



Chevron U.S.A. Products Company

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91000 207

September 30, 1992

Mr. Scott Seery
Alameda County Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Re : Chevron Service Station No. 9-8139
16304 Foothill Rd., San Leandro, California

Mr. Seery :

Enclosed is the quarterly monitoring report dated September 23, 1992.

During this sampling period, monitoring wells MW-1, MW-7, MW-8, MW-10, and MW-11 were nondetect (ND) for total petroleum hydrocarbon as gasoline (TPH-G), benzene, toluene, ethylbenzene, and xylenes (BTEX). Well MW-2 contained only 1.1 ppb xylenes. The remaining wells (MW-3, MW-6, and MW-9) had the following ranges of TPH-G and BTEX : ND<50 to 26000 ppb TPH-G, 1.2 to 4900 ppb benzene, 0.6 to 1100 ppb toluene, ND<0.5 to 1200 ppb ethylbenzene, 1.9 to 3600 ppb xylenes. Depth to water ranged from 14.30 to 22.24 feet.

This site will continue too be monitored and sampled on a quarterly basis.

If you have any questions or comments, call me at (510) 842-8752.

Sincerely,

Chevron U.S.A. Products Co.

Kenneth Kan
Engineer

LKAN/MacFile 9-8139R4

Enclosure

cc : Mr. Lester Feldman
RWQCB-S.F. Bay Region
2101 Webster Str., Suite 500
Oakland, CA 94612

Ms. Bette Owen
Chevron U.S.A. Products Co.

Received 10/7/92
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92007-000007

**QUARTERLY MONITORING REPORT
THIRD QUARTER 1992**

**CHEVRON SERVICE STATION NO. 9-8139
16304 Foothill Boulevard
San Leandro, California**



Prepared for
CHEVRON USA, INC.
CHV149/353



BURLINGTON ENVIRONMENTAL

92 001-1 00 07

September 23, 1992
CHV149/353

Mr. Kenneth Kan
Environmental Engineer
Chevron USA, Inc.
2410 Camino Ramon
San Ramon, California 94583-0804

Re: **QUARTERLY MONITORING REPORT**
Third Quarter 1992
Chevron Service Station No. 9-8139
16304 Foothill Boulevard
San Leandro, California

Dear Mr. Kan:

Burlington Environmental Inc. (Burlington) is pleased to submit the following quarterly monitoring report for Chevron USA, Inc. (Chevron) Service Station No. 9-8139, located at 16304 Foothill Boulevard in San Leandro, California. The groundwater monitoring and sampling was conducted by Burlington on July 27 and 28, 1992.

MONITORING ACTIVITIES

The site is occupied by an operating service station located on Foothill Boulevard in southern San Leandro, California (see Figure 1). The service station is located approximately 250 feet east of Highway 580, and 6,000 feet south of Lake Chabot. There are currently five groundwater monitoring wells and three groundwater extraction wells located onsite and two groundwater monitoring wells located offsite (see Figure 2). In each monitoring well, the depth to groundwater and the presence or absence of phase-separated hydrocarbons (PSH) were determined. Groundwater samples were collected and analyzed according to Chevron and EPA guidelines to determine the concentrations of total petroleum hydrocarbons as gasoline (TPH), and benzene, toluene, ethylbenzene and total xylenes (BTEX). The monitoring and sampling procedures are presented in Appendix A. Field data sheets are presented in Appendix B.

Superior Precision Analytical, Inc., located in San Francisco, California, performed the analyses. The analytical results, techniques, and detection limits are presented in Table 1.

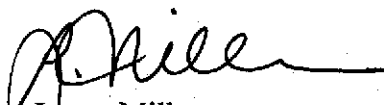
RESULTS

The groundwater elevation in the monitoring wells beneath and in the vicinity of the site on July 27, 1992, ranged from 104.62 to 112.79 feet above mean sea level (see Table 2). A contour map of these data is presented in Figure 3. As shown on the contour map, the general groundwater flow direction beneath the site is to the south with an approximate gradient of 0.03 ft/ft.

The results of the chemical analyses are presented in Table 1. No PSH were detected in any of the monitoring wells during the April 1992 quarterly sampling event. Figure 4 presents isoconcentration contours for benzene. Chain-of-custody documentation and certified analytical results are presented in Appendix C.

As of August 21, 1992, the management of your project has been transferred from Ms. Felicia Rein to Mr. Larry Miller. We look forward to continuing the working relationship that had been established between your firm and Ms. Rein. We appreciate the opportunity to provide you with quality environmental consulting services. Please do not hesitate to contact us if we can provide further assistance.

Best regards,
BURLINGTON ENVIRONMENTAL INC.



Larry Miller
Field Project Manager



David C. Tight, R.G. No. 4603
Investigation/Remediation Manager

Attachments: Table 1 - Groundwater Analytical Results
Table 2 - Groundwater Elevation Data

Figure 1 - Site Location Map
Figure 2 - Site Vicinity Map
Figure 3 - Groundwater Elevation Contours
Figure 4 - Benzene Isoconcentration Contours

Appendix A - Groundwater Sampling and Analysis Procedures
Appendix B - Water Sample Field Data Sheets
Appendix C - Chain-of-Custody Records and Certified Analytical Reports

