5	NA	NA	34.89	3.77	31.12	0.9
MW-2	06/28/1993	NA	NA	NA	NA	NA	NA	NA	34.89	3.96	30.93	NA
MW-2	07/21/1993	<50	8	1.2	1.8	7.9	NA	NA	34.89	4.39	30.50	5.9
MW-2	10/19/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.89	3.92	30.97	5.7
MW-2	01/20/1994	<50	1.5	<0.5	<0.5	<0.5	NA	NA	34.89	4.45	30.44	3.2
MW-2	04/12/1994	<50	2.9	<0.5	<0.5	<0.5	NA	NA	34.89	4.72	30.17	11.4
MW-2	07/20/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.89	5.32	29.57	2.4
MW-2	10/06/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.89	4.03	30.86	2.9
MW-2	01/20/1995	290	28	<0.5	<0.5	<0.5	NA	NA	34.89	3.89	31.00	4.6
MW-2	07/06/1995	120	3	<0.5	<0.5	<0.5	NA	NA	34.89	8.84	26.05	NA
MW-2	01/24/1996	70	3.1	<0.5	0.8	1.5	NA	NA	34.89	3.80	31.09	NA
MW-2 (D)	01/24/1996	70	3.2	0.5	0.7	1.5	NA	NA	34.89	NA	NA	NA
MW-2	07/12/1996	<50	0.68	<0.5	<0.5	<0.5	270	NA	34.89	3.85	31.04	3.8
MW-2	01/16/1997	230	34	1.6	1.6	4.2	460	NA	34.89	3.84	31.05	NA
MW-2	10/24/1997	<50	<0.50	<0.50	<0.50	<0.50	54	NA	34.89	3.75	31.14	2.9
MW-2	05/13/1998	NA	NA	NA	NA	NA	NA	NA	34.89	3.78	31.11	NA
MW-2	10/01/1998	<50	<0.50c	<0.50c	<0.50c	<0.50c	100	NA	34.89	4.90	29.99	3.0
MW-2	04/29/1999	NA	NA	NA	NA	NA	NA	NA	34.89	4.69	30.20	NA
MW-2	11/01/1999	<50.0	<0.500	1.29	0.669	4.52	7.21	NA	34.89	5.24	29.65	2.9
MW-2	04/05/2000	376d	68.1d	3.10d	2.88d	5.35d	729d	NA	34.89	3.43	31.46	3.6
MW-2	10/30/2000	5,790	59.2	315	162	1320	346	NA	34.89	2.35	32.54	2.8
MW-2	04/27/2001	2,720	90.8	22.8	18.1	165	512	578	34.89	4.67	30.22	0.9

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MW-2	10/31/2001	<10,000	<100	<100	<100	<100	NA	<100	34.89	3.68	31.21	1.3
MW-2	05/09/2002	490	1.5	7.8	2.1	14	NA	200	34.89	3.18	31.71	1.1
MW-2	07/25/2002	1,200	1.0	3.3	1.3	8.3	NA	45	34.89	3.30	31.59	0.4
MW-2	10/23/2002	1,100	0.85	3.8	1.3	7.9	NA	140	37.87	3.87	34.00	0.8
MW-2	01/22/2003	730	<0.50	100	0.96	5.4	NA	230	37.87	2.68	35.19	1.5
MW-2	04/30/2003	<500	<5.0	23	<5.0	<10	NA	410	37.87	3.42	34.45	0.1
MW-2	**07/14/2003**	**<800**	**1.2**	**59**	**1.4**	**9.8**	**NA**	**60**	**37.87**	**3.50**	**34.37**	**1.1**
MW-3	07/12/1989	3,900	380	41	99	30	NA	NA	35.00	3.83	31.17	NA
MW-3	01/30/1990	5,500	440	35	79	130	NA	NA	35.00	3.24	31.76	NA
MW-3	04/27/1990	4,500	310	26	37	110	NA	NA	35.00	4.02	30.98	NA
MW-3	07/31/1990	3,500	210	17	8.4	62	NA	NA	35.00	4.31	30.69	NA
MW-3	10/30/1990	2,300	610	<0.5	<0.5	28	NA	NA	35.00	4.52	30.48	NA
MW-3	01/31/1991	4,100	300	20	19	81	NA	NA	35.00	4.33	30.67	NA
MW-3	04/30/1991	3,800	370	19	8.6	60	NA	NA	35.00	3.79	31.21	NA
MW-3	07/30/1991	3,300	160	13	15	87	NA	NA	35.00	4.37	30.63	NA
MW-3	10/29/1991	1,000	35	2.8	2.9	8.1	NA	NA	35.00	4.00	31.00	NA
MW-3	01/20/1992	6,900	380	18	47	48	NA	NA	35.00	3.87	31.13	NA
MW-3	04/14/1992	6,000	480	38	41	55	NA	NA	35.00	3.15	31.85	NA
MW-3	07/21/1992	3,700	330	13	30	23	NA	NA	35.00	4.17	30.83	NA
MW-3	10/02/1992	4,200	260	10	13	12	NA	NA	35.00	4.43	30.57	NA
MW-3	01/20/1993	4,200	360	15	32	26	NA	NA	35.00	2.20	32.80	NA
MW-3 (D)	01/20/1993	3,900	370	15	32	26	NA	NA	35.00	NA	NA	NA
MW-3	05/03/1993	12,000	290	520	120	620	NA	NA	35.00	3.50	31.50	0.6
MW-3	06/28/1993	NA	NA	NA	NA	NA	NA	NA	35.00	4.08	30.92	NA
MW-3	07/21/1993	2,000	170	12	<10	11	NA	NA	35.00	4.12	30.88	4.3
MW-3 (D)	07/21/1993	2,000	170	10	<10	14	NA	NA	35.00	NA	NA	NA

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MW-3	10/19/1993	2,000	240	<0.5	<0.5	<0.5	NA	NA	35.00	4.20	30.80	5.7
MW-3	01/20/1994	4,200	280	<10	<10	<10	NA	NA	35.00	4.08	30.92	4.1
MW-3 (D)	01/20/1994	3,800	250	<10	<10	<10	NA	NA	35.00	NA	NA	4.1
MW-3	04/12/1994	4,700	380	<10	<10	<10	NA	NA	35.00	3.70	31.30	10.6
MW-3 (D)	04/12/1994	3,400	370	<25	<25	<25	NA	NA	35.00	NA	NA	NA
MW-3	07/20/1994	5,100	320	77	15	34	NA	NA	35.00	4.26	30.74	2.3
MW-3 (D)	07/20/1994	4,400	250	14	13	32	NA	NA	35.00	NA	NA	NA
MW-3	10/06/1994	4,300	280	9.7	4	15	NA	NA	35.00	4.31	30.69	2.3
MW-3	01/20/1995	4,600	180	18	16	10	NA	NA	35.00	3.00	32.00	11.1
MW-3 (D)	01/20/1995	4,300	170	12	15	7.2	NA	NA	35.00	NA	NA	NA
MW-3	07/06/1995	3,900	310	<0.5	7.6	13	NA	NA	35.00	3.75	31.25	NA
MW-3 (D)	07/06/1995	4,100	330	<0.5	7.9	2.4	NA	NA	35.00	NA	NA	NA
MW-3	01/24/1996	5,000	210	14	14	12	NA	NA	35.00	3.26	31.74	NA
MW-3	07/12/1996	2,700	210	<0.5	<0.5	<0.5	3,600	NA	35.00	3.77	31.23	2.4
MW-3 (D)	07/12/1996	2,800	210	<0.5	<0.5	<0.5	3,400	NA	35.00	NA	NA	2.4
MW-3	01/16/1997	4,200	130	19	10	34	4,400	4,600	35.00	2.38	32.62	2.3
MW-3	10/24/1997	4,100	270	9	5.1	8.8	2,000	NA	35.00	4.12	30.88	1.9
MW-3 (D)	10/24/1997	1,700	220	<5.0	<5.0	<5.0	1,500	NA	35.00	NA	NA	1.9
MW-3	05/13/1998	NA	NA	NA	NA	NA	NA	NA	35.00	3.22	31.78	NA
MW-3	10/01/1998	1,400	84c	<5.0c	<5.0c	<5.0c	2,300	NA	35.00	4.15	30.85	2.0
MW-3 (D)	10/01/1998	2,100	100c	<10c	<10c	<10c	2,600	NA	35.00	NA	NA	2.0
MW-3	04/29/1999	NA	NA	NA	NA	NA	NA	NA	35.00	4.27	30.73	NA
MW-3	11/01/1999	1,850	94.3	6.09	<5.00	6.67	4,140	NA	35.00	4.65	30.35	2.2
MW-3	04/05/2000	3,070	96.9	12.1	<10.0	<10.0	1,050	NA	35.00	3.50	31.50	2.7
MW-3	10/30/2000	1,570	56.8	1.91	1.39	3.06	572	524	35.00	3.40	31.60	3.1
MW-3	04/27/2001	2,420	103	12.6	<5.00	15.6	314	NA	35.00	3.67	31.33	0.9
MW-3	10/31/2001	<50	0.71	<0.50	<0.50	<0.50	NA	31	35.00	3.79	31.21	1.6

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MW-3	05/09/2002	2,000	52	<10	<10	<10	NA	4,100	35.00	3.76	31.24	0.9
MW-3	07/25/2002	1,800	50	<5.0	<5.0	<5.0	NA	1,900	35.00	4.17	30.83	3.7
MW-3	10/23/2002	1,700	27	<5.0	<5.0	<5.0	NA	1,400	37.97	4.36	33.61	1.6
MW-3	01/22/2003	1,800	38	2.4	1.5	2.4	NA	390	37.97	3.09	34.88	1.3
MW-3	04/30/2003	3,300	56	5.2	<5.0	<10	NA	540	37.97	3.39	34.58	1.5
MW-3	**07/14/2003**	**1,000**	**20**	**2.7**	**<2.5**	**<5.0**	**NA**	**360**	**37.97**	**4.05**	**33.92**	**1.5**
MW-4	01/30/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	4.50	29.23	NA
MW-4	04/27/1990	130a	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.62	30.11	NA
MW-4	07/31/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	4.19	29.54	NA
MW-4	10/30/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	4.19	29.54	NA
MW-4	01/31/1991	50a	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	4.49	29.24	NA
MW-4	04/30/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	4.02	29.71	NA
MW-4	07/30/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	4.39	29.34	NA
MW-4	10/29/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.75	29.98	NA
MW-4	01/20/1992	<30	<0.3	<0.3	<0.3	<0.3	NA	NA	33.73	3.94	29.79	NA
MW-4	04/14/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.71	30.02	NA
MW-4	07/21/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	4.02	29.71	NA
MW-4	10/02/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	4.13	29.60	NA
MW-4	01/20/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.10	30.63	NA
MW-4	05/03/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.70	30.03	1.7
MW-4	06/28/1993	NA	NA	NA	NA	NA	NA	NA	33.73	3.81	29.92	NA
MW-4	07/21/1993	<50	0.56	<0.5	<0.5	<0.5	NA	NA	33.73	3.81	29.92	4.5
MW-4	10/19/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.94	29.79	5.8
MW-4	01/20/1994	<50	0.71	<0.5	<0.5	<0.5	NA	NA	33.73	4.00	29.73	4.4
MW-4	04/12/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	4.01	29.72	7.3
MW-4	07/20/1994	160	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.91	29.82	6.4

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MW-4	10/06/1994	410	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.99	29.74	5.0
MW-4	01/20/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.56	30.17	4.9
MW-4	07/06/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	33.73	3.85	29.88	NA
MW-4	01/24/1996	<50	<0.5	<0.5	0.6	1.8	NA	NA	33.73	2.56	31.17	NA
MW-4	07/12/1996	<50	<0.5	<0.5	<0.5	<0.5	b	NA	33.73	3.36	30.37	2.7
MW-4	01/16/1997	Well inaccessible		NA	NA	NA	NA	NA	33.73	NA	NA	NA
MW-4	10/24/1997	Well inaccessible		NA	NA	NA	NA	NA	33.73	NA	NA	NA
MW-4	05/13/1998	Well inaccessible		NA	NA	NA	NA	NA	33.73	NA	NA	NA
MW-4	10/01/1998	<50	<0.50c	<0.50c	<0.50c	0.74c	8.1	NA	33.73	3.90	29.83	2.5
MW-4	04/29/1999	<50	<0.50	<0.50	<0.50	<0.50	5.7	NA	33.73	3.97	29.76	2.1
MW-4	11/01/1999	Well inaccessible		NA	NA	NA	NA	NA	33.73	NA	NA	NA
MW-4	04/05/2000	<50.0	<0.500	<0.500	<0.500	<0.500	3.64	NA	33.73	3.63	30.10	2.1
MW-4	10/30/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	33.73	3.33	30.40	3.0
MW-4	04/27/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	33.73	3.48	30.25	2.2
MW-4	10/31/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	33.73	3.58	30.15	2.8
MW-4	05/09/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	33.73	3.74	29.99	2.0
MW-4	07/25/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	33.73	3.71	30.02	1.3
MW-4	10/23/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	36.72	3.93	32.79	2.6
MW-4	01/22/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	36.72	3.67	33.05	3.1
MW-4	04/30/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<5.0	36.72	3.46	33.26	2.8
MW-4	**07/14/2003**	**56 a**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**NA**	**<0.50**	**36.72**	**3.75**	**32.97**	**2.4**
MW-5	01/30/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	7.12	24.26	NA
MW-5	04/27/1990	210a	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.19	27.19	NA
MW-5	07/31/1990	90	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.09	27.29	NA
MW-5	10/30/1990	100	0.8	0.7	0.6	1.4	NA	NA	31.38	4.39	26.99	NA
MW-5	01/31/1991	80a	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.49	26.89	NA

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MW-5	04/30/1991	90	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.27	27.11	NA
MW-5	07/30/1991	90	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.32	27.06	NA
MW-5	10/29/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	3.79	27.59	NA
MW-5	01/20/1992	<30	<0.3	<0.3	<0.3	<0.3	NA	NA	31.38	4.09	27.29	NA
MW-5	04/14/1992	<50a	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.12	27.26	NA
MW-5	07/21/1992	74a	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.13	27.25	NA
MW-5	10/02/1992	76a	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.30	27.08	NA
MW-5	01/20/1993	72a	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	3.12	28.26	NA
MW-5	05/03/1993	70a	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.07	27.31	1.6
MW-5 (D)	05/04/1993	80a	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	NA	NA	NA
MW-5	06/28/1993	NA	NA	NA	NA	NA	NA	NA	31.38	4.08	27.30	NA
MW-5	07/21/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.05	27.33	3.5
MW-5	10/19/1993	51	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.20	27.18	3.8
MW-5	01/20/1994	90	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.40	26.98	4.2
MW-5	04/12/1994	67	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.18	27.20	NA
MW-5	07/20/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.06	27.32	3.2
MW-5	10/06/1994	80	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.01	27.37	2.1
MW-5 (D)	10/06/1994	60	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	NA	NA	NA
MW-5	01/20/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	3.49	27.89	3.2
MW-5	07/06/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	31.38	4.06	27.32	NA
MW-5	01/24/1996	70	<0.5	<0.5	0.8	2.9	NA	NA	31.38	2.90	28.48	NA
MW-5	07/12/1996	62	<0.5	<0.5	<0.5	<0.5	b	NA	31.38	4.02	27.36	1.9
MW-5	01/16/1997	66	0.91	0.89	<0.50	1.7	<2.5	NA	31.38	2.59	28.79	2.2
MW-5 (D)	01/16/1997	<50	0.7	0.78	<0.50	1.3	<2.5	NA	31.38	NA	NA	2.2
MW-5	10/24/1997	59	<0.50	<0.50	<0.50	<0.50	17	NA	31.38	4.15	27.23	4.6
MW-5	05/13/1998	72	<0.50	<0.50	<0.50	<0.50	<2.5	NA	31.38	3.64	27.74	2.1
MW-5 (D)	05/13/1998	70	<0.50	<0.50	<0.50	<0.50	<2.5	NA	31.38	NA	NA	2.1