Table 1
GROUNDWATER ANALYTICAL RESULTS

Chevron Service Station No. 9-8139
16304 Foothill Blvd, San Leandro, California

WELL NUMBER	SAMPLE NO.	DATE SAMPLED	TPH		TOTAL OIL & GREASE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	TOTAL		METALS		ETHYLENE DIBROMIDE
			Gasoline	Diesel						Pb	Cr	Cd	Zn	
EPA Detection Method:			8015	8015	413	602*	602*	602*	602*	7420	7190	7130	7950	504
MW-1	WS-1SL	12/5/89	ND(<500)	ND(<1000)	ND(<5000)	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	ND(<500)	ND(<100)	20	20	ND(<.05)
	WS-1SL	5/24/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	1WSSL	9/6/90	ND(<50)	NA	NA	ND(<.5)	0.8	ND(<.5)	0.5	NA	NA	NA	NA	ND(<.05)
	WS13SL	11/29/90	ND(<50)	NA	NA	0.7	0.9	ND(<.5)	1	NA	NA	NA	NA	NA
	WS18SL	2/20/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS27SL	5/22/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS39SL	8/22/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS47SL	11/13/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS59SL	1/31/92	ND(<50)	NA	NA	0.5	ND(<.5)	ND(<.5)	0.5	NA	NA	NA	NA	NA
	WS64SL	4/23/92	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS75SL	7/27/92	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	MW-2	WS-2SL	12/5/89	ND(<500)	ND(<1000)	ND(<5000)	ND(<.5)	ND(<.5)	ND(<.5)	0.9	ND(<500)	ND(<100)	ND(<10)	10
WS-2SL		5/24/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
2WSSL		9/6/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	ND(<.05)
WS10SL		11/29/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
WS19SL		2/20/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
WS26SL		5/22/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
WS38SL		8/22/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
WS46SL		11/13/91	58	NA	NA	ND(<.5)	0.5	0.7	2.3	NA	NA	NA	NA	NA
WS56SL		1/31/92	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
WS62SL		4/23/92	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
WS73SL		7/27/92	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	1.1	NA	NA	NA	NA	NA
MW-3		WS-3SL	12/5/89	24,000	NA	NA	2,400	1,800	360	2,600	NA	NA	NA	NA
	WS-5SL (d)	12/5/89	24,000	NA	ND(<5000)	2,500	1,900	390	2,600	ND(<500)	ND(<100)	ND(<10)	40	ND(<.05)
	WS-3SL	5/24/90	9,000	NA	NA	2,600	1,700	250	1,500	NA	NA	NA	NA	NA
	WS-4SL (d)	5/24/90	10,000	NA	NA	2,600	1,800	260	1,600	NA	NA	NA	NA	NA
	3WSSL	9/6/90	3,500	NA	NA	900	550	110	460	NA	NA	NA	NA	ND(<.05)
	WS15SL	11/29/90	9,200	NA	NA	1,100	1,100	210	1,100	NA	NA	NA	NA	NA
	WS21SL	2/20/91	8,800	NA	NA	960	780	200	920	NA	NA	NA	NA	NA
	WS29SL	5/22/91	28,000	NA	NA	5,800	1,200	460	2,300	NA	NA	NA	NA	NA
	WS41SL	8/22/91	21,000	NA	NA	3,100	2,000	480	2,000	NA	NA	NA	NA	NA
	WS42SL (d)	8/22/91	19,000	NA	NA	2,700	1,800	420	1,700	NA	NA	NA	NA	NA
	WS49SL	11/13/91	18,000	NA	NA	2,400	1,200	450	2,200	NA	NA	NA	NA	NA
	WS58SL	1/31/92	18,000	NA	NA	3,800	920	700	2,600	NA	NA	NA	NA	NA
WS65SL	4/23/92	46,000	NA	NA	5,000	1,900	1,000	3,500	NA	NA	NA	NA	NA	
WS76SL	7/27/92	26,000	NA	NA	4,300	1,100	1,200	3,600	NA	NA	NA	NA	NA	

(continued)

Table 1
GROUNDWATER ANALYTICAL RESULTS

Chevron Service Station No. 9-8139
16304 Foothill Blvd, San Leandro, California
(continued)

WELL NUMBER	SAMPLE NO.	DATE SAMPLED	TPH Gasoline	TPH Diesel	TOTAL OIL & GREASE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	Pb	TOTAL Cr	METALS Cd	Zn	ETHYLENE DIBROMIDE
EPA Detection Method:			8015	8015	413	602*	602*	602*	602*	7420	7190	7130	7950	504
MW-4**	WS-4SL	12/5/89	19,000	NA	NA	390	1,300	460	1,800	NA	NA	NA	NA	ND(<.05)
(EW-3)	WS-5SL	5/24/90	4,500	NA	NA	210	440	140	480	NA	NA	NA	NA	NA
	4WSSL	9/6/90	6,000	NA	NA	680	520	170	580	NA	NA	NA	NA	ND(<.05)
	WS16SL	11/29/90	15,000	NA	NA	800	1,000	430	1,700	NA	NA	NA	NA	NA
	WS22SL	2/20/91	15,000	NA	NA	640	390	420	1,600	NA	NA	NA	NA	NA
	WS23SL (d)	2/20/91	15,000	NA	NA	680	410	430	1,600	NA	NA	NA	NA	NA
	WS30SL	5/22/91	9,800	NA	NA	580	140	310	740	NA	NA	NA	NA	NA
	WS31SL (d)	5/22/91	7,200	NA	NA	520	130	270	670	NA	NA	NA	NA	NA
MW-5**	WS-6SL *	5/25/90	28,000	NA	NA	920	1,100	460	1,300	NA	NA	NA	NA	2.4
(EW-2)	NS *	9/7/90	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	NS	11/29/90	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	NS	2/20/91	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	NS	5/22/91	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	WS-7SL *	5/25/90	ND(<50)	NA	NA	ND(<2)	ND(<3)	ND(<3)	ND(<3)	NA	NA	NA	NA	ND(<.02)
	6WSSL *	9/7/90	ND(<50)	NA	NA	ND(<2)	ND(<3)	ND(<3)	ND(<3)	NA	NA	NA	NA	ND(<.05)
	WS17SL	11/29/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS24SL	2/20/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS32SL	5/22/91	ND(<50)	NA	NA	0.5	0.7	ND(<.5)	1.1	NA	NA	NA	NA	NA
	WS45SL	8/23/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS50SL	11/14/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS51SL	11/14/91	ND(<50)	NA	NA	ND(<.5)	0.6	ND(<.5)	1.1	NA	NA	NA	NA	NA
	WS60SL	1/31/92	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS61SL (d)	1/31/92	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS66SL	4/23/92	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS67SL (d)	4/23/92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	WS77SL	7/27/92	ND(<50)	NA	NA	NA	0.6	ND(<.5)	1.9	NA	NA	NA	NA	NA
MW-7	WS-8SL *	5/25/90	ND(<50)	NA	NA	ND(<2)	ND(<3)	ND(<3)	ND(<3)	NA	NA	NA	NA	ND(<.02)
	7WSSL *	9/7/90	ND(<50)	NA	NA	ND(<2)	ND(<3)	ND(<3)	ND(<3)	NA	NA	NA	NA	ND(<.05)
	8WSSL (d)*	9/7/90	ND(<50)	NA	NA	ND(<2)	ND(<3)	ND(<3)	ND(<3)	NA	NA	NA	NA	ND(<.05)
	WS14SL	11/29/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS20SL	2/20/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS28SL	5/22/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS40SL	8/22/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS48SL	11/13/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS57SL	1/31/92	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS63SL	4/23/92	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS74SL	7/27/92	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA

(continued)

Table 1
GROUNDWATER ANALYTICAL RESULTS

Chevron Service Station No. 9-8139
16304 Foothill Blvd, San Leandro, California
(continued)

WELL NUMBER	SAMPLE NO.	DATE SAMPLED	TPH		TOTAL OIL & GREASE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	TOTAL METALS			ETHYLENE DIBROMIDE	
			Gasoline	Diesel						Pb	Cr	Cd		Zn
EPA Detection Method:			8015	8015	413	602*	602*	602*	602*	7420	7190	7130	7950	504
MW-8	9WSSL	9/7/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	ND(<.05)
	WS11SL	11/29/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS12SL (d)	11/29/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS25SL	2/20/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS33SL	5/22/91	ND(<50)	NA	NA	0.6	ND(<.5)	ND(<.5)	1	NA	NA	NA	NA	NA
	WS44SL	8/23/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS52SL	11/14/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	WS55SL	1/30/92	ND(<50)	NA	NA	1	0.7	ND(<.5)	1.1	NA	NA	NA	NA	NA
	WS68SL	4/24/92	ND(<50)	NA	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
WS81SL	7/27/92	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA	
MW-9	WS43SL	8/22/91	9600	NA	NA	46	170	98	1,200	NA	NA	NA	NA	ND(<.05)
	WS53SL	11/14/91	11,000	NA	NA	130	58	86	1,500	NA	NA	NA	NA	ND(<.05)
	WS54SL	1/30/92	11,000	NA	NA	210	29	110	1,900	NA	NA	NA	NA	NA
	WS69SL	4/24/92	17,000	NA	NA	180	25	100	1,900	NA	NA	NA	NA	NA
	WS80SL	7/27/92	2,800	NA	NA	1.6	18	18	280	NA	NA	NA	NA	NA
MW-10	WS78SL	7/27/92	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
MW-11	WS79SL	7/27/92	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
EW-1**	WS-9SL *	5/25/90	3,900	NA	NA	260	430	64	340	NA	NA	NA	NA	0.03
RINSATE	RS-4SL	12/5/89	ND(<500)	NA	ND(<5000)	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	ND(<500)	ND(<100)	ND(<10)	ND(<10)	ND(<.05)
	RS-1SL	5/24/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	1RSSL	9/7/90	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	ND(<.05)
	RS3SL	2/20/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	RS4SL	5/22/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	RS7SL	8/22/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	RS7SL	11/13/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	RS8SL	1/30/92	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	RS9SL	4/23/92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

(continued)

Table 1
GROUNDWATER ANALYTICAL RESULTS

Chevron Service Station No. 9-8139
16304 Foothill Blvd, San Leandro, California
(continued)

WELL NUMBER	SAMPLE NO.	DATE SAMPLED	TPH		TOTAL OIL & GREASE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	TOTAL METALS			ETHYLENE DIBROMIDE	
			Gasoline	Diesel						Pb	Cr	Cd		Zn
EPA Detection Method:			8015	8015	413	602*	602*	602*	602*	7420	7190	7130	7950	504
TRIP BLANK	TB3SL	2/20/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	TB4SL	5/22/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	TB6SL	5/22/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	TB7SL	11/13/91	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	TB8SL	1/30/92	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	TB-LB	4/23/92	ND(<50)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA
	TB-LB	7/27/92	ND(<.5)	NA	NA	ND(<.5)	ND(<.5)	ND(<.5)	ND(<.5)	NA	NA	NA	NA	NA

Notes:

Groundwater chemistry values presented in parts per billion (ppb)

ND = Less than method detection limit

NS = Not Sampled due to the presence of floating product

NA = No Analysis

(d) = Duplicate Sample

*In 5/90 and in 9/90 MW-5, MW-6, MW-7 and EW-1 were analyzed for Volatile Organics using EPA Method 8240 (624).

Other samples were analyzed using EPA Method 8020 (602).

**MW-4 and MW-5 were converted to extraction wells EW-3 and EW-2, respectively, on June 10, 1991.

Extraction wells are not monitored in quarterly events.

Table 2
GROUNDWATER ELEVATION DATA

Chevron Service Station No. 9-8139
16304 Foothill Blvd., San Leandro, California

Well Number	Date Sampled	Casing Diameter (inches)	TOC Elevation (ft-MSL)	Depth to Water (ft-BTOC)	PSH (ft)	Water Elevation (ft-MSL)
MW-1	3/23/90	2.0	127.09	12.92	ND	114.17
	9/6/90	2.0	127.09	14.68	ND	112.41
	9/25/90	2.0	127.09	15.01	ND	112.08
	11/29/90	2.0	127.09	14.82	ND	112.27
	2/20/91	2.0	127.09	14.29	ND	112.80
	4/19/91	2.0	127.09	12.16	ND	114.93
	5/22/91	2.0	127.09	13.69	ND	113.40
	8/22/91	2.0	127.09	15.38	ND	111.71
	11/13/91	2.0	127.09	15.80	ND	111.29
	1/30/92	2.0	127.09	14.71	ND	112.38
	4/23/92	2.0	127.09	12.22	ND	114.87
7/27/92	2.0	127.09	14.30	ND	112.79	
MW-2	3/23/90	2.0	125.98	12.40	ND	113.58
	9/6/90	2.0	125.98	14.85	ND	111.13
	9/25/90	2.0	125.98	14.80	ND	111.18
	11/29/90	2.0	125.98	14.40	ND	111.58
	2/20/91	2.0	125.98	14.09	ND	111.89
	4/19/91	2.0	125.98	12.62	ND	113.36
	5/22/91	2.0	125.98	12.98	ND	113.00
	8/22/91	2.0	125.98	14.93	ND	111.05
	11/13/91	2.0	125.98	15.42	ND	110.56
	1/30/92	2.0	125.98	14.70	ND	111.28
	4/23/92	2.0	125.98	13.83	ND	112.15
7/27/92	2.0	125.98	15.30	ND	110.68	
MW-3 (a)	3/23/90	2.0	127.84	17.50	ND	110.34
	9/6/90	2.0	126.77	18.72	ND	108.05
	9/25/90	2.0	126.77	18.40	ND	108.37
	11/29/90	2.0	126.77	18.97	ND	107.80
	2/20/91	2.0	126.77	19.20	ND	107.57
	4/19/91	2.0	126.77	17.81	ND	108.96
	5/22/91	2.0	126.77	17.88	ND	108.89
	8/1/91	2.0	126.77	19.23	ND	107.54
	8/22/91	2.0	126.77	20.17	ND	106.60
	11/13/91	2.0	126.77	19.95	ND	106.82
	1/30/92	2.0	126.77	19.14	ND	107.63
4/23/92	2.0	126.77	17.75	ND	109.02	
7/27/92	2.0	126.77	19.00	ND	107.77	

(continued)

Table 2
GROUNDWATER ELEVATION DATA

Chevron Service Station No. 9-8139
16304 Foothill Blvd., San Leandro, California

(continued)