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MW-5	10/01/1998	57	<0.50c	<0.50c	<0.50c	0.62c	20	NA	31.38	4.25	27.13	2.2
MW-5	04/29/1999	<50	<0.50	<0.50	<0.50	<0.50	16	NA	31.38	4.56	26.82	2.0
MW-5	11/01/1999	<50.0	<0.500	<0.500	<0.500	<0.500	3.06	NA	31.38	4.19	27.19	2.2
MW-5	04/05/2000	<50.0	<0.500	<0.500	<0.500	<0.500	22.5	NA	31.38	4.34	27.04	2.2
MW-5	10/30/2000	<50.0	<0.500	<0.500	<0.500	<0.500	19.3	NA	31.38	3.25	28.13	4.0
MW-5	04/27/2001	51.5	<0.500	<0.500	<0.500	<0.500	4.29	NA	31.38	4.07	27.31	1.0
MW-5	10/31/2001	210	<0.50	<0.50	<0.50	<0.50	NA	<5.0	31.38	4.02	27.36	1.5
MW-5	05/09/2002	280	0.71	<0.50	<0.50	<0.50	NA	<5.0	31.38	4.31	27.07	1.7
MW-5	07/25/2002	410	<0.50	<0.50	<0.50	<0.50	NA	<5.0	31.38	4.32	27.06	0.7
MW-5	10/23/2002	290	<0.50	<0.50	<0.50	<0.50	NA	<0.50	34.36	4.37	29.99	2.3
MW-5	01/22/2003	260	<0.50	<0.50	<0.50	<0.50	NA	<5.0	34.36	4.12	30.24	2.4
MW-5	04/30/2003	90 e	<0.50	<0.50	<0.50	<1.0	NA	<5.0	34.36	3.88	30.48	1.5
MW-5	**07/14/2003**	**72 a**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**NA**	**<0.50**	**34.36**	**4.57**	**29.79**	**1.0**
E-4	07/12/1989	<50	<0.5	<1	<1	<3	NA	NA	34.63	NA	>39.13	NA
E-4	01/30/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	04/27/1990	120a	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	07/31/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	10/30/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	01/31/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	04/30/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	07/30/1991	<50	<0.5	0.6	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	10/29/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	01/20/1992	<30	<0.3	<0.3	<0.3	<0.3	NA	NA	34.63	NA	>34.63	NA
E-4	04/14/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	07/21/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	10/02/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA

WELL CONCENTRATIONS
Shell-branded Service Station
29 Wildwood Avenue
Piedmont, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft)	GW Elevation (MSL)	DO Reading (ppm)
E-4	01/20/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	05/03/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	0.6
E-4	06/28/1993	NA	NA	NA	NA	NA	NA	NA	34.63	NA	>34.63	NA
E-4	07/21/1993	<50	5.4	0.72	1	4.4	NA	NA	34.63	NA	>34.63	5.4
E-4	10/19/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	5.6
E-4	01/20/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	NA
E-4	04/12/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	9.4
E-4	07/20/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	2.0
E-4	10/06/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	1.3
E-4	01/20/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	34.63	NA	>34.63	3.7
E-4	05/16/1995	Well abandoned		NA	NA	NA	NA	NA	NA	NA	NA	NA

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to October 31, 2001, analyzed by EPA Method 8015.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to October 31, 2001, analyzed by EPA Method 8020.

MTBE = Methyl-tertiary-butyl ether

TOC = Top of Casing Elevation

SPH = Separate-Phase Hydrocarbons

GW = Groundwater

DO = Dissolved Oxygen

ug/L = Parts per billion

ppm = Parts per million

MSL = Mean sea level

ft = Feet

<n = Below detection limit

D = Duplicate sample

NA = Not applicable

WELL CONCENTRATIONS
Shell-branded Service Station
29 Wildwood Avenue
Piedmont, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)

Notes:

a = Chromatogram pattern indicated an unidentified hydrocarbon/ hydrocarbon reported does not match pattern of laboratory's standard.

b = Due to coelution with early eluters, no result could be determined for MTBE

c = Laboratory reported 1.3 ug/L benzene, 11 ug/L toluene, 0.98 ug/L ethyl benzene, and 6.5 ug/L total xylenes in the equipment blank.

d = Result reported was generated out of hold time.

e = Hydrocarbon reported in the gasoline range does not match STL's gasoline standard.

Well E-4 is a flowing artesian well; potentiometric surface above top-of-casing elevation.

Site surveyed March 5, 2002, by Virgil Chavez Land Surveying of Vallejo, California.

TABLE 2. Analytic Results for Soil - Shell Service Station, WIC # 204-6001-0109, 29 Wildwood Avenue, Piedmont, California

Boring ID	Sample Depth (ft)	Date Sampled	Analytic Method	Sat/ Unsat	TPPH	B	E	T	X	Total Lead	Organic Lead
					<----------ppm---------->						
BH-A(MW-1)	3.6	7/5/89	8015/8020	Sat	<5	<0.05	<0.1	<0.1	<0.3	---	---
composite	---	7/5/89	8015/8020	Sat	<5	<0.05	<0.1	<0.1	<0.3	---	---
composite	---	7/5/89	6010/LUFT	---	---	---	---	---	---	27	<1
BH-B(MW-2)	1.0	7/5/89	8015/8020	Unsat	11	0.19	0.1	<0.1	<0.3	---	---
	3.5	7/5/89	8015/8020	Unsat	710	3	17	5	71	---	---
	7.4	7/5/89	8015/8020	Sat	5	<0.05	<0.1	<0.1	<0.3	---	---
	10.5	7/5/89	8015/8020	Sat	<5	<0.05	<0.1	<0.1	<0.3	---	---
	14.0	7/5/89	8015/8020	Sat	<5	<0.05	<0.1	<0.1	<0.3	---	---
composite	---	7/5/89	6010/LUFT	---	---	---	---	---	---	25	<1
BH-C(MW-3)	3.5	7/5/89	8015/8020	Unsat	72	1.3	0.2	0.3	0.7	---	---
	5.5	7/5/89	8015/8020	Sat	270	1.2	8.3	3.1	42.	---	---
	9.0	7/5/89	8015/8020	Sat	<5	<0.05	<0.1	<0.1	<0.3	---	---
composite	---	7/5/89	6010/LUFT	---	---	---	---	---	---	34	<1
BH-D	2.5	7/5/89	8015/8020	Unsat	<5	<0.05	<0.1	<0.1	<0.3	---	---
	6.0	7/5/89	8015/8020	Sat	<5	<0.05	<0.1	<0.1	<0.3	---	---
	9.5	7/5/89	8015/8020	Sat	<5	<0.05	<0.1	<0.1	<0.3	---	---
	15.0	7/5/89	8015/8020	Sat	<5	<0.05	<0.1	<0.1	<0.3	---	---
composite	---	7/5/89	6010/LUFT	---	---	---	---	---	---	26	<1
BH-E	2.0	7/5/89	8015/8020	Unsat	<5	<0.05	<0.1	<0.1	<0.3	---	---
	5.8	7/5/89	8015/8020	Sat	<5	<0.05	<0.1	<0.1	<0.3	---	---
composite	---	7/5/89	6010/LUFT	---	---	---	---	---	---	28	<1
BH-H	3.5	7/5/89	8015/8020	Sat	8.	0.07	<0.1	<0.1	<0.3	---	---
	7.0	7/5/89	8015/8020	Sat	<5	<0.05	<0.1	<0.1	<0.3	---	---
composite	---	7/5/89	6010/LUFT	---	---	---	---	---	---	32	<1

--Table 2 continues on next page--

TABLE 2. Analytic Results for Soil - Shell Service Station, WIC # 204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Boring ID	Sample Depth (ft)	Date Sampled	Analytic Method	Sat/ Unsat	TPPH	B	E	T	X	Total Lead	Organic Lead
					<--------			ppm			-------->
BH-I	4.0	7/5/89	8015/8020	Sat	540	<1	<4	<2	<10	---	---
	7.5	7/5/89	8015/8020	Sat	29	<0.2	<0.2	<0.1	<0.3	---	---
	10.0	7/5/89	8015/8020	Sat	<5	<0.05	<0.1	<0.1	<0.3	---	---
composite	---	7/5/89	6010/LUFT	---	---	---	---	---	---	24	<1

Abbreviations:

TPPH = Total Purgeable Petroleum Hydrocarbons
B = Benzene
E = Ethylbenzene
T = Toluene
X = Xylenes
--- = Not analyzed or not applicable
Sat = Saturated soil sample
Unsat = Unsaturated soil sample

Analytic Laboratory:

All samples were analyzed by International Technology Analytical Services, San Jose, California

Analytic Methods:

8015 = Modified EPA Method 8015, gas chromatography/flame ionization for TPPH
8020 = EPA Method 8020, gas chromatography/photoionization for BETX
6010 = EPA method 6010 induction coupled Plasma, for total Lead
LUFT = California Regional Water Quality Control Board Leaking Underground Fuel Tank Manual Method, atomic absorption for organic lead

TABLE 1. Analytic Results for Soil - Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California

Soil Boring (Well ID)	Sample Depth (ft)	Date Sampled	Analytic Method	Sat/ Unsat	TPH-G	B	E	T	X
					<---------- parts per million (mg/kg) ---------->				
BH-J	2.4	1/23/90	8015/8020	Unsat	<1	<0.0025	<0.0025	<0.0025	<0.0025
(MW-4)	5.2	1/23/90	8015/8020	Unsat	<1	<0.0025	<0.0025	<0.0025	<0.0025
	18.2	1/23/90	8015/8020	Sat	<1	<0.0025	<0.0025	<0.0025	<0.0025
BH-K	3.2	1/23/90	8015/8020	Unsat	<1	<0.0025	<0.0025	<0.0025	<0.0025
(MW-5)	5.2	1/23/90	8015/8020	Unsat	<1	<0.0025	<0.0025	<0.0025	<0.0025
	18.0	1/23/90	8015/8020	Sat	<1	<0.0025	<0.0025	<0.0025	<0.0025
BH-L	3.2	1/24/90	8015/8020	Unsat	<1	<0.0025	<0.0025	<0.0025	<0.0025
	6.4	1/24/90	8015/8020	Unsat	<1	<0.0025	<0.0025	<0.0025	<0.0025
	15.2	1/24/90	8015/8020	Sat (?)	<1	<0.0025	<0.0025	<0.0025	<0.0025
	25.2	1/24/90	8015/8020	Sat (?)	<1	<0.0025	<0.0025	<0.0025	<0.0025

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline
B = Benzene
E = Ethylbenzene
T = Toluene
X = Xylenes

Sat = Saturated soil sample
Unsat = Unsaturated soil sample
<n = not detected at detection limit of n parts per million

Analytical Laboratory:

National Environmental Testing, Inc. (NET), Santa Rosa, California

Analytic Methods:

8015 = Modified EPA Method 8015 for TPH-G
8020 = EPA Method 8020 for BETX

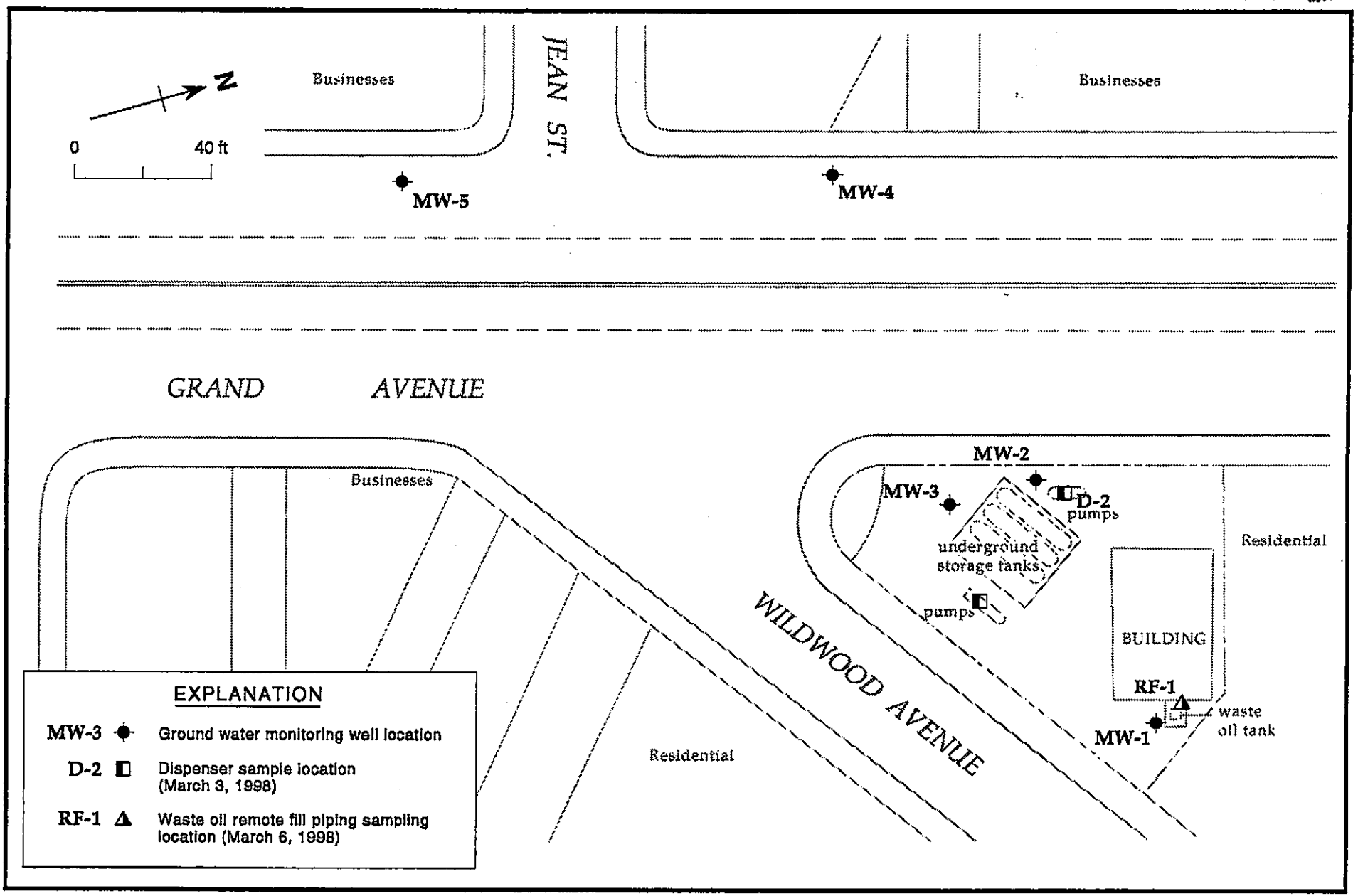


Figure 1. Dispenser and Waste Oil Sampling Locations - March 1998 - Shell Service Station, 29 Wildwood Avenue, Piedmont, California

Table 1. Dispenser Sample Analytical Data - Shell Service Station - WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California

Sample ID	Depth (feet)	TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
		(Concentrations reported in milligrams per kilogram)					
March 3, 1998 Samples:							
D-2	2.0	1,600	36	6.3	24	18.0	160

Abbreviations and Notes:

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015.

MTBE = Methyl tert-butyl ether by EPA Method 8020.

Benzene, ethylbenzene, toluene, xylenes by EPA Method 8020.

Table 2. Soil Analytical Data - Non-Gasoline Hydrocarbons - Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California

Sample ID	Depth (feet)	Date Sampled	TRPH	TPHg	TPHd mg/kg	VOCs	SVOCs
RF-1	2.0	3/6/98	<15	<1.0	10	ND	ND

Notes and Abbreviations:

mg/kg = Milligrams per kilogram
TRPH = Total recoverable petroleum hydrocarbons by EPA Method 418.1
TPHg = Total petroleum hydrocarbons as gas by modified EPA Method 8015
TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method 8015
VOCs = Volatile Organic Compounds by EPA Method 8240
SVOCs = Semi-volatile organic compounds by EPA Method 8270
<n = Below detection limit of n mg/kg
ND = Not detected. See laboratory report for specific detection limits.