Well Number	Date Sampled	Casing Diameter (inches)	TOC Elevation (ft-MSL)	Depth to Water (ft-BTOC)	PSH (ft)	Water Elevation (ft-MSL)
MW-4 (c)	3/23/90	2.0	125.22	16.02	ND	109.20
	9/6/90	2.0	125.22	17.35	ND	107.87
	9/25/90	2.0	125.22	17.48	ND	107.74
	11/29/90	2.0	125.22	17.61	ND	107.61
	2/20/91	2.0	125.22	17.81	ND	107.41
	4/19/91	2.0	125.22	15.80	ND	109.42
	5/22/91	2.0	125.22	16.68	ND	108.54
MW-5 (c)	3/23/90	2.0	125.85	16.89	ND	108.96
	9/7/90	2.0	125.85	18.46	0.04	107.42 (b)
	9/25/90	2.0	125.85	19.30	1.3	107.58 (b)
	11/29/90	2.0	125.85	18.87	0.71	107.54 (b)
	2/20/91	2.0	125.85	18.91	0.47	107.31 (b)
	4/19/91	2.0	125.85	16.99	0.48	109.24 (b)
	5/22/91	2.0	125.85	17.69	0.33	108.42 (b)
MW-6	3/23/90	2.0	124.18	18.51	ND	105.67
	9/7/90	2.0	124.18	16.18	ND	108.00
	9/25/90	2.0	124.18	16.42	ND	107.76
	11/29/90	2.0	124.18	16.11	ND	108.07
	2/20/91	2.0	124.18	16.09	ND	108.09
	4/19/91	2.0	124.18	15.15	ND	109.03
	5/22/91	2.0	124.18	15.41	ND	108.77
	8/23/91	2.0	124.18	17.80	ND	106.38
	11/14/91	2.0	124.18	16.52	ND	107.66
	1/30/92	2.0	124.18	16.48	ND	107.70
	4/23/92	2.0	124.18	16.20	ND	107.98
7/27/92	2.0	124.18	16.52	ND	107.66	
MW-7	3/23/90	2.0	126.86	21.40	ND	105.46
	9/7/90	2.0	126.86	18.38	ND	108.48
	9/25/90	2.0	126.86	19.25	ND	107.61
	11/29/90	2.0	126.86	18.55	ND	108.31
	2/20/91	2.0	126.86	18.55	ND	108.31
	4/19/91	2.0	126.86	17.33	ND	109.53
	5/22/91	2.0	126.86	17.42	ND	109.44
	8/22/91	2.0	126.86	19.05	ND	107.81
	11/13/91	2.0	126.86	21.84	ND	105.02
	1/30/92	2.0	126.86	22.42	ND	104.44
	4/23/92	2.0	126.86	22.04	ND	104.82
7/27/92	2.0	126.86	22.24	ND	104.62	

(continued)

Table 2
GROUNDWATER ELEVATION DATA

Chevron Service Station No. 9-8139
16304 Foothill Blvd., San Leandro, California
(continued)

Well Number	Date Sampled	Casing Diameter (inches)	TOC Elevation (ft-MSL)	Depth to Water (ft-BTOC)	PSH (ft)	Water Elevation (ft-MSL)
MW-8	9/7/90	2.0	123.61	16.07	ND	107.54
	9/25/90	2.0	123.61	16.20	ND	107.41
	11/29/90	2.0	123.61	16.30	ND	107.31
	2/20/91	2.0	123.61	16.32	ND	107.29
	4/19/91	2.0	123.61	14.71	ND	108.90
	5/22/91	2.0	123.61	15.42	ND	108.19
	8/22/91	2.0	123.61	17.15	ND	106.46
	11/14/91	2.0	123.61	16.99	ND	106.62
	1/30/92	2.0	123.61	16.30	ND	107.31
	4/23/92	2.0	123.61	15.05	ND	108.56
	7/27/92	2.0	123.61	16.08	ND	107.53
MW-9	8/22/91	2.0	124.20	17.60	ND	106.60
	11/14/91	2.0	124.20	17.48	ND	106.72
	1/30/92	2.0	124.20	16.71	ND	107.49
	4/23/92	2.0	124.20	15.23	ND	108.97
	7/27/92	2.0	124.20	16.72	ND	107.48
MW-10	7/27/92	2.0	125.03	17.52	ND	107.51
MW-11	7/27/92	2.0	122.92	15.38	ND	107.54
EW-1	8/1/91	6.0	124.95	17.54	ND	107.41
EW-2	8/1/91	4.0	125.79	18.07	ND	107.72
EW-3	8/1/91	4.0	125.22	17.49	ND	107.73

Notes:

TOC = Top of casing

ft-MSL = Feet above mean sea level

ft-BTOC = Feet below top of casing

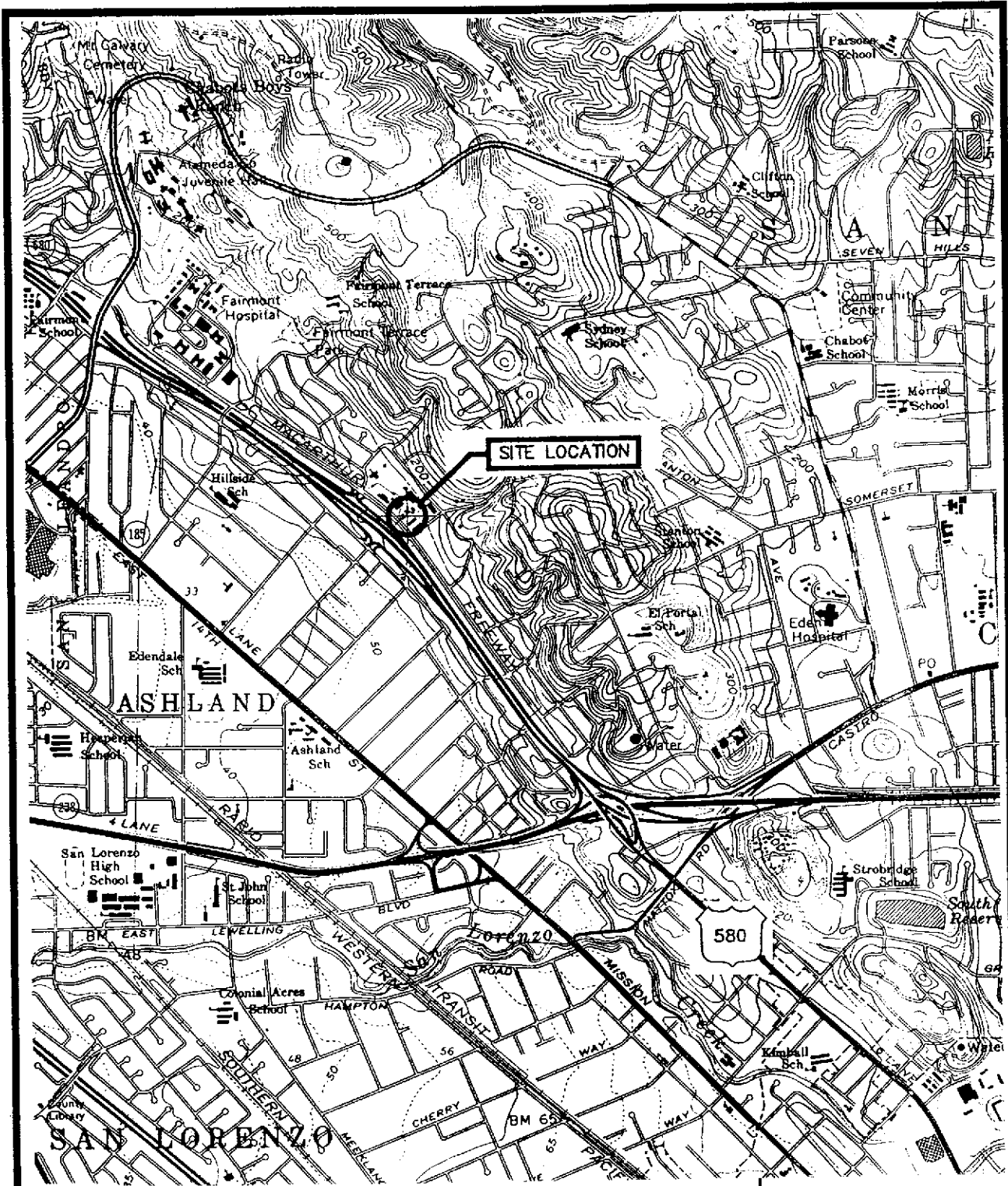
ND = Not detected

(a) MW-3 wellhead modified and resurveyed on 9/6/90.

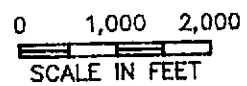
(b) Corrected water elevation in MW-5 due to presence of phase separate hydrocarbon.

(c) Well decommissioned on June 10, 1991, and replaced with groundwater extraction well.

Assumed density of gasoline = 0.79



Hayward, California [NE/4 Hayward 15' Quadrangle]
 N3737.5-W12200/7.5



SITE LOCATION MAP
 Chevron Service Station No. 9-8139
 16304 Foothill Boulevard
 San Leandro, California

Reviewed By : *[Signature]*

Date : 7/1/92

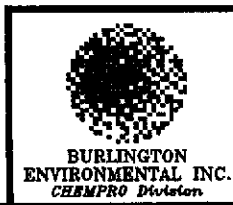
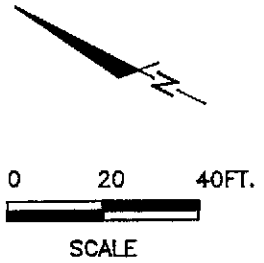
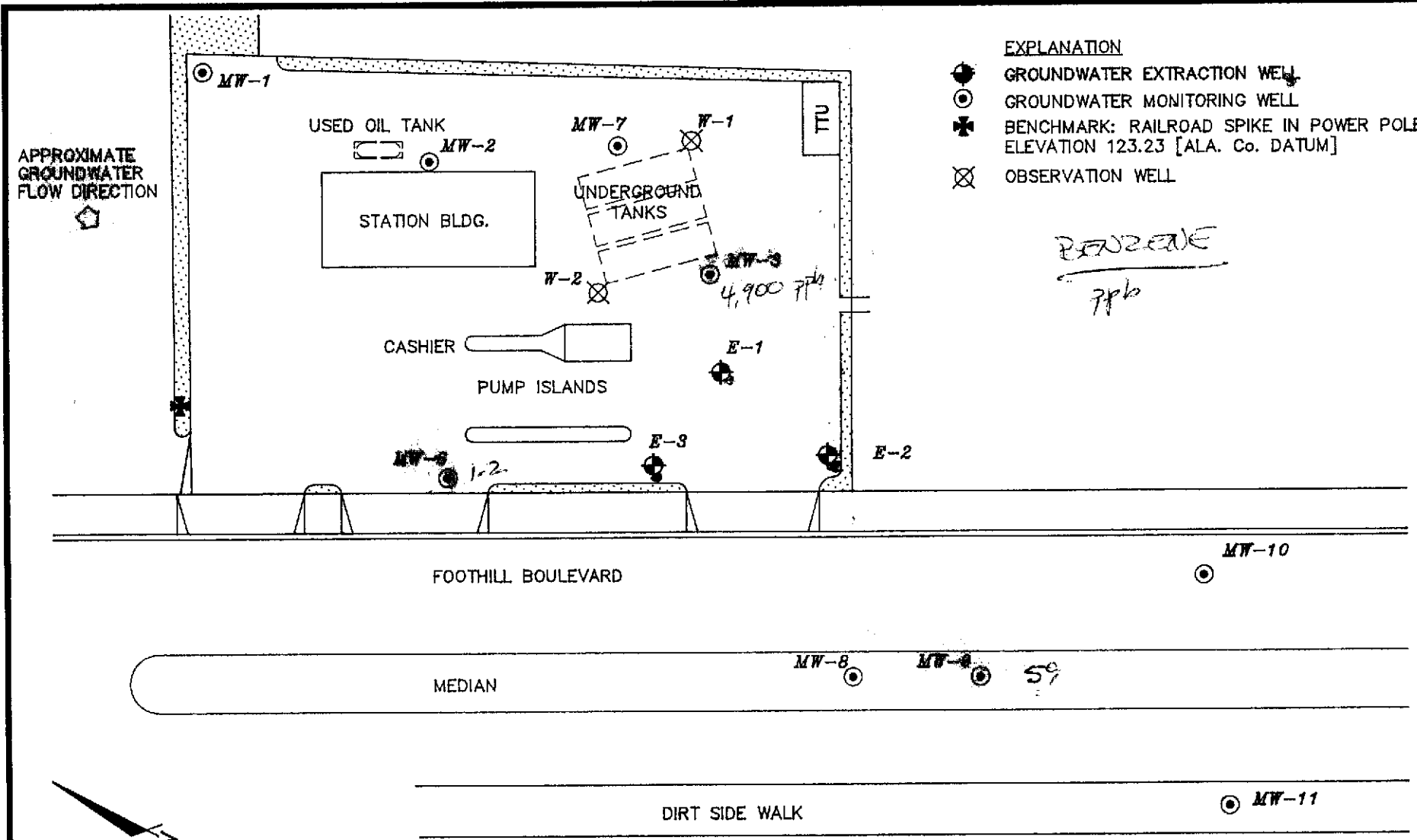
Figure 1

Project No.	CHV149
Drawn By	Date
PPK	6/28/91
Drawing No.	A0629701

EXPLANATION

- GROUNDWATER EXTRACTION WELL
- GROUNDWATER MONITORING WELL
- ⊕ BENCHMARK: RAILROAD SPIKE IN POWER POLE ELEVATION 123.23 [ALA. Co. DATUM]
- ⊗ OBSERVATION WELL