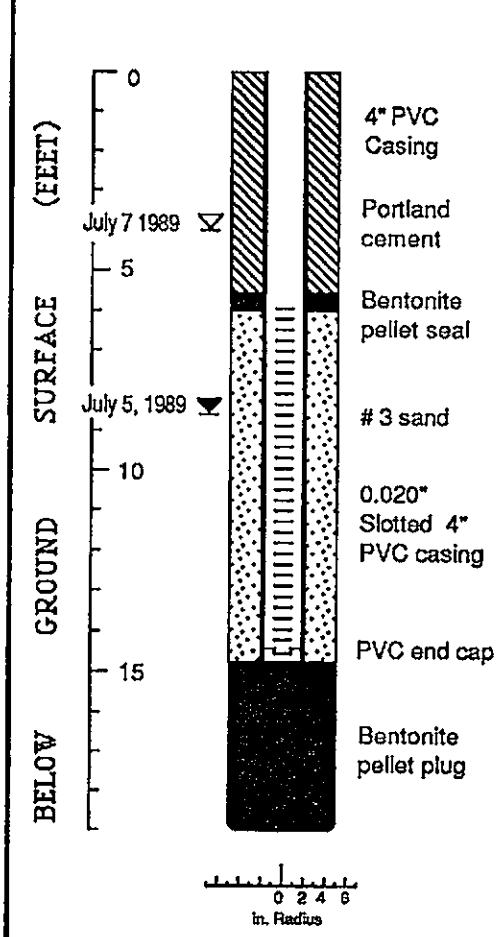
Table 3. Soil Analytical Data - Metals - Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California

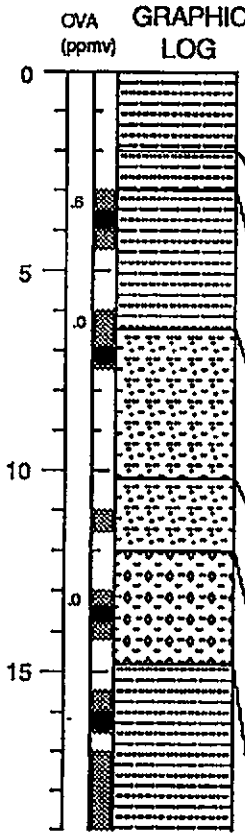
Sample ID	Depth (feet)	Date Sampled	Cadmium	Chromium	Lead	Nickel	Zinc
			← Concentrations in mg/kg →				
RF-1	2.0	3/6/98	<0.50	33.0	11.0	37.0	38.0

Notes and Abbreviations:

mg/kg = Milligrams per kilogram
Cadmium, Chromium, Lead, Nickel, and Zinc by EPA Method 6010

WELL MW-1 (BH-A)





DESCRIPTION

Silty CLAY (CL); dark brown; medium stiff; damp; 10-20% very fine to very coarse sand; high plasticity; low est K; roots; orange mottling, some black staining

Clayey SILT / Sandy SILT (ML); yellow-brown; medium stiff; damp; 10-30% very fine to medium sand; moderate plasticity; low est K

Silty CLAY (CH); medium brown mottled orange-brown; damp; <10% very fine to medium sand; high plasticity; low est K

Sandy SILT (ML); orange-brown mottled gray; medium stiff; damp; 20-40% very fine to medium sand; moderate plasticity; low est K

Silty SAND (SM); gray mottled orange; medium dense; moist; 20-40% moderate plasticity fines; very fine to medium sand; <30% subangular to subrounded pebbles to 1/4" diameter; mod est K

Silty GRAVEL / Sandy SILT (GM/ML); orange-brown, multicolored; 20-40% very fine to very coarse sand; 20-50% subangular to subrounded pebbles; 20-40% low plasticity fines; mod to high est K

Silty CLAY (CH); red-brown mottled black, orange-brown; medium stiff; damp; <10% very fine to medium sand; high plasticity fines; very low est K

6" black organic interbed at ~15'

EXPLANATION

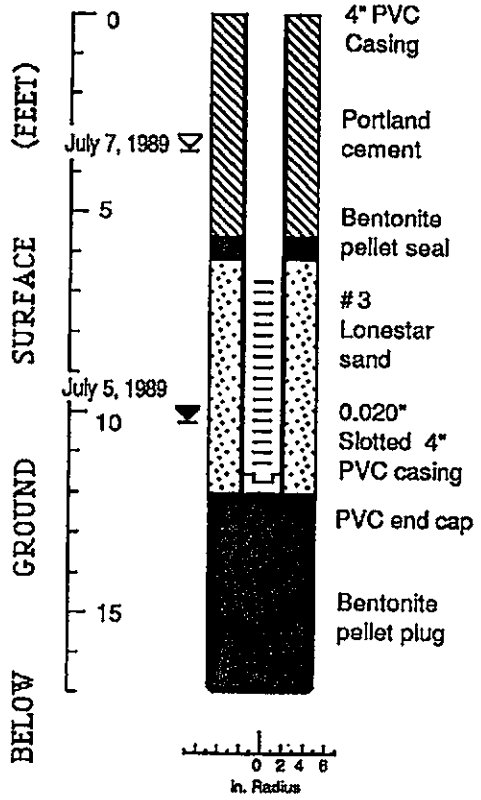
- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

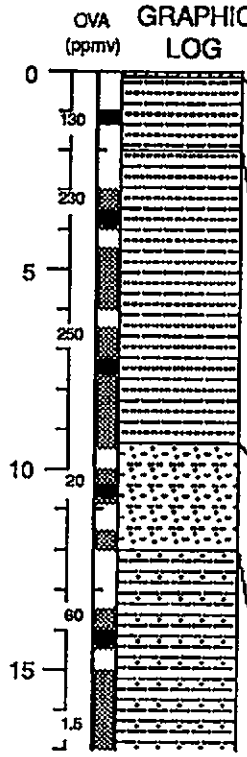
Logged by:	Jack Gardner
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Bay Area Exploration, Suisun, CA
Driller:	Carr / Mossman
Drilling Method:	Hollow stem auger
Dates Drilled:	July 5 to 6, 1989
Well Head Completion:	Locking cap with traffic-rated vault
Type of sampler:	Split barrel (1.5", 2.0", 2.5" ID)

Well Construction and Boring Log - Well MW-1 (BH-A)

Shell Service Station, 29 Wildwood Ave., Piedmont, California

WELL MW-2 (BH-B)





DESCRIPTION

Asphalt

Black; strong hydrocarbon odor from 0.2' to 0.4'

Silty CLAY (CH); black to dark gray-brown; medium stiff; damp; <10% very fine to very coarse sand; <10% subangular to subrounded pebbles to 1/8" diameter; highly plastic fines; low est K

Clayey SILT (ML/MH); blue-brown mottled orange; medium stiff; damp; <20% very fine to medium sand; <5% subangular to subrounded pebbles to 1/4" diameter; high plasticity fines; low to mod est K

Silty SAND (SM); orange-brown; medium stiff; moist; very fine to very coarse sand; <30% subangular to subrounded pebbles to 1" diameter; 20-40% non-plastic fines; mod est K

~10-20% non-plastic fines; high est K at 10'

CLAY interbed from 11.5' to 11.7'

Sandy CLAY to Clayey SILT (CH/MH); yellow-brown to orange-brown; medium stiff; damp; ~10% very fine to coarse sand; 10-20% subangular to subrounded pebbles to 1/2" diameter; high plasticity fines; low est K

1" pebbles interbed at 16.5;

EXPLANATION

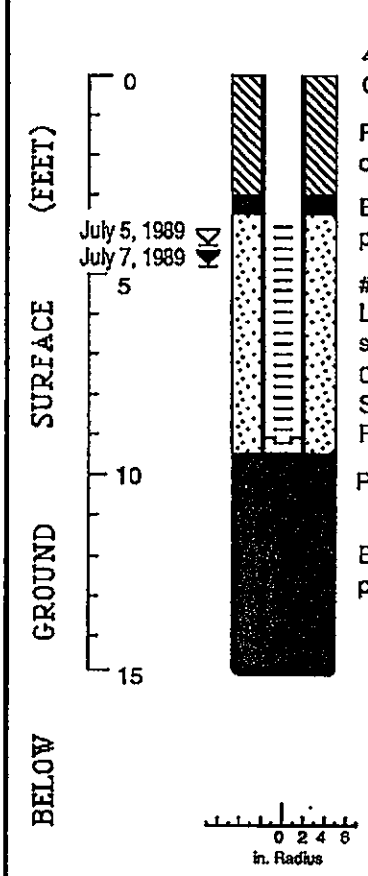
- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

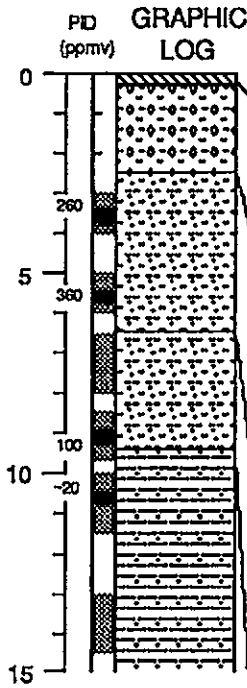
Logged by:	Jack Gardner
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Bay Area Exploration, Suisun, CA
Driller:	Carr/Mossman
Drilling Method:	Hollow stem auger
Dates Drilled:	July 5, 1989
Well Head Completion:	Locking cap with traffic-rated vault
Type of sampler:	Split barrel (1.5", 2.0", 2.5" ID)

Well Construction and Boring Log - Well MW-2 (BH-B)

Shell Service Station, 29 Wildwood Ave., Piedmont, California

WELL MW-3 (BH-C)





DESCRIPTION

Asphalt

Silty GRAVEL (GM); orange-brown; dense; damp; 20-40% very fine to very coarse sand; subangular to subrounded sand to 1 1/2" diameter; 20-40% low plasticity fines; mod est K [fill]

Strong hydrocarbon odor at 2'

Sandy SILT (ML); black; medium dense; damp; 10-30% very fine to medium sand; low plasticity fines; >10% subangular to subrounded pebbles to 1/4" diameter; low to mod est K; strong hydrocarbon odor

Oil saturated; black; moist; strong hydrocarbon odor at 5'

Very strong gasoline odor; sheen from 6.5' to 8.5'

Silty GRAVEL (GM) from 6.5' to 7.2'

Silty SAND to Silty GRAVEL (SM/GM); black; medium dense to loose, saturated; 30-60% very fine to very coarse sand; 10-60% subangular to subrounded pebbles to 1 1/2" diameter; 10-30% non-plastic fines; very high est K; strong hydrocarbon odor

Very fine to medium sand; very high est K from 8.5' to 9.3'

Sandy CLAY (CH); red-brown mottled orange; medium stiff; damp; <10% very fine to very coarse sand; high plasticity fines; <10% subangular to subrounded pebbles to 3/4" diameter; low est K; no hydrocarbon odor

EXPLANATION

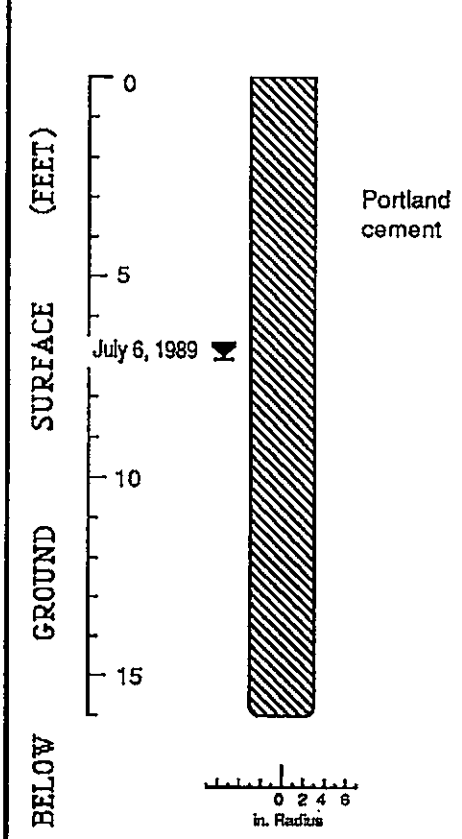
- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

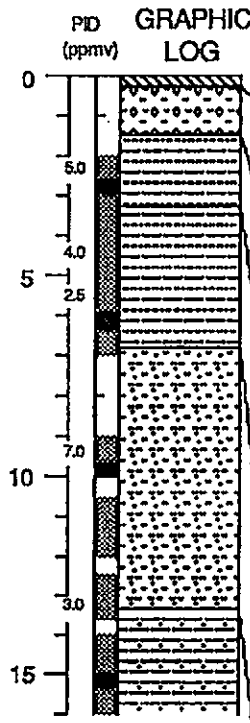
Logged by: Jack Gardner
Supervisor: Richard Weiss; EG 1112
Drilling Company: Bay Area Exploration, Suisun, CA
Driller: Carr/Mossman
Drilling Method: Hollow stem auger
Dates Drilled: July 5 to 6, 1989
Well Head Completion: Locking cap with traffic-rated vault
Type of sampler: Split barrel (1.5", 2.0", 2.5" ID)

Well Construction and Boring Log - Well MW-3 (BH-C)

Shell Service Station, 29 Wildwood Ave., Piedmont, California

BORING BH-D





DESCRIPTION

Asphalt

Silty GRAVEL (GM); orange-brown; medium dense; damp; subangular to subrounded pebbles to 2" diameter; 20-40% low plasticity fines; mod est K

Clayey SILT (ML); black; medium stiff; damp; 10-20% very fine to very coarse sand; moderate plasticity fines; <10% subangular to subrounded pebbles to 3/8" diameter; low est K

Orange at 2.5'

Silty CLAY (CH); dark gray mottled orange; medium stiff; damp; high plasticity fines; 10-20% subangular to subrounded pebbles to 1/4" diameter; very low est K; moderate hydrocarbon odor

Strong hydrocarbon odor at 9.5'

Sandy SILT to Silty SAND (ML/SM); orange-brown; medium stiff; moist; 30-60% very fine to very coarse sand; 30-60% moderate plasticity fines; <20% subangular to subrounded pebbles, variable to 1/2" diameter; mod to high est K; no hydrocarbon odor

Sandy CLAY (CH); orange-brown; stiff; damp; <10% very fine to very coarse sand; high plasticity fines; <10% subangular to subrounded pebbles to 3/8" diameter; very low est K

EXPLANATION

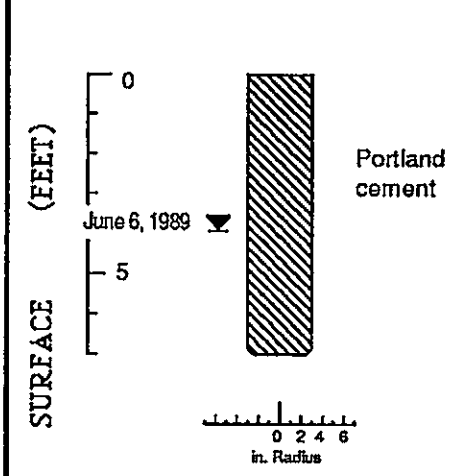
- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

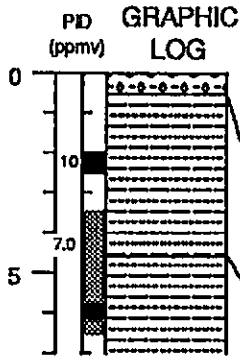
Logged by: Jack Gardner
Supervisor: Richard Weiss; EG 1112
Drilling Company: Bay Area Exploration, Suisun, CA
Driller: Carr/Mossman
Drilling Method: Hollow stem auger
Dates Drilled: July 6, 1989
Well Head Completion: Locking cap with traffic-rated vault
Type of sampler: Split barrel (1.5", 2.0", 2.5" ID)

Boring Log - Boring BH-D

Shell Service Station, 29 Wildwood Ave., Piedmont, California

BORING BH-E





DESCRIPTION

Silty GRAVEL (GM); orange-brown; medium dense; damp; subangular to subrounded pebbles to 2" diameter; 20-40% low plasticity fines; mod est K [fill]

Silty CLAY (CH); dark gray-brown; medium stiff; damp; high plasticity fines; low est K

Strong hydrocarbon odor at 4 1/2'

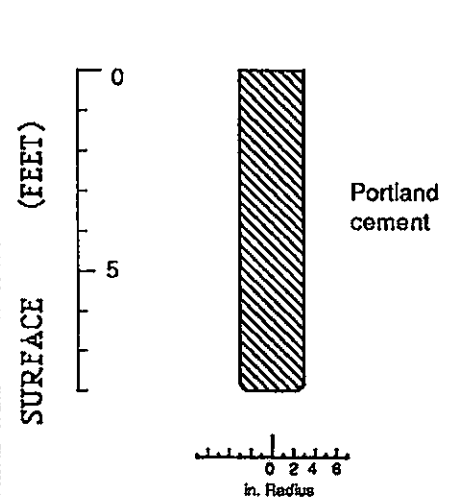
Clayey SILT (ML/MH); gray-brown mottled orange; 10-20% very fine to medium sand; moderate to high plasticity fines; low est K

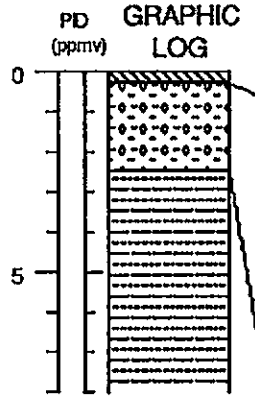
EXPLANATION

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

Logged by: Jack Gardner
Supervisor: Richard Weiss; EG 1112
Drilling Company: Bay Area Exploration, Suisun, CA
Driller: Carr/Mossman
Drilling Method: Hollow stem auger
Dates Drilled: July 6, 1989
Well Head Completion: ~~Locking cap with traffic-rated vault~~
Type of sampler: Split barrel (1.5", 2.0", 2.5" ID)

BORING BH-F





DESCRIPTION

Asphalt

Silty GRAVEL (GM); orange-brown; medium dense; damp; 20-40% very fine to very coarse sand; 20-40% low plasticity fines; subangular to subrounded pebbles to 2" diameter; low mod to high est K

Gravel interbed; hard at ~2.5'

3" Sand interbed at ~8'

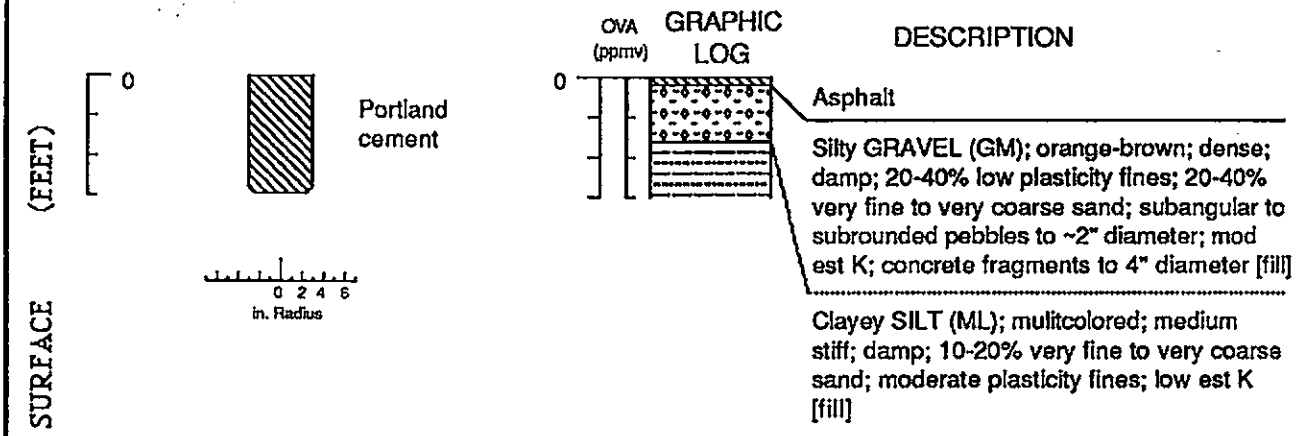
Clayey SILT (ML/MH); brown to orange-brown; medium stiff; damp; 10-20% very fine to very coarse sand; <20% subangular to subrounded pebbles to 1 1/2" diameter; moderate to high plasticity fines; low est K

EXPLANATION

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

Logged by: Jack Gardner
Supervisor: Richard Weiss; EG 1112
Drilling Company: Bay Area Exploration, Suisun, CA
Driller: Carr/Mossman
Drilling Method: Hollow stem auger
Dates Drilled: July 6, 1989
Well Head Completion: Locking cap with traffic-rated vault
Type of sampler: Split barrel (1.5", 2.0", 2.5" ID)

BORING BH-G

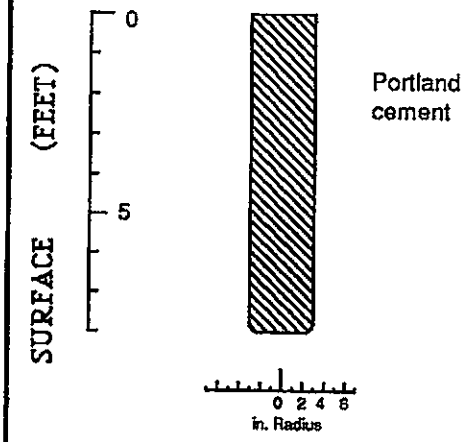


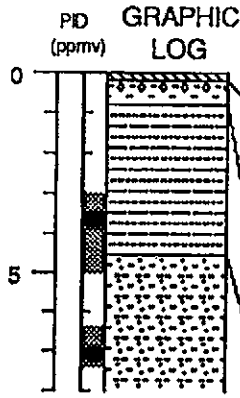
EXPLANATION

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

Logged by: Jack Gardner
Supervisor: Richard Weiss; EG 1112
Drilling Company: Bay Area Exploration, Suisun, CA
Driller: Carr/Mossman
Drilling Method: Hollow stem auger
Dates Drilled: July 6, 1989
Well Head Completion: Locking cap with traffic-rated vault
Type of sampler: Split barrel (1.5", 2.0", 2.5" ID)

BORING BH-H





DESCRIPTION

Asphalt

Silty GRAVEL(GM); orange-brown; medium dense; damp; 10-30% very fine to very coarse sand; subangular to subrounded pebbles to 2" diameter; 30-50% low to moderate plasticity fines; mod est K

Silty CLAY (CH); black mottled gray; medium stiff; damp; high plasticity fines; low est K; strong hydrocarbon odor

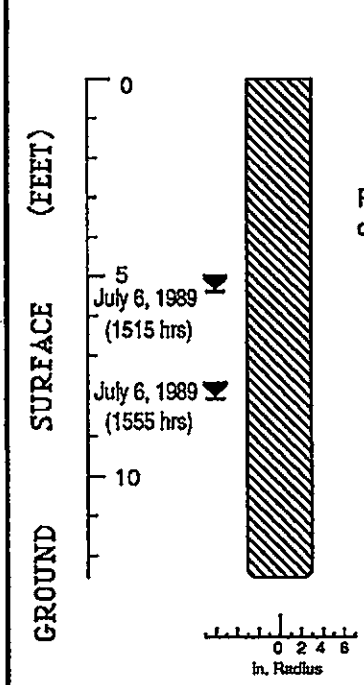
Sandy SILT to Clayey SILT (ML); yellow-brown mottled orange; medium stiff; damp;20-40% very fine to medium sand; low to moderate plasticity; low to mod est K

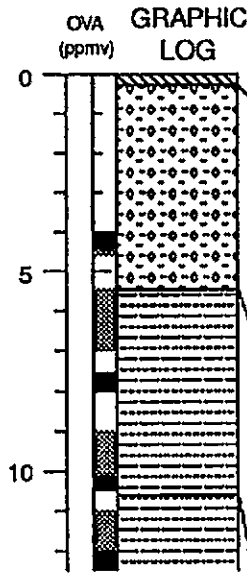
EXPLANATION

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

Logged by: Jack Gardner
Supervisor: Richard Weiss; EG 1112
Drilling Company: Bay Area Exploration, Suisun, CA
Driller: Carr/Mossman
Drilling Method: Hollow stem auger
Dates Drilled: July 6, 1989
Well Head Completion: Locking cap with traffic-rated vault
Type of sampler: Split barrel (1.5", 2.0", 2.5" ID)

BORING BH-I





DESCRIPTION

Asphalt

Silty GRAVEL interbedded with Clayey SILT (GM/ML); orange-brown to dark brown; dense to medium stiff; damp; 20-40% very fine to very coarse sand; angular to subrounded pebbles to 2" diameter; 20-50% low to moderate plastic fines; low to mod est K

Black soil; minor hydrocarbon odor at 2.5'

Strong smell at 4'

Clayey SILT to Silty SAND (ML/SM); yellow-brown mottled orange-brown and gray; medium stiff; wet; 20-60% moderate to non-plastic fines; low to high est K

Strong gasoline odor at 6'

Very fine to medium sand; very high est K from 9.5' to 10'

(Gravelly from 10' to 10.3')

Silty CLAY (CH); red-brown mottled gray; stiff; damp; ~10-20% very fine to very coarse sand; <5% to 20% subangular to subrounded pebbles to 3/8" diameter; highly plastic fines; very low est K

EXPLANATION

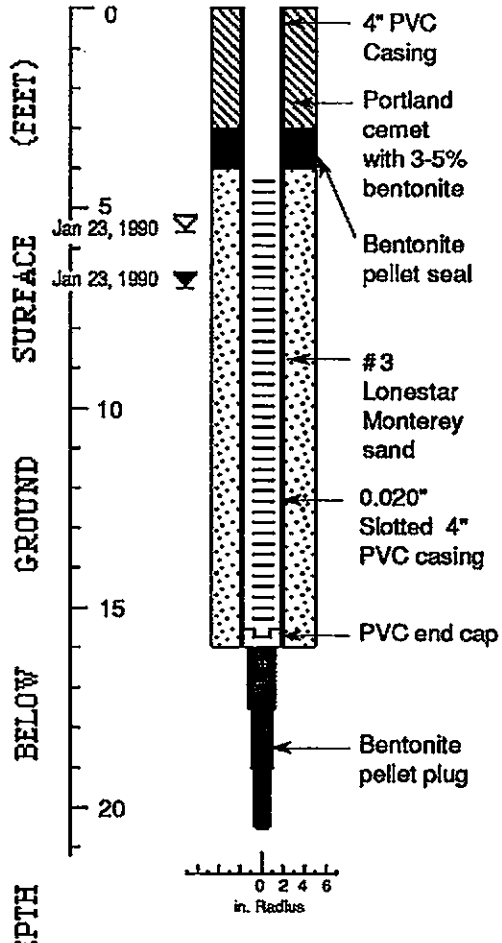
- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

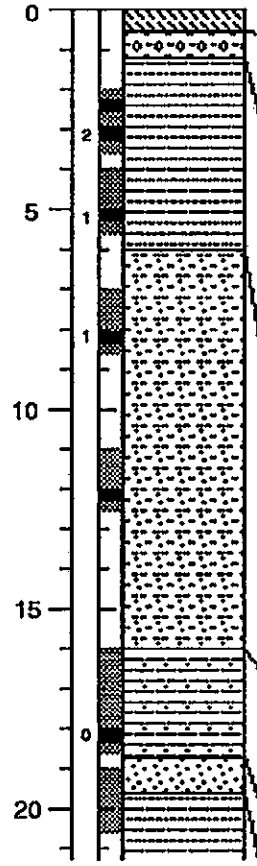
Logged by: Jack Gardner
Supervisor: Richard Weiss; EG 1112
Drilling Company: Bay Area Exploration, Suisun, CA
Driller: Carr/Mossman
Drilling Method: Hollow stem auger
Dates Drilled: July 6, 1989
Well Head Completion: Locking cap with traffic-rated vault
Type of sampler: Split barrel (1.5", 2.0", 2.5" ID)

Boring Log - Boring BH-I

Shell Service Station, 29 Wildwood Ave., Piedmont, California

WELL MW-4 (BH-J)





DESCRIPTION

Asphaltic concrete

Silty GRAVEL (GM); gray-black; medium dense; damp; 10% clay; 20% silt; 70% subangular to subrounded pebbles to 3" diameter; moderate plasticity; moderate K; no odor [Roadbed]

Silty CLAY (CH); dark gray mottled orange; stiff; moist; 60-65% clay; 30% silt; <5% fine sand;<5% subangular pebbles to 3/8" diameter; moderate to high plasticity; very low K; no odor

Gray- green mottled orange at 4.0-5.5'; no odor

Contact - driller

Silty SAND (SM); light brown; medium dense; wet; 30% silt; 60% fine to coarse sand; 10% subangular pebbles to 1" diameter; moderate to high K; no odor

3/4" Pebbles at 10'

Subangular to subrounded pebbles at 5/8" diameter at 11'

Contact - driller

Sandy CLAY/gravelly CLAY (CH); brown; very stiff; moist; 35-50% clay; 20% silt;15-25% fine to coarse sand; 15-20% subangular to subrounded pebbles to 3/4" diameter; high plasticity; very low to low K;

SAND (SP); brown; loose; wet;<5% silt; 95-100% fine to medium sand; high K; no odor

Silty CLAY (CH); brown; very stiff; moist; 50-55% clay; 40% silt; 5-10% fine to coarse sand; moderate to high plasticity; very low K; no odor

EXPLANATION

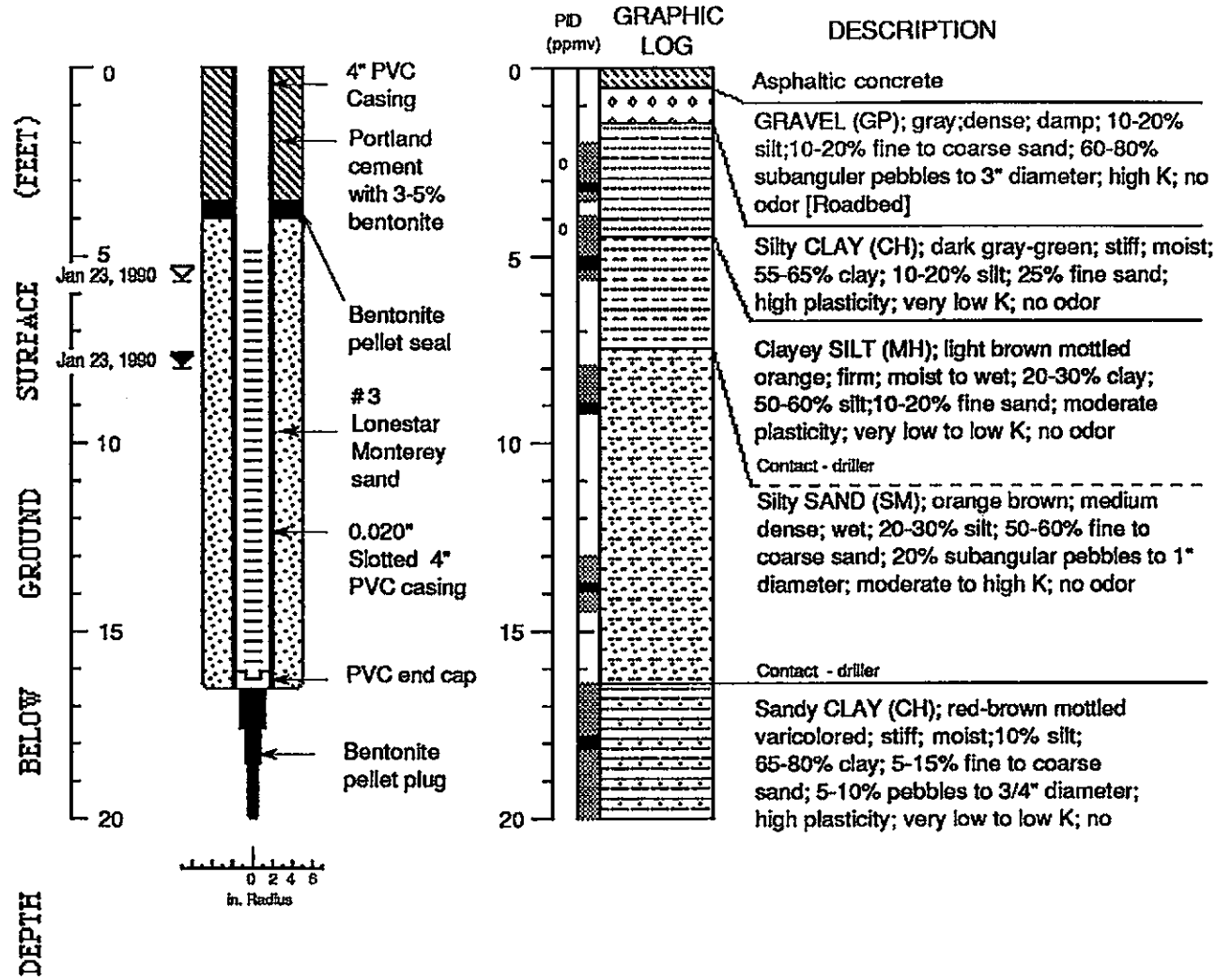
- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged by:	N. Scott MacLeod
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Soil Exploration Services, Vacaville, CA
Driller:	Russ Ellis
Drilling Method:	Hollow stem auger
Date Drilled:	January 23, 1990
Well Head Completion:	Locking wellcap, traffic-rated vault
Type of Sampler:	Split barrel (1.5", 2.0", 2.5" I.D.)
Ground Surface Elevation:	34.03'