*REZONE
7pb*

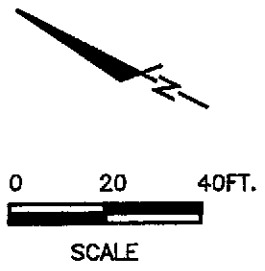
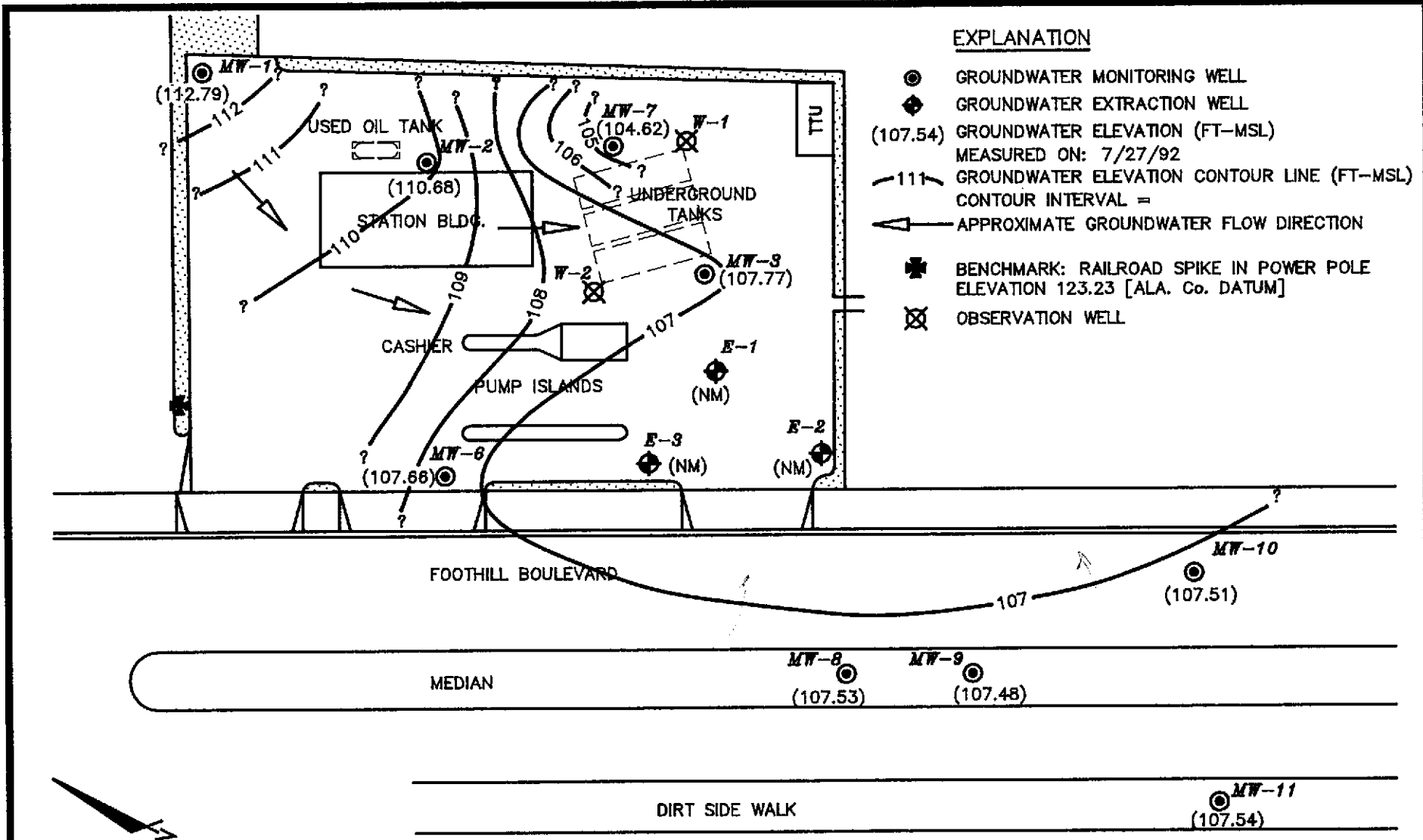


SITE VICINITY MAP
 Chevron Service Station No. 9-8139
 16304 Foothill Boulevard
 San Leandro, California

Reviewed By: *[Signature]*

Date: 5/4/92

Figure 2	
Project No. CHV-149	
Drawn By PPK	Date 1/14/92
Drawing No. A0629703	



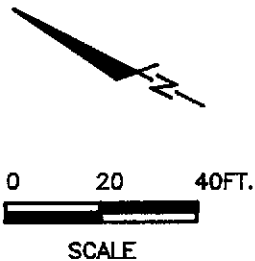
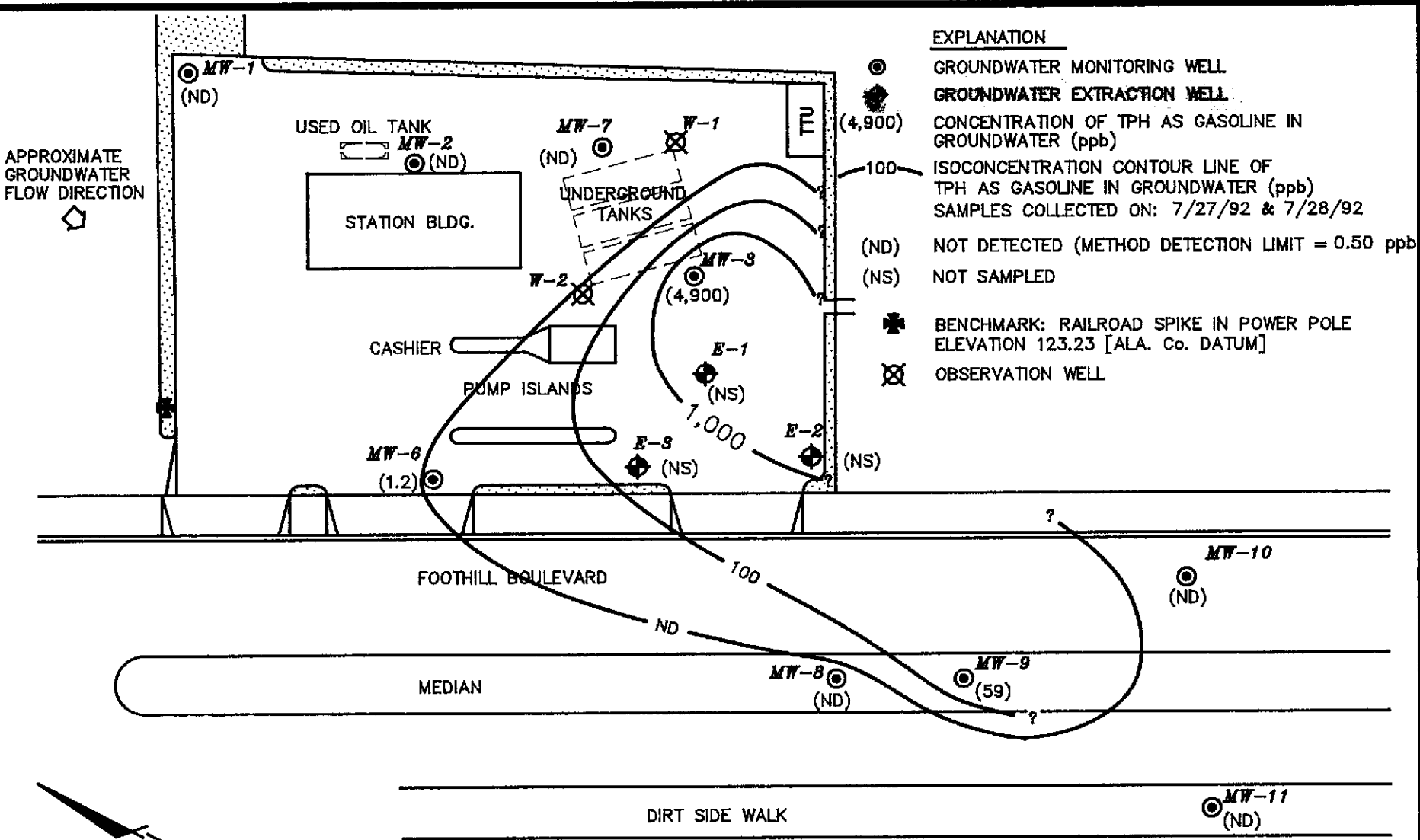
GROUNDWATER ELEVATION CONTOURS
Chevron Service Station No. 9-8139
16304 Foothill Boulevard
San Leandro, California

Reviewed By: *[Signature]*

Date: 9/18/92

Figure 3	
Project No. CHV-149	
Drawn By PPK	Date 9/18/92
Drawing No. A0629703	

APPROXIMATE
GROUNDWATER
FLOW DIRECTION



BENZENE ISOCONCENTRATION CONTOURS
Chevron Service Station No. 9-8139
16304 Foothill Boulevard
San Leandro, California

Reviewed By *[Signature]*

Date: 9/18/92

Figure 4

Project No. CHV-149

Drawn By PPK Date 9/18/92

Drawing No. A0629704

APPENDIX A
GROUNDWATER SAMPLING AND ANALYSIS PROCEDURES

Appendix A
GROUNDWATER SAMPLING AND ANALYSIS
PROCEDURES

INTRODUCTION

The sampling and analysis procedures for water-quality monitoring programs are contained in this Appendix. These procedures ensure that consistent and reproducible sampling methods are used, proper analytical methods are applied, analytical results are accurate, precise, and complete, and the overall objectives of the monitoring program are achieved.