Well Construction and Boring Log - Well MW-4 (BH-J)

Shell Service Station
WIC #204-6001-0109
Piedmont, California

WELL MW-5 (BH-K)



EXPLANATION

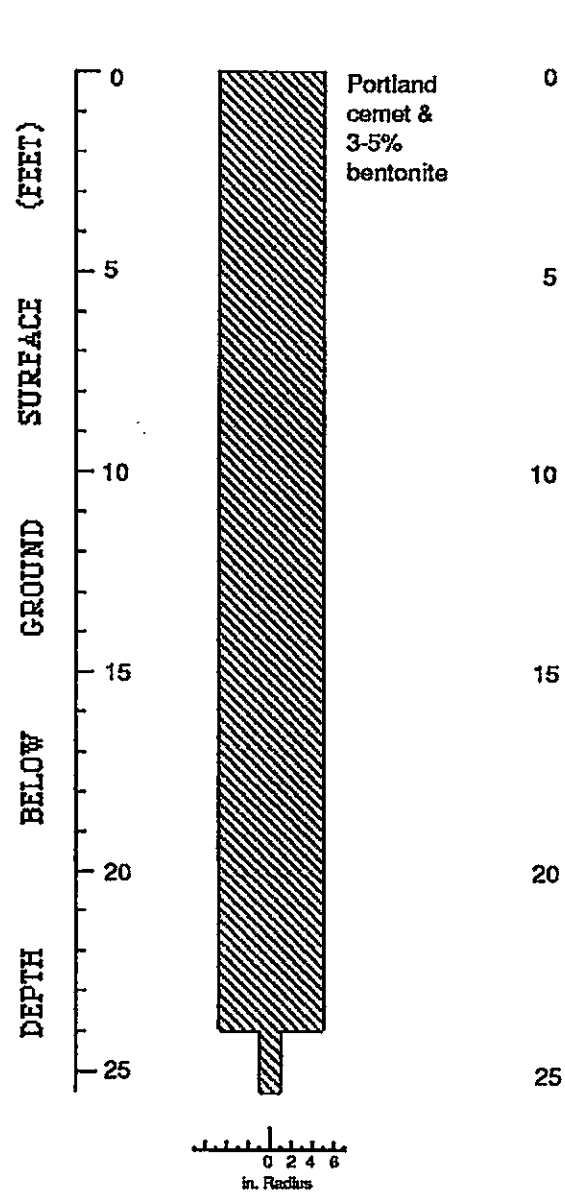
- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

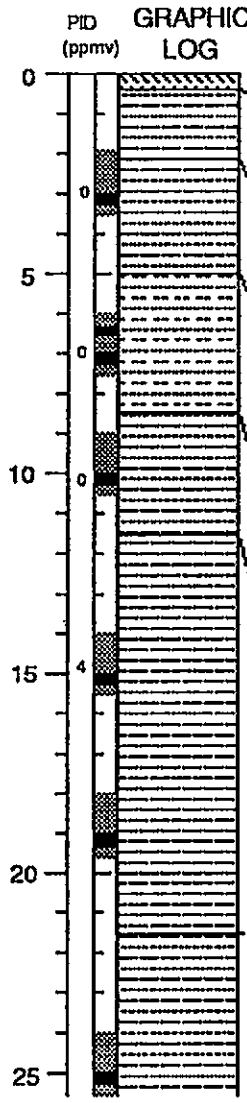
Logged by:	N. Scott MacLeod
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Soils Exploration Services, Vacaville, CA
Driller:	Russ Ellis
Drilling Method:	Hollow stem auger
Date Drilled:	January 23, 1990
Well Head Completion:	Locking wellcap, traffic-rated vault
Type of sampler:	Split barrel (1.5", 2.0", 2.5" I.D.)
Ground Surface Elevation:	31.61'

Well Construction and Boring Log - Well MW-5 (BH-K)

Shell Service Station
WIC #204-6001-0109
Piedmont, California

BORING BH-L





DESCRIPTION

Asphaltic concrete

Silty CLAY (CH); brown; stiff; moist; 65-70% clay; 30% silt; <5% fine to coarse sand; moderate to high plasticity; very low K; no odor

Clayey SILT (MH); brown varicolored; firm; damp to moist; 30% clay; 50-65% silt; 5-20% fine to coarse sand; moderate plasticity ; very low to low K; no odor

Silty SAND/clayey SAND (SM/SC); red & brown varicolored; dense; moist; 15-20% clay; 15-20% silt; 40% fine to coarse sand; 20-30% subangular to subrounded pebbles to 1" diameter; moderate plasticity; low to moderate K; no odor

Silty CLAY/Clayey SILT (CH/MH); brown; stiff; damp to moist; 45% clay; 50% silt; 5% fine sand; moderate plasticity; very low K; no odor

CLAY (CH); brown; very stiff to hard; damp; high plasticity; very low K; no odor

Hard at 18-19.5'
Light gray-green at 18.6' to 19.5'

Silty CLAY/CLAY (CH); light gray-green mottled orange; hard; moist; 80-90% clay; 10-20% silt; high plasticity; very low K; no odor

EXPLANATION

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

Logged by:	N. Scott MacLeod
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Soils Exploration Services, Vacaville, CA
Driller:	Russ Ellis
Drilling Method:	Hollow stem auger
Date Drilled:	January 24, 1990
Type of sampler:	Split barrel (2.0" I.D.)

Boring Log - BH-L

Shell Service Station
WIC #204-6001-0109
Piedmont, California

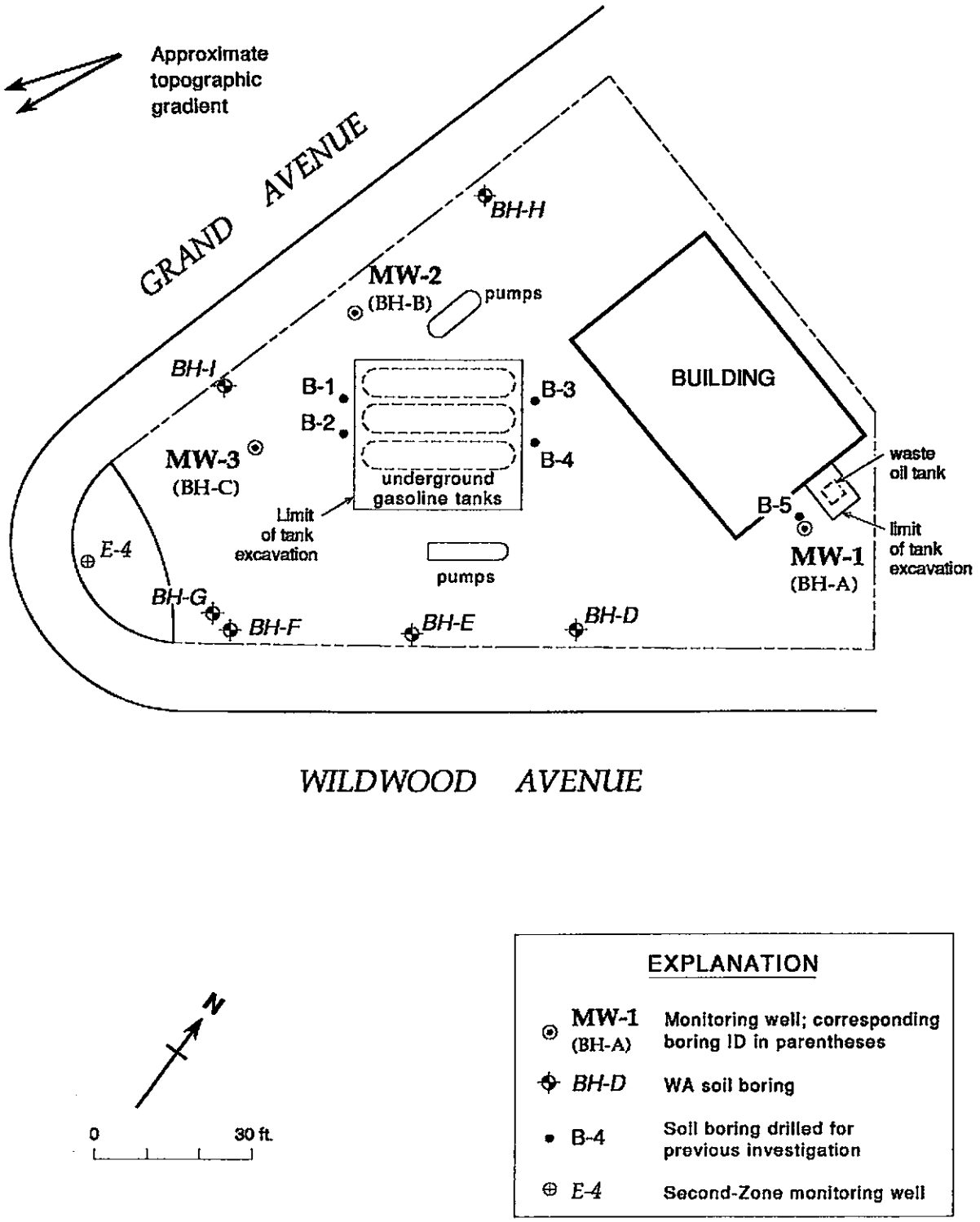


Figure 2. Site Map - Shell Service Station, 29 Wildwood Avenue, Piedmont, California

8/10/92

ANAMETRIX, INC.
LABORATORY SERVICES
ENVIRONMENTAL • ANALYTICAL CHEMISTRY
1961 CONCOURSE DR., SUITE E • SAN JOSE, CA 95131
TEL: (408) 432-8192 • FAX: (408) 432-8198

Dave Blunt
Ensco/Exceltech
41674 Christy Street
Fremont, CA 94539-3114

August 18, 1988
Work Order Number 8808085
Date Received 08/11/88
Project No. 1856

Dear Mr. Blunt:

Eight soil samples were received for analysis of BTEX plus total volatile hydrocarbons as gasoline by gas chromatography, using the following EPA method(s):

ANAMETRIX I.D.	SAMPLE I.D.	METHOD(S)
8808085-01	1856 B-3-1	8015
-02	" B-3-2	8015/8020
-03	" B-3-3	8015
-04	" B-4-1	8015/8020
-05	" B-4-2	8015
-06	" B-5-(1-2)COMP.	"
-07	" B-1-1	"
-08	" B-2-1	"

RESULTS

See enclosed data sheets, Pages 2 thru 9.

If there is any more that we can do, please give us a call. Thank you for using ANAMETRIX, INC.

Sincerely,

Sarah Schoen

Sarah Schoen, Ph.D.
GC Manager

SRS/dg

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1856 B-3-1	Anametrix I.D.	: 8808085-01
Matrix	: SOIL	Analyst	: mr
Date sampled	: 08-10-88	Supervisor	: BMS
Date anl. TVH:	08-12-88	Date released	: 08-18-88
Date ext. TEH:	NA	Date ext. TOG	: NA
Date anl. TEH:	NA	Date anl. TOG	: NA

CAS #	Compound Name	Reporting Limit (ug/kg)	Amount Found (ug/kg)
	TVH as Gasoline	5000	13000

BRL - Below reporting limit.
TVH - Total Volatile Hydrocarbons is determined by modified EPA 8015 with either headspace or purge and trap.
TEH - Total Extractable Hydrocarbons is determined by modified EPA 8015 with direct injection.
TOG - Total Oil & Grease is determined by Standard Method 503E.
BTEX- Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow CRWQCB Region 2 guidelines.

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1856 B-3-2	Anametrix I.D.	: 8808085-02
Matrix	: SOIL	Analyst	: mh
Date sampled	: 08-10-88	Supervisor	: [illegible]
Date anl. TVH	: 08-12-88	Date released	: 08-18-88
Date ext. TEH	: NA	Date ext. TOG	: NA
Date anl. TEH	: NA	Date anl. TOG	: NA

CAS #	Compound Name	Reporting Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	200	4500
108-88-3	Toluene	200	1600
100-41-4	Ethylbenzene	200	2500
1330-20-7	Total Xylenes	200	28000
	TVH as Gasoline	5000	6500000

BRL - Below reporting limit.
TVH - Total Volatile Hydrocarbons is determined by modified EPA 8015 with either headspace or purge and trap.
TEH - Total Extractable Hydrocarbons is determined by modified EPA 8015 with direct injection.
TOG - Total Oil & Grease is determined by Standard Method 503E.
BTEX- Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow CRWQCB Region 2 guidelines.

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1856 B-3-3	Anametrix I.D.	: 8808085-03
Matrix	: SOIL	Analyst	: mh
Date sampled	: 08-10-88	Supervisor	: JHS
Date anl. TVH:	08-12-88	Date released	: 08-18-88
Date ext. TEH:	NA	Date ext. TOG	: NA
Date anl. TEH:	NA	Date anl. TOG	: NA

CAS #	Compound Name	Reporting Limit (ug/kg)	Amount Found (ug/kg)
	TVH as Gasoline	5000	BRL

BRL - Below reporting limit.
TVH - Total Volatile Hydrocarbons is determined by modified EPA 8015 with either headspace or purge and trap.
TEH - Total Extractable Hydrocarbons is determined by modified EPA 8015 with direct injection.
TOG - Total Oil & Grease is determined by Standard Method 503E.
BTEX- Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow CRWQCB Region 2 guidelines.

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1856 B-4-1
Matrix : SOIL
Date sampled : 08-10-88
Date anl. TVH: 08-15-88
Date ext. TEH: NA
Date anl. TEH: NA

Anametrix I.D. : 8808085-04
Analyst : [illegible]
Supervisor : [illegible]
Date released : 08-18-88
Date ext. TOG : NA
Date anl. TOG : NA

CAS #	Compound Name	Reporting Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	200	3400
108-88-3	Toluene	200	1200
100-41-4	Ethylbenzene	200	11000
1330-20-7	Total Xylenes	200	17000
	TVH as Gasoline	5000	750000

BRL - Below reporting limit.
TVH - Total Volatile Hydrocarbons is determined by modified EPA 8015 with either headspace or purge and trap.
TEH - Total Extractable Hydrocarbons is determined by modified EPA 8015 with direct injection.
TOG - Total Oil & Grease is determined by Standard Method 503E.
BTEX- Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow CRWQCB Region 2 guidelines.

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1856 B-4-2	Anametrix I.D.	: 8808085-05
Matrix	: SOIL	Analyst	: ml
Date sampled	: 08-10-88	Supervisor	: JAS
Date anl. TVH	: 08-12-88	Date released	: 08-18-88
Date ext. TEH	: NA	Date ext. TOG	: NA
Date anl. TEH	: NA	Date anl. TOG	: NA

CAS #	Compound Name	Reporting Limit (ug/kg)	Amount Found (ug/kg)
	TVH as Gasoline	5000	BRL

BRL - Below reporting limit.
TVH - Total Volatile Hydrocarbons is determined by modified EPA 8015 with either headspace or purge and trap.
TEH - Total Extractable Hydrocarbons is determined by modified EPA 8015 with direct injection.
TOG - Total Oil & Grease is determined by Standard Method 503E.
BTEX- Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow CRWQCB Region 2 guidelines.

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1856 B-5-(1-2)COMP.	Anametrix I.D.	: 8808085-06
Matrix	: SOIL	Analyst	:
Date sampled	: 08-10-88	Supervisor	:
Date anl. TVH:	08-15-88	Date released	: 08-18-88
Date ext. TEH:	NA	Date ext. TOG	: NA
Date anl. TEH:	NA	Date anl. TOG	: NA

CAS #	Compound Name	Reporting Limit (ug/kg)	Amount Found (ug/kg)
	TVH as Gasoline	5000	BRL

BRL - Below reporting limit.
TVH - Total Volatile Hydrocarbons is determined by modified EPA 8015 with either headspace or purge and trap.
TEH - Total Extractable Hydrocarbons is determined by modified EPA 8015 with direct injection.
TOG - Total Oil & Grease is determined by Standard Method 503E.
BTEX- Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow CRWQCB Region 2 guidelines.

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1856 B-1-1	Anametrix I.D.	: 8808085-07
Matrix	: SOIL	Analyst	: [illegible]
Date sampled	: 08-09-88	Supervisor	: [illegible]
Date anl. TVH	: 08-12-88	Date released	: 08-18-88
Date ext. TEH	: NA	Date ext. TOG	: NA
Date anl. TEH	: NA	Date anl. TOG	: NA

CAS #	Compound Name	Reporting Limit (ug/kg)	Amount Found (ug/kg)
	TVH as Gasoline	5000	BRL

BRL - Below reporting limit.
TVH - Total Volatile Hydrocarbons is determined by modified EPA 8015 with either headspace or purge and trap.
TEH - Total Extractable Hydrocarbons is determined by modified EPA 8015 with direct injection.
TOG - Total Oil & Grease is determined by Standard Method 503E.
BTEX- Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow CRWQCB Region 2 guidelines.

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 1856 B-2-1	Anametrix I.D.	: 8808085-08
Matrix	: SOIL	Analyst	: mh
Date sampled	: 08-09-88	Supervisor	: BRS
Date anl. TVH	: 08-12-88	Date released	: 08-18-88
Date ext. TEH	: NA	Date ext. TOG	: NA
Date anl. TEH	: NA	Date anl. TOG	: NA

CAS #	Compound Name	Reporting Limit (ug/kg)	Amount Found (ug/kg)
	TVH as Gasoline	5000	BRL

BRL - Below reporting limit.
TVH - Total Volatile Hydrocarbons is determined by modified EPA 8015 with either headspace or purge and trap.
TEH - Total Extractable Hydrocarbons is determined by modified EPA 8015 with direct injection.
TOG - Total Oil & Grease is determined by Standard Method 503E.
BTEX- Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow CRWQCB Region 2 guidelines.

EXPLORATORY BORING LOG

ensco environmental services, Inc.

PROJECT NAME: SHELL STATION
29 WILDWOOD AVE.
PIEDMONT, CA

PROJECT NUMBER: 1856G

BORING NO. B-1

DATE DRILLED: 8/9/88

LOGGED BY: RAG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
0				Asphalt - 3", baserock - 9"		
1-2			CH	SILTY CLAY, dark gray (7.5YR 4/0), some fine grained sands, petroleum odor, high plasticity, medium stiff, moist		
3-4			CL	SANDY CLAY, yellowish brown (10YR 5/6), fine grained sand up to 20%, slight petroleum odor, medium stiff, moist		
5	B-1-1	11	CL	SANDY CLAY, light gray to olive yellow (2.5YR 7/0 to 2.5 YR 6/6), fine grained sand to 40%, possible petroleum odor, moist, stiff		0
8-9			CL-SC	SANDY CLAY to CLAYEY SAND, mottled light gray to strong brown (7.5YR 7/0 to 7.5YR 5/8), fine grained sands at 40 to 60%, no petroleum odor, very stiff to medium dense, very moist to wet	▽ 8/9/88, Groundwater encountered - 9.5 ft.	
10	B-1-2	30		Increasing gravels, up to 0.5" across		0
11				Bottom of boring =10.5 feet		
12-21						

SUPERVISED AND APPROVED BY R.G./C.E.G.

EXPLORATORY BORING LOG

ensco environmental services, inc.

PROJECT NAME: SHELL STATION
29 WILDWOOD AVE.
PIEDMONT, CA

PROJECT NUMBER: 1856G

BORING NO. B-2

DATE DRILLED: 8/9/88

LOGGED BY: RAG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
1				Asphalt - 3", baserock - 9"		
2			CH	SILTY CLAY, dark gray (7.5YR 4/0), some fine grained sands, no petroleum odor, high plasticity medium stiff, moist		
3			SC	CLAYEY SAND, dark brown (10YR 3/3), fine to medium grained sands, some gravels up to 0.5" across, faint petroleum odor, loose, moist		
4						
5	B-2-1	7	SW	SAND, dark gray (10YR 4/1), fine to medium grained, strong petroleum odor, loose, very moist, something very hard and resistant at 7 feet, large fragments of red chert 6" across in cuttings		175
6				8/9/88, Groundwater encountered - 6 ft.	▽	
7				Refusal at 7 feet		
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						

SUPERVISED AND APPROVED BY R.G./C.E.G.

EXPLORATORY BORING LOG

ensco environmental services, inc.

PROJECT NAME: SHELL STATION
29 WILDWOOD AVE.
PIEDMONT, CA

PROJECT NUMBER: 1856G

BORING NO. B-3

DATE DRILLED: 8/10/88

LOGGED BY: RAG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
				Concrete - 6"		
1-3				Pea gravel backfill		
4			SC	CLAYEY SAND, brown (10YR 5/3), fine grained sands up to 60%, petroleum odor, loose, moist to very moist		
5-7	B-3-1	6	CH	SILTY CLAY, black (2.5YR 2/0), some isolated gravels, petroleum odor, high plasticity, medium stiff, moist to very moist		90
8				8/10/88, Groundwater encountered - 8 ft.	▽	
9-11	B-3-2	20	CL-SC	SANDY CLAY to CLAYEY SAND, dark gray to gray (2.5y 4/0 to 2.5Y 6/0), fine grained sands, localized clayey and sandy areas, some gravels up to 2" across, strong petroleum odor, medium dense to very stiff, wet		>200
12-14			CL	SILTY CLAY, reddish brown (5YR 4/3), some medium grained sands, possible petroleum odor, hard, damp to moist		
15	B-3-3	74				10
16				Bottom of boring = 15.5 feet		
17-21						

SUPERVISED AND APPROVED BY R.G./C.E.G.

EXPLORATORY BORING LOG

ensco environmental services, Inc.

PROJECT NAME: SHELL STATION
29 WILDWOOD AVE.
PIEDMONT, CA

PROJECT NUMBER: 1856G

BORING NO. B-4

DATE DRILLED: 8/10/88

LOGGED BY: RAG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
				Concrete - 6"		
1-5		3		Pea gravel backfill No sample recovery		
6-9			SP	SAND, dark gray to very dark gray (7.5YR 4/0 to 7.5YR 3/0), fine grained sand, up to 10% clay, strong petroleum odor, loose, very moist to wet, petroleum sheen on sand 8/10/88, Groundwater encountered - 8 ft.	▽	
10	B-4-1	13				250
11-12			SC	CLAYEY SAND, greenish gray (5G 5/1), fine grained sands up to 60%, some rounded gravels up to 2" across, slight petroleum odor, loose, moist		
13-15			CL	SILTY CLAY, reddish brown (5YR 4/3), some medium grained sands, slight petroleum odor, hard, damp		
15	B-4-2	68				20
16-21				Bottom of boring =15 feet		

SUPERVISED AND APPROVED BY R.G./C.E.G.

EXPLORATORY BORING LOG

ensco environmental services, Inc.

PROJECT NAME: SHELL STATION
29 WILDWOOD AVE.
PIEDMONT, CA

PROJECT NUMBER: 1856G

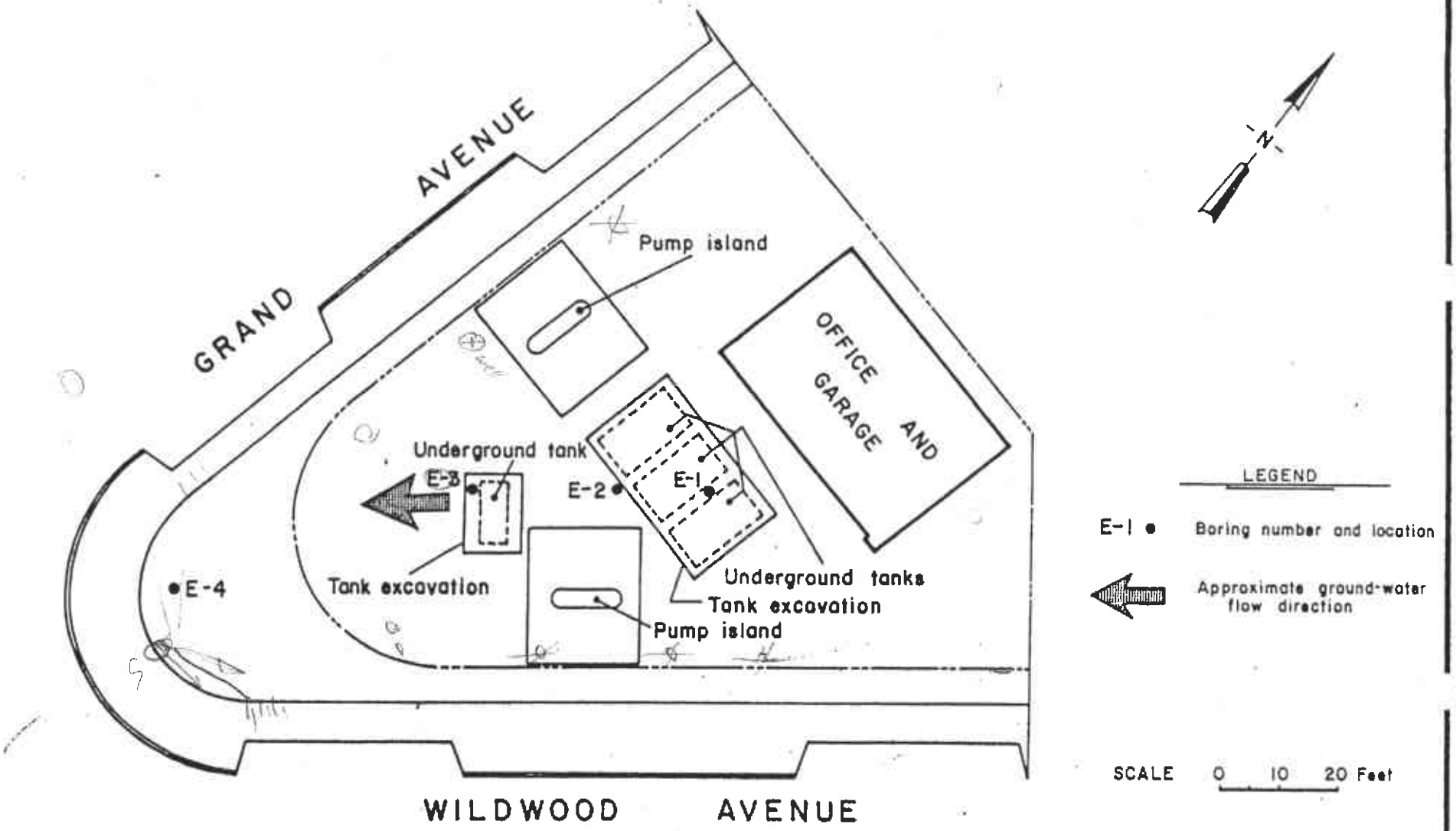
BORING NO. B-5

DATE DRILLED: 8/10/88

LOGGED BY: RAG

DEPTH (ft.)	SAMPLE No	BLOWS/FOOT 140 ft/lbs.	UNIFIED SOIL CLASSIFICATION	SOIL DESCRIPTION	WATER LEVEL	OVA READING ppm
1				Asphalt - 4", baserock - 8"		
2			CH	SILTY CLAY, grayish brown (10YR 5/2), no petroleum odor, high plasticity, stiff, moist		
3						
4			CH	SILTY CLAY, very dark grayish brown (10YR 3/2), some fine sands and medium gravels, high plasticity, slight petroleum odor, stiff, moist		
5	B-5-1	16				
6			CL	SILTY CLAY to SANDY CLAY, mottled dark gray to strong brown (10YR 4/0 to 10YR 4/6), fine grained sands up to 40%, some medium sized gravels, petroleum odor, stiff, moist		20
7			CL-SC	SANDY CLAY to CLAYEY SAND, mottled dark grayish brown to dark brown (10YR 4/2 to 10YR 4/3), 40 to 60% fine grained sands, no petroleum odor, stiff to medium dense, moist 8/10/88, Water level - 9 ft.	▽	
8						
9			SC	CLAYEY SAND, light yellowish brown, fine grained sands up to 70%, no petroleum odor, medium dense, moist		
10	B-5-2	14				
11			SC-SP	CLAYEY SAND to SAND, mottled light gray to yellowish brown (10YR 7/1 to 10YR 5/6), 70 to 90% fine grained sands, no petroleum odor, medium dense, wet		0
12				Bottom of boring =10.5 feet		
13						
14						
15						
16						
17						
18						
19						
20						
21						

SUPERVISED AND APPROVED BY R.G./C.E.G. LOP



EMCON Associates
San Jose, California

GETTLER - RYAN, INC.
SUBSURFACE HYDROGEOLOGIC INVESTIGATIONS
SHELL STATION, GRAND AVE. AND WILDWOOD AVE.
PIEDMONT, CALIFORNIA

SITE PLAN AND BORING LOCATION MAP

FIGURE

PROJECT NO.
438-37.01

LOG OF EXPLORATORY BORING

PROJECT NUMBER 438-37.01 BORING NO. E-1

BY BH DATE 8/15/84 SURFACE ELEV. -

CLASSIFICATION DATA			FIELD DATA			Depth in Ft.	Ground Water Levels	Samples	DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasticity Index		Compressive Stength (TSF)	Penetration (Blows/Ft.)				
									4-inch Concrete
									FILL - Dark gray (2.5Y N4/0) fine SAND has a very strong product odor - damp
						5			(very dark grayish brown (2.5Y 3/2) sandy CLAY has product sheen - wet)
									BOTTOM OF BORING
						10			

REMARKS: Boring was backfilled to 4-inch with cuttings and capped with 4-inches of concrete.

EMCON ASSOCIATES

LOG OF EXPLORATORY BORING

PROJECT NUMBER 438-37.01

BY BH DATE 8/15/84

BORING NO. E-2

SURFACE ELEV. -

CLASSIFICATION DATA			FIELD DATA			Depth in Ft.	Ground Water Levels	Samples	DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasticity Index		Compressive Stength (TSF)	Penetration (Blows/Ft.)				
					9	5			4-inch Concrete FILL - Black (2.5Y N2/0) silty CLAY has strong product odor - damp (has strong product sheen) BOTTOM OF BORING
						10			

REMARKS: Boring was backfilled to 4-inches with cuttings and capped with 4-inches of concrete.