SAMPLE COLLECTION

Sample collection procedures include equipment cleaning, water-level and total well-depth measurements, and well purging and sampling.

Equipment Cleaning

Sample bottles, caps, and septa were precleaned and provided by a Chevron-approved laboratory. All sampling containers were used only once and discarded after analysis is complete.

Before starting the sampling event, all equipment to be placed in the well or come in contact with groundwater was disassembled and cleaned thoroughly with detergent water, then steam cleaned with service station tap water, and rinsed with distilled water. Any parts that may absorb contaminants, such as plastic pump valves or bladders, were cleaned as described above or replaced.

During the sampling event the equipment used in the well was washed with detergent, steam-cleaned, and rinsed with distilled water before purging or sampling the next well. The water level sounder was washed with detergent and rinsed with distilled water before use in the each well. The rinse water is stored in 55-gallon drums onsite and will be disposed of by Chevron.

Quality Assurance Samples

No rinsate sample was collected because the bailers were all dedicated to the site. All sample bailers were steam cleaned first, and washed with TSP before being dedicated to its respective monitoring well. A trip blank was taken to insure contamination did not result from travel exposure.

Water-Level, Floating-Hydrocarbon, and Total Well-Depth Measurements

Before purging and sampling, the depth to water, floating hydrocarbon thickness, and the well total depth were measured using an oil water interface probe and an electric sounder. The electric sounder, manufactured by Slope-Indicator, Inc., is a transistorized instrument that uses a reel-mounted, two conductor, coaxial cable that connects the control panel to the sensor. Cable markings are stamped at 1-foot intervals. An engineers rule was used to measure the depths to the closest 0.01 foot. The water level was measured by lowering the sensor into the monitor well. A low current circuit is completed when the sensor contacts the water, which serves as an electrolyte. The current is amplified and fed across an indicator light and audible buzzer, signaling when water has been contacted. A sensitivity control compensates for very saline or conductive water. The oil water interface probe signals with a solid sound when it contacts phase-separated hydrocarbons. When the probe detects water, the sound changes to a beeping sound.

Floating hydrocarbon was not encountered in any of the monitoring wells. When floating product is detected at greater than 1/32-inch in thickness, a sample is not collected.

All liquid measurements were recorded to the nearest 0.01 foot in the field logbook. The groundwater elevation at each monitor well was calculated by subtracting the measured depth to water from the surveyed well-casing elevation. Well total depth was then measured by lowering the sensor to the bottom of the well. Well total depth, used to calculate purge volumes and to determine whether the well screen is partially obstructed by silt, was recorded to the nearest 0.5 foot in the field logbook.

Well Purging

Before sampling, standing water in the casing was purged from the monitor wells using a PVC hand bailer. Samples were collected from the monitor wells after a minimum of four casing volumes had been evacuated or the pH, electrical conductivity, and temperature had stabilized. In the case that the monitor well was purged until dry, the well was allowed to recover to within 80% of its static water level and sampled.

The pH, electrical conductivity, and temperature meter were calibrated each day before beginning field activities. After every well volume of groundwater removed from the monitoring well, field measurements were taken. The data is presented on the water sample field data sheets. The calibration was checked once each day to verify meter performance. All field meter calibrations were recorded in the field log book.

Groundwater generated from well-purging operations were contained for temporary storage in 55-gallon drums. All drums were labeled and stored onsite in a location designated by the station manager. The sampler recorded the following information on the drum label for each drum generated:

- * Drum content (i.e., groundwater)
- * Source (i.e., well identification code)
- * Date generated
- * Client contact
- * Project number
- * Name of sampler

Well Sampling

A Teflon bailer was used for well sampling. Glass bottles of at least 40 milliliters volume and fitted with Teflon-lined septa were used in sampling for volatile organics. These bottles were filled completely to prevent air from remaining in the bottle. A positive meniscus forms when the bottle is completely full. A convex Teflon septum is placed over the meniscus to eliminate air. After capping, the bottle was inverted and tapped to verify that it did not contain air bubbles. The sample containers for other parameters were filled, and capped. Duplicate sample analysis was performed on groundwater samples taken from monitor well 9 and were analyzed for the same chemical analyses.

SAMPLE HANDLING AND DOCUMENTATION

The following section specifies the procedures and documentation used during sample handling.

Sample Handling

All sample containers were labeled immediately following sample collection. Samples were kept cool with ice cubes until received by the laboratory. Ice cubes were replaced each day to maintain refrigeration. At the time of sampling, each sample was logged on a chain-of-custody record which accompanied the sample to the Superior Laboratory.

Sample Documentation

The following procedures were used during sampling and analysis to provide chain-of-custody control during sample handling from collection through storage. Sample documentation included the use of the following:

- * Field logbooks to document sampling activities in the field
- * Labels to identify individual samples
- * Chain-of-custody record sheets for documenting possession and transfer of samples

Field Logbook

In the field, the sampler recorded the following information on the Water Sample Field Data Sheet for each sample collected:

- * Project number
- * Client name
- * Location
- * Name of sampler
- * Date and time
- * Pertinent well data (e.g., casing diameter, depth to water, well depth)
- * Calculated and actual purge volumes
- * Purging equipment used
- * Sampling equipment used
- * Appearance of each sample (e.g., color, turbidity, sediment)
- * Results of field analyses (i.e., temperature, pH, electrical conductivity)
- * General comments

The field logbooks were signed by the sampler.

Labels

Sample labels contained the following information:

- * Project number
- * Sample number (i.e., well designation)
- * Sampler's initials
- * Date and time of collection
- * Type of preservative used (if any)

Sampling and Analysis Chain-of-Custody Record

The Sampling and Analysis Chain-of-Custody record, initiated at the time of sampling, contains, but is not limited to, the well number, sample type, analytical request, date of sampling, and the name of the sampler. The record sheet was signed, timed, and dated by the sampler when transferring the samples. The number of custodians in the chain of possessions were kept to a minimum. A copy of the Sampling and Analysis Chain-of-Custody record is included in Appendix C.