EMCON ASSOCIATES

LOG OF EXPLORATORY BORING

PROJECT NUMBER 438-37.01 BORING NO. E-3

BY BH DATE 8/15/84 SURFACE ELEV. -

CLASSIFICATION DATA			FIELD DATA			Depth in Ft.	Ground Water Levels	Samples	DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasticity Index		Compressive Stength (TSF)	Penetration (Blows/Ft.)				
					8 5	5			4-inch Concrete FILL - Dark olive gray (5Y 3/2) fine SAND has strong product odor - damp (has strong product sheen) BOTTOM OF BORING
						10			

REMARKS: Boring was backfilled to 4-inches with cuttings and capped with 4-inches of concrete.

EMCON ASSOCIATES

LOG OF EXPLORATORY BORING

PROJECT NUMBER 438-37.01 BORING NO. E-4

BY BH DATE 8/15/84 SURFACE ELEV. -

CLASSIFICATION DATA			FIELD DATA						DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasticity Index		Compressive Stength (TSF)	Penetration (Blows/Ft.)	Depth in Ft.	Ground Water Levels	Samples	
					29	5			2-inch Asphalt and 4-inch Baserock (SC)Very dark grayish brown (10YR 3/2) clayey SAND - damp (CL)Dark olive gray (5Y 3/2) sandy CLAY - damp (SC)Dark olive gray (5Y 3/2) clayey SAND - damp
					35	10			(CL)Dark yellowish brown (10YR 3/6) fine sandy CLAY - damp (brown (7.5YR 5/2) sandy - damp to dry) (contains thin gravelly interbeds) (dark brown (7.5YR 3/4) sandy damp)
					35	15			
					70	20			(gray (5Y 5/1) silty very fine sandy - damp to dry)
					58	25			(light olive gray (5Y 6/2) very fine sandy contains minor medium to coarse sand - damp to dry)
					55	30			(SM)Olive gray (5Y 5/2) silty fine SAND - wet (CL)Mottled brown (7.5YR 4/2) and dark yellowish brown (10YR 4/6) CLAY - damp to dry (mottled brown (7.5YR 4/2) and yellowish brown (10YR 5/6) sandy contains thin gravelly. interbeds - damp to dry
					65	35			BOTTOM OF BORING

Sand pack

Screen

REMARKS: Boring was converted to a ground-water monitoring well with the installation of 35 feet of 3-inch PVC casing. The lower 12 feet of casing was slotted and the annular space backfilled to 15 feet with coarse aquarium sand. A bentonite-concrete seal was placed from 15 feet to 1 foot. The well was capped with a protective vault box and a locking device.

Emcon Associates

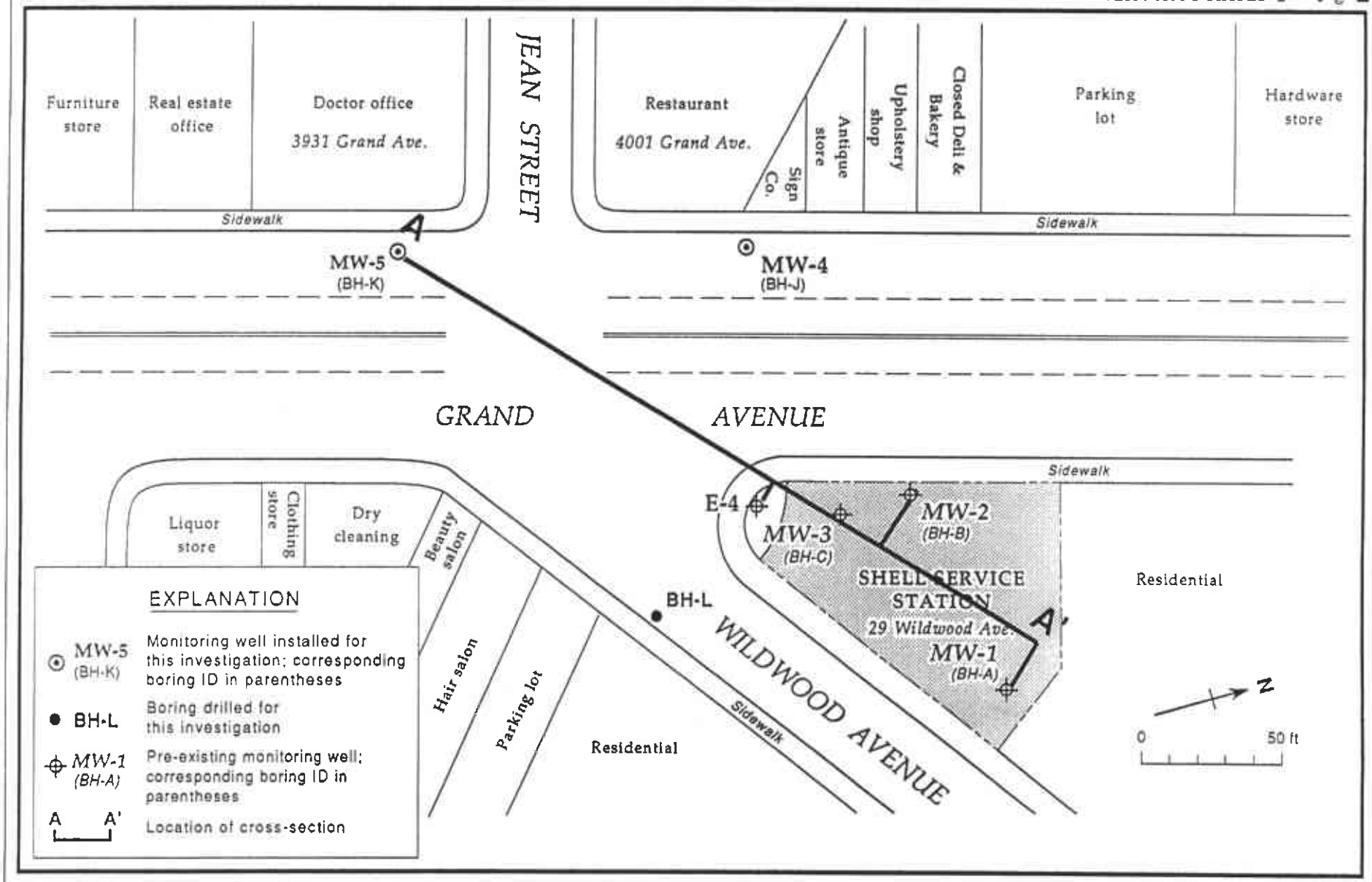


Figure 2. Soil Boring, Monitoring Well and Cross-Section Locations - Shell Service Station, WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California

5/17/90

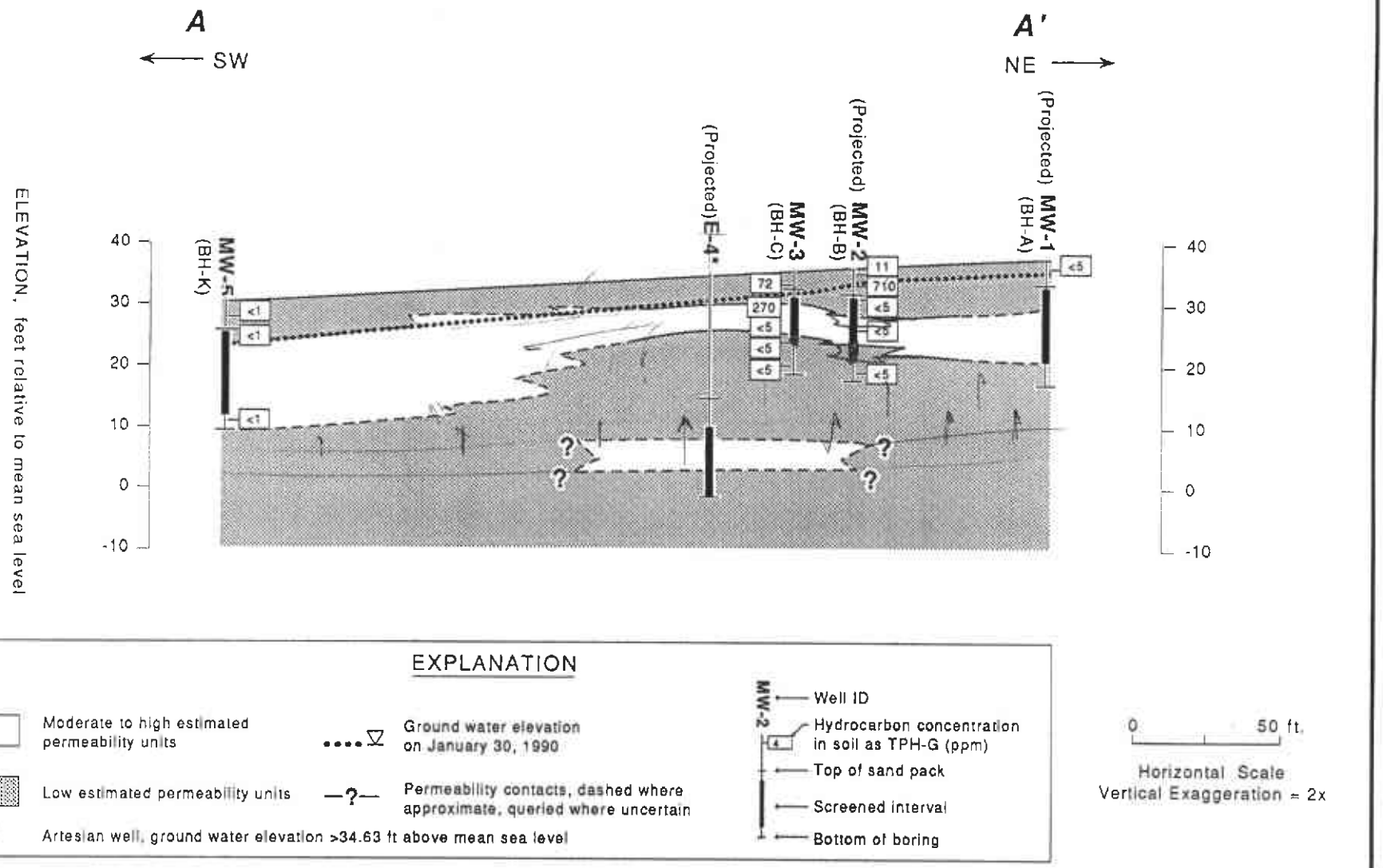


Figure 3. Geologic Cross-Section A-A' - Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California

6/4/90

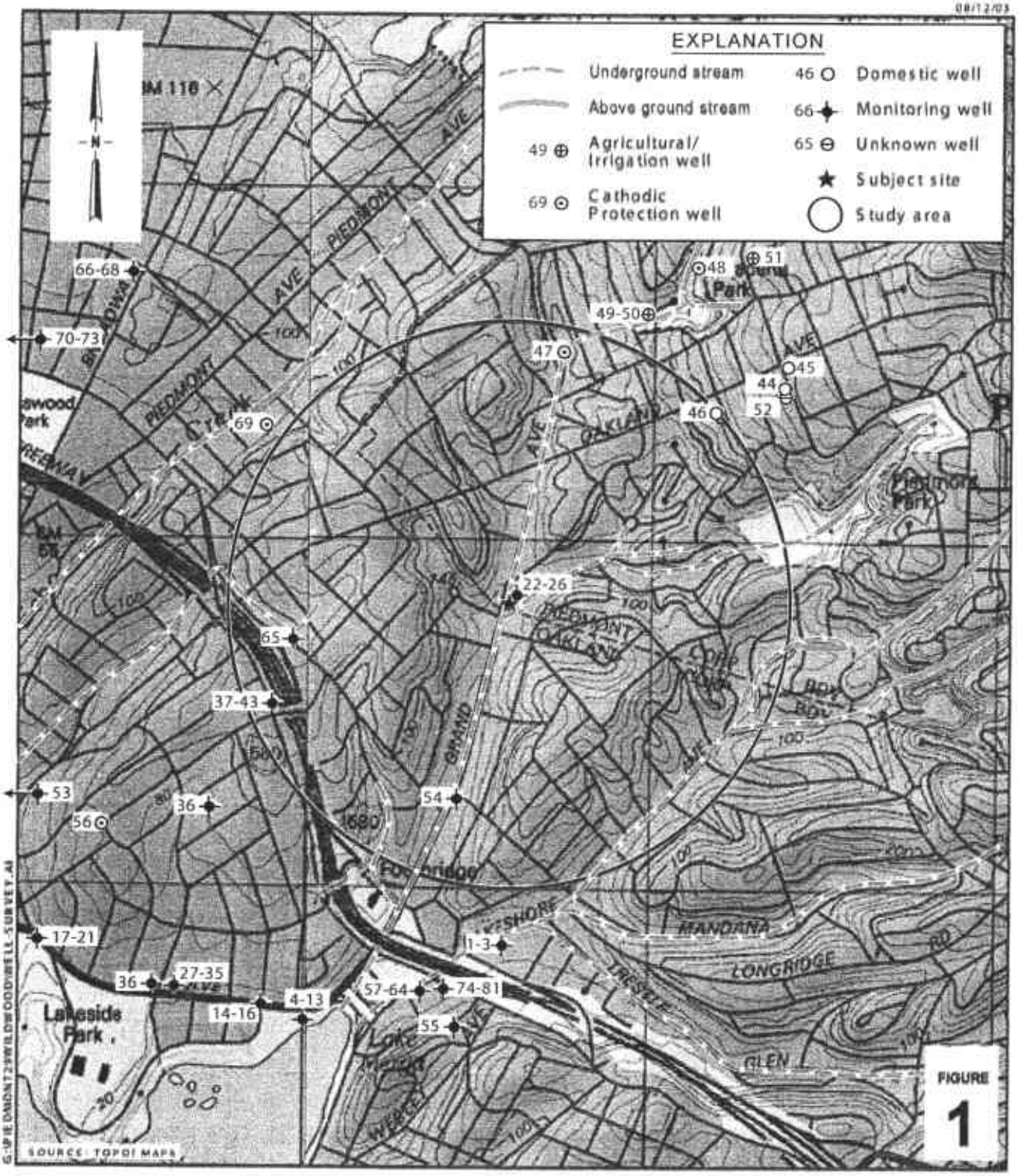


FIGURE 1

Shell-branded Service Station
29 Wildwood Avenue
Piedmont, California
Incident #98995822

CAMBRIA

Vicinity Map/ Area Well Survey

1/2 Mile Radius

Table 1. Department of Well Resources Well Survey Results
Shell-branded Service Station, 29 Wildwood, Piedmont, California. Incident # 98995822

Map ID	Well ID	Owner Well ID	Install Date	Owner	Well Location	Use	Depth (fbg)	Screened Interval (fbg)	Sealed Interval (fbg)	Well Status	Miles From Site
1	1S4W-25R3	U-1	9/24/90	Unocal	3220 Lakeshore Ave.	MON	20	5-20	0-4	UNK	0.60
2	1S4W-25R2	U-2	9/24/90	Unocal	3220 Lakeshore Ave.	MON	20	5-20	0-4	UNK	0.60
3	1S4W-25R4	U-3	9/24/90	Unocal	3220 Lakeshore Ave.	MON	20	5-20	0-4	UNK	0.60
4	1S4W-25Q1	MW-8F	3/16/89	Texaco	500 Grand Ave.	MON	20	9-15	0-8	UNK	0.83
5	1S4W-25Q2	MW-8G	3/16/89	Texaco	500 Grand Ave.	MON	16.5	5-15	0-4.5	UNK	0.83
6	1S4W-25Q3	MW-8H	1/8/90	Texaco	500 Grand Ave.	MON	16.5	5-15	0-4	UNK	0.83
7	1S4W-25Q4	MW-8I	1/9/90	Texaco	500 Grand Ave.	MON	16.5	5-15	0-4	UNK	0.83
8	1S4W-25Q5	MW-8J	1/9/90	Texaco	500 Grand Ave.	MON	16.5	5-15	0-4	UNK	0.83
9	1S4W-25Q7	MW-8E	8/3/92	Texaco	500 Grand Ave.	MON	20	4.5-15	0-4	DEST	0.83
10	1S4W-25Q8	MW-8B	4/1/93	Texaco	500 Grand Ave.	MON	---	---	---	DEST	0.83
11	1S4W-25Q9	MW-8C	4/1/93	Texaco	500 Grand Ave.	MON	---	---	---	DEST	0.83
12	1S4W-25Q10	MW-8L	5/18/93	Texaco	500 Grand Ave.	MON	19.5	3-18	1.5-2.5	UNK	0.83
13	1S4W-25Q11	MW-8K	5/18/93	Texaco	500 Grand Ave.	MON	19.5	3-18	1.5-2.5	UNK	0.83
14	1S4W-25P13	C-1	12/14/92	Chevron	460 Grand Ave.	MON	20	5-15	0-4.5	UNK	0.84
15	1S4W-25P14	C-2	12/14/92	Chevron	460 Grand Ave.	MON	16.5	5-15	0-4.5	UNK	0.84
16	1S4W-25P15	C-3	12/14/92	Chevron	460 Grand Ave.	MON	15	5-15	0-4.5	UNK	0.84
17	1S4W-25M80	MW-2	---	Chevron	210 Grand Ave.	MON	---	---	---	DEST	1.04
18	1S4W-25M9	MW-6	6/29/90	Chevron	210 Grand Ave.	MON	12	5-10	0-5	UNK	1.04
19	1S4W-25M10	MW-7	6/29/90	Chevron	210 Grand Ave.	MON	12	5-10	0-5	UNK	1.04
20	1S4W-25M11	MW-8	6/29/90	Chevron	210 Grand Ave.	MON	14	5.5-8	0-5.5	UNK	1.04
21	1S4W-25M12	MW-9	6/29/90	Chevron	210 Grand Ave.	MON	12	5-10	0-4.5	UNK	1.04
22	1S4W-25A5	MW-1	7/6/89	Shell	29 Wildwood Ave	MON	20	6-15	0-5.5	UNK	0.00
23	1S4W-25A6	MW-2	7/6/89	Shell	29 Wildwood Ave	MON	20	6-12	0-5.5	UNK	0.00
24	1S4W-25A7	MW-3	7/6/89	Shell	29 Wildwood Ave	MON	20	3.5-10	0-3.5	UNK	0.00
25	1S4W-25A4	MW-4	1/23/90	Shell	29 Wildwood Ave	MON	20	4-16	3-4	UNK	0.00
26	1S4W-25A8	MW-5	1/23/90	Shell	29 Wildwood Ave	MON	16.5	5-16	3.5-4	UNK	0.00
27	1S4W-25P6	MW-6	3/6/90	Quick Stop Markets	363 Grand Ave.	MON	30	15-30	0-15	UNK	0.90

Table 1. Department of Well Resources Well Survey Results
Shell-branded Service Station, 29 Wildwood, Piedmont, California. Incident # 98995822

Map ID	Well ID	Owner Well ID	Install Date	Owner	Well Location	Use	Depth (fbg)	Screened Interval (fbg)	Sealed Interval (fbg)	Well Status	Miles From Site
28	1S4W-25P7	MW-7	3/7/90	Quick Stop Markets	363 Grand Ave.	MON	23.5	13.5-23.5	0-11.5	UNK	0.90
29	1S4W-25P8	MW-8	3/7/90	Quick Stop Markets	363 Grand Ave.	MON	31.5	18.5-28.5	0-16.5	UNK	0.90
30	1S4W-25P5	MW-5	3/5/90	Quick Stop Markets	363 Grand Ave.	MON	31.5	15-30	0-13	UNK	0.90
31	1S4W-25P4	MW-4	3/5/90	Quick Stop Markets	363 Grand Ave.	MON	31.5	15-30	0-13	UNK	0.90
32	1S4W-	MW-1	11/10/88	Quick Stop Markets	363 Grand Ave.	MON	27	27-30.5	0-13	UNK	0.90
33	1S4W-	MW-3	11/16/88	Quick Stop Markets	363 Grand Ave.	MON	36	24-34	0-15	UNK	0.90
34	1S4W-	MW-2	11/11/88	Quick Stop Markets	363 Grand Ave.	MON	35.5	15-35	0-15	UNK	0.90
35	1S4W-25P12	RW-1	8/14/90	Quick Stop Markets	363 Grand Ave.	MON	37	25-35	0-22	UNK	0.90
36	1S4W-25P9	S-1	1/7/91	Shell	350 Grand Ave.	MON	17	7-16	0-5	UNK	0.65
37	1S4W-24P1	S-A	4/14/86	Shell	230 MacArthur Blvd.	MON	13	3-13	1.5-2.0	UNK	0.45
38	1S4W-24P2	S-B	4/14/86	Shell	230 MacArthur Blvd.	MON	13	3-13	1.5-2.0	UNK	0.45
39	1S4W-24P3	S-C	4/14/86	Shell	230 MacArthur Blvd.	MON	13	3-13	1.5-2.0	UNK	0.45
40	1S4W-24P7	MW-4	1/9/90	Shell	230 MacArthur Blvd.	MON	25.5	15-25	0-14	UNK	0.45
41	1S4W-24P?	MW-1	7/11/88	Shell	230 MacArthur Blvd.	MON	31.5	10-30	0-8	UNK	0.45
42	1S4W-24P5	MW-2	7/11/88	Shell	230 MacArthur Blvd.	MON	28	10-28	0-6	UNK	0.45
43	1S4W-24P6	MW-3	7/12/88	Shell	230 MacArthur Blvd.	MON	28.5	11.5-28.5	0-10	UNK	0.45
44	1S3W-19P4		2/5/91	Paul Hertelendy	321 Hillside Ave.	DOM	157	77-157	0-21	UNK	0.60
45	1S3W-19P13		5/30/05	Abbott	304 Hillside Ave.	DOM	220	---	0-75	UNK	0.68
46	1S3W-19P2		1977	Traulsen	326 El Cerrito	DOM	300	---	0-110	UNK	0.50
47	1S3W-19M3		1/27/82	East Bay MUD	Lower Grand Ave & Holly Place	CAT	65	---	5-48	UNK	0.48
48	1S3W-19L?		7/17/74	PG & E	132 Dracena Ave	CAT	120	---	---	UNK	0.70
49	1S3W-19M2		8/29/77	City of Peidmont	Dracena Park	IRR	300	---	---	UNK	0.56
50	1S3W-19M3		10/1977	City of Peidmont	Dracena Park	IRR	300	---	---	UNK	0.56
51	1S3W-19M5	---	12/23/88	John B. Bates, Jr.	125 Hillside Ave.	IRR	100	40-100	0-20	UNK	0.75
52	1S3W-	1137	---	Ernest J. Sweetland	321 Hillside Ave.	UNK	119.5	39.5-119.5	---	UNK	0.60
53	1S4W-25M14	---	2/23/93	Wells Fargo Bank/Sehpard Trust	230 Bay Place	MON	20	5-20	0-4	UNK	1.00
54	1S4W-25H1	MW-1	1/25/91	Martini Company	3509 Grand Ave.	MON	40	10-40	0-8	UNK	0.35

Table 1. Department of Well Resources Well Survey Results
Shell-branded Service Station, 29 Wildwood, Piedmont, California. Incident # 98995822

Map ID	Well ID	Owner Well ID	Install Date	Owner	Well Location	Use	Depth (fbg)	Screened Interval (fbg)	Sealed Interval (fbg)	Well Status	Miles From Site
55	1S4W-25R1	MW-1	10/10/89	Ranger Pipeline	637 Beacon	MON	35.5	15-35.5	0-15	UNK	0.75
56	1S4W-25L1	---	8/7/74	PG & E	Adams and Lee Streets	Cathodic	120	---	0-95	UNK	0.81
57	1S4W-25R5	MW-A	---	Chevron	3026 Lakeshore Ave	MON	---	---	---	DEST	0.70
58	1S4W-25R6	MW-B	---	Chevron	3026 Lakeshore Ave	MON	---	---	---	DEST	0.70
59	1S4W-25R7	MW-C	---	Chevron	3026 Lakeshore Ave	MON	---	---	---	DEST	0.70
60	1S4W-25R8	MW-D	---	Chevron	3026 Lakeshore Ave	MON	---	---	---	DEST	0.70
61	1S4W-25R9	MW-G	---	Chevron	3026 Lakeshore Ave	MON	---	---	---	DEST	0.70
62	1S4W-25R10	MW-H	---	Chevron	3026 Lakeshore Ave	Extraction	---	---	---	DEST	0.70
63	1S4W-25R11	MW-I	---	Chevron	3026 Lakeshore Ave	Extraction	---	---	---	DEST	0.70
64	1S4W-25R12	MW-J	---	Chevron	3026 Lakeshore Ave	Extraction	---	---	---	DEST	0.70
65	1S4W-25B1	1	6/7/89	City of Oakland (Fire Station 10)	172 Santa Clara Ave	MON	25	10-25	0-9.5	UNK	0.38
66	1S4W-24L4	MW-1	10/17/89	Unocal	3943 Broadway	MON	20	5-20	0-4	UNK	0.90
67	1S4W-24L14	MW-10	2/6/92	Unocal	3943 Broadway	MON	---	---	---	UNK	0.90
68	1S4W-24L15	MW-11	2/6/92	Unocal	3943 Broadway	MON	---	---	---	UNK	0.90
69	1S4W-24Q1	---	6/26/74	PG & E	Moutell St, 75' w/o Robley Terrace	CAT	120	---	0-95	UNK	0.55
70	1S4W-24M1	MW-1	9/7/89	Unocal	411 W. MacArthur Blvd.	MON	29	5-29	0-4	UNK	1.00
71	1S4W-24M2	MW-2	9/6/89	Unocal	411 W. MacArthur Blvd.	MON	30.5	3.5-28.5	0-3	UNK	1.00
72	1S4W-24M3	MW-3	9/7/89	Unocal	411 W. MacArthur Blvd.	MON	29	5-29	0-4	UNK	1.00
73	1S4W-24M4	MW-4	9/6/89	Unocal	411 W. MacArthur Blvd.	MON	29	5-29	0-4	UNK	1.00
74	1S4W-25R13	MW-1	8/7/91	Chevron	3026 Lakeshore Ave	MON	14	4-14	0-3	DEST	0.69
75	1S4W-25R14	MW-2	8/7/91	Chevron	3026 Lakeshore Ave	MON	12	2-12	0-2	UNK	0.69
76	1S4W-25R15	MW-3	8/13/91	Chevron	3026 Lakeshore Ave	MON	18	8-18	0-5	UNK	0.69
77	1S4W-25R16	MW-4	8/13/91	Chevron	3026 Lakeshore Ave	MON	15	5-15	0-4	UNK	0.69
78	1S4W-25R17	MW-1	6/19/92	Chevron	3026 Lakeshore Ave	MON	19	4-19	0-3	UNK	0.69
79	1S4W-25R18	MW-5	6/12/92	Chevron	3026 Lakeshore Ave	MON	24	15-35	0-13	UNK	0.69
80	1S4W-25R19	MW-6	6/12/92	Chevron	3026 Lakeshore Ave	MON	19	4-19	0-3	UNK	0.69
81	1S4W-25R13	MW-7	6/12/92	Chevron	3026 Lakeshore Ave	MON	19	4-19	0-3	UNK	0.69

Table 1. Department of Well Resources Well Survey Results

Shell-branded Service Station, 29 Wildwood, Piedmont, California. Incident # 98995822

Map ID	Well ID	Owner Well ID	Install Date	Owner	Well Location	Use	Depth (fbg)	Screened Interval (fbg)	Sealed Interval (fbg)	Well Status	Miles From Site

Notes and Abbreviations:

Well information provided by the Alameda County Water District.

Map ID number refers to map location on Figure 1.

Well ID = California State well identification number as recorded by the Department of Water Resources in Sacramento, California

fbg = feet below grade

AG = Agricultural

DOM = Domestic

GEO = Geotechnical

IND = Industrial

MON = Monitoring

UNK = Unknown

CAT = Cathodic Protection

DEST = destroyed

"---" = no data available

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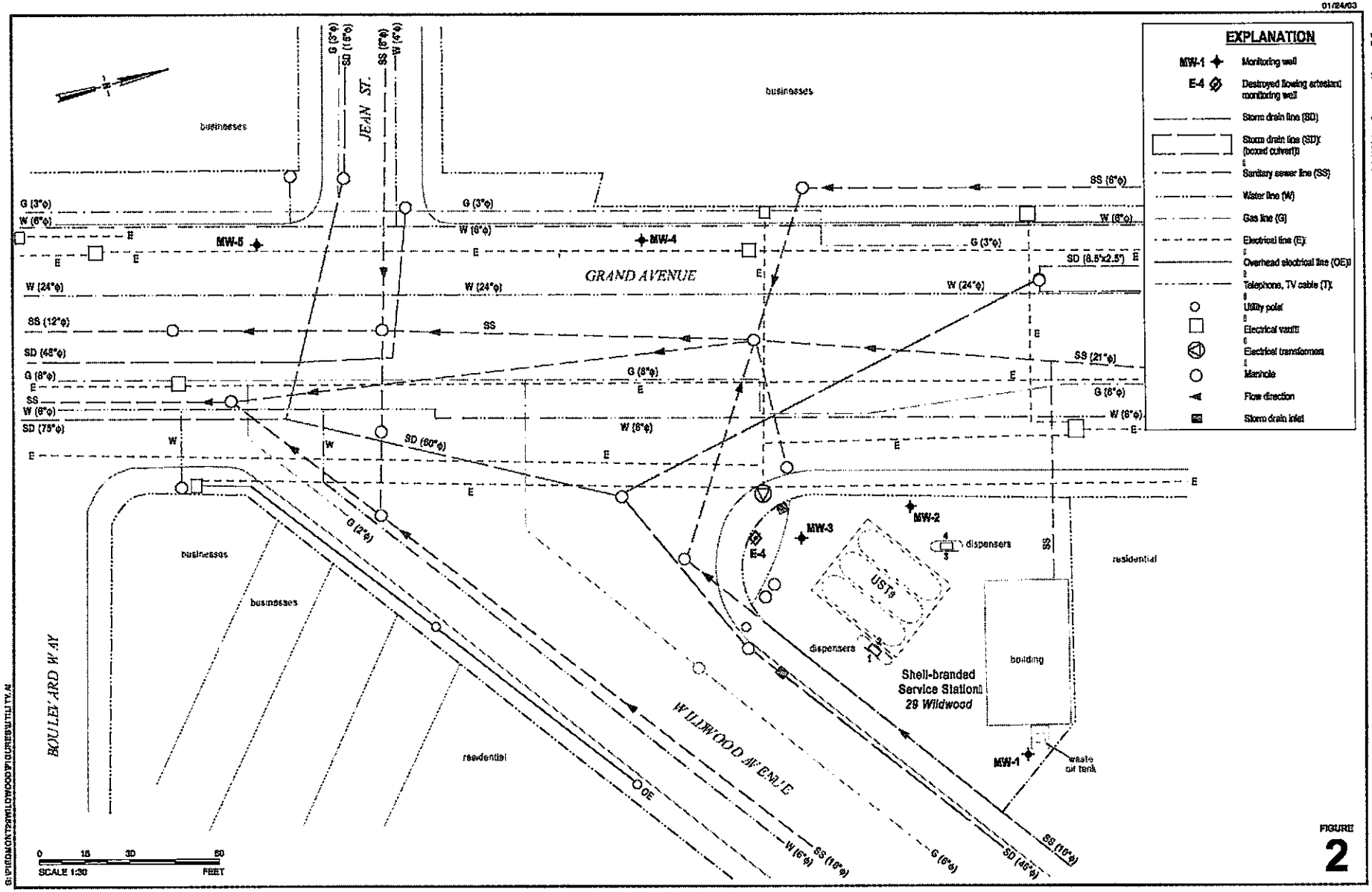

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Utility Location Map

CAMBRIA

Shell-branded Service Station
29 Wildwood Avenue
Piedmont, California
Incident #98995822

FIGURE
2