APPENDIX B
WATER SAMPLE FIELD DATA SHEETS

WATER DATA SHEET

PROJECT NO.: 353

SAMPLE ID.: WS - 79 - SL

LOCATION: 16304 Football Blvd., San Jose, CA

DATE: 7.28.92

STATION NO.: 9-0139

WELL/SAMPLE

SAMPLER: DAL

POINT DESIGNATION: mw -11

SAMPLING DEVELOPING BAILING FLOATING PRODUCT

Casing Diameter: Screened Int. (ft.): 14.5 Calc. Casing Vol. (gal.): 2.36
 2 inch X 7.27.92 (2" = .17) (3" = .38) (4" = .66) (6" = 1.5)
 3 inch _____ Initial DTW (ft.): 15.38 @ 1140 Calc. Purge Vol. (gal.): 9.45
 4 inch _____ Initial TD (ft.): 29.28 Final DTW (ft.): 16.60 @ 0836
 6 inch _____ Water Column Height (ft.): 13.9 Final TD (ft.): 29.27
 other _____ TD (Actual) (ft.): 29.5 80 % Recovery (ft.): 18.16 Product Bailed (gal.): 0
 Casing Elev. (ft.): _____

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
<u>0826</u>	<u>2.5</u>	<u>6.68</u>	<u>66.0</u>	<u>5.95 x 10²</u>	<u>Butterscotch</u>	_____
<u>0829</u>	<u>5.0</u>	<u>6.67</u>	<u>65.9</u>	<u>5.91 x 10²</u>	<u>"</u>	_____
<u>0832</u>	<u>7.5</u>	<u>6.67</u>	<u>66.8</u>	<u>5.94 x 10²</u>	<u>"</u>	_____
<u>0835</u>	<u>9.5</u>	<u>6.67</u>	<u>66.7</u>	<u>5.92 x 10²</u>	<u>Butterscotch</u>	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

Odor? NONE

Actual Purge Vol. (gal.): 9.5

PURGE METHOD:
 Bailer (Teflon)
 Bailer (PVC)
 Well Wizard
 Dedicated Bailer
 Other _____

SAMPLE METHOD:
 Bailer (Teflon)
 Bailer (PVC)
 Dedicated Bailer
 Other _____

REMARKS: WS. 79-SL sampled @ 0850 on 7.28.92

WEATHER: Foggy, ~ 70°

WATER DATA SHEET

PROJECT NO.: 353 SAMPLE ID.: WS - 78 - SL
 LOCATION: 16304 Foothill Blvd., San Leandro DATE: 7-28-92
 STATION NO.: 9-8139 WELL/SAMPLE _____
 SAMPLER: DAL POINT DESIGNATION: MW-10

SAMPLING DEVELOPING BAILING FLOATING PRODUCT

Casing Diameter: Screened Int. (ft.): 14.5-27.5 Calc. Casing Vol. (gal.): 2.05
 2 Inch X 7.27-92 (2" = .17) (3" = .38) (4" = .66) (6" = 1.5)
 3 Inch _____ Initial DTW (ft.): 17.52 @ 1150 Calc. Purge Vol. (gal.): 8.20
 4 Inch _____ Initial TD (ft.): 29.58 Final DTW (ft.): 20.02 @ 0746
 6 Inch _____ Water Column Height (ft.): 12.06 Final TD (ft.): 29.58
 other _____ TD (Actual) (ft.): 29.5 80 % Recovery (ft.): 17.93 Product Bailed (gal.): Ø
 Casing Elev. (ft.): _____

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
<u>0733</u>	<u>2</u>	<u>5.91</u>	<u>65.9</u>	<u>9.22 x 10²</u>	<u>BUTELSCOTED</u>	
<u>0737</u>	<u>4</u>	<u>5.94</u>	<u>65.9</u>	<u>9.06 x 10²</u>	<u>BUTELSCOTED</u>	
<u>0740</u>	<u>6</u>	<u>5.98</u>	<u>66.2</u>	<u>9.16 x 10²</u>	<u>BUTELSCOTED</u>	
<u>0742</u>	<u>8.5</u>	<u>6.01</u>	<u>66.1</u>	<u>9.20 x 10²</u>	<u>BUTELSCOTED</u>	

Odor? NONE

Actual Purge Vol. (gal.): 8.5

PURGE METHOD: SAMPLE METHOD:
 Bailer (Teflon) X Bailer (Teflon)
 X Bailer (PVC) _____ Bailer (PVC)
 _____ Well Wizard _____ Dedicated Bailer
 _____ Dedicated Bailer _____ Other
 _____ Other

REMARKS: WS-78-SL SAMPLES @ 0805 on 7-28-92

WEATHER: Foggy, ~ 70°

WATER DATA SHEET

PROJECT NO.: 353

SAMPLE ID.: WS - 80 - SL

LOCATION: 16304 Foothill Blvd., San Leandro

DATE: 7-28-92

STATION NO.: 9-8139

WELL/SAMPLE

SAMPLER: DAL

POINT DESIGNATION: mw-9

SAMPLING

DEVELOPING

BAILING FLOATING PRODUCT

Casing Diameter: 2 inch X 3 inch _____ 4 inch _____ 6 inch _____ other _____

Screened Int. (ft.): 17-27 7-27-92

Initial DTW (ft.): 16.72 @ 1158

Initial TD (ft.): 26.67

Casing Elev. (ft.): 124.20 Water Column Height (ft.): 9.95

TD (Actual) (ft.): 27 80 % Recovery (ft.): 18.71

Calc. Casing Vol. (gal.): 1.69
(2" = .17) (3" = .38) (4" = .66) (6" = 1.5)

Calc. Purge Vol. (gal.): 6.76

Final DTW (ft.): 16.82 @ 0916

Final TD (ft.): 26.70

Product Bailed (gal.): Ø

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
<u>0910</u>	<u>1.5</u>	<u>6.68</u>	<u>67.8</u>	<u>6.99 x 10²</u>	<u>TAN</u>	_____
<u>0912</u>	<u>3.0</u>	<u>6.69</u>	<u>67.4</u>	<u>6.98 x 10²</u>	<u>CAMEL</u>	_____
<u>0914</u>	<u>4.5</u>	<u>6.72</u>	<u>67.9</u>	<u>7.13 x 10²</u>	<u>CAMEL</u>	_____
<u>0915</u>	<u>7.0</u>	<u>6.76</u>	<u>68.2</u>	<u>7.10 x 10²</u>	<u>CAMEL</u>	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

Odor? NONE

Actual Purge Vol. (gal.): 7

PURGE METHOD:

- Bailer (Teflon)
- Bailer (PVC)
- Well Wizard
- Dedicated Bailer
- Other _____

SAMPLE METHOD:

- Bailer (Teflon)
- Bailer (PVC)
- Dedicated Bailer
- Other _____

REMARKS: WS-80-SL Samples @ 0930 ON 7-28-92

WEATHER: Foggy, ~70.

WATER DATA SHEET

PROJECT NO.: 353 SAMPLE ID.: WS-81-5L
 LOCATION: 16304 Foothill Blvd., San Leandro DATE: 7.28.92
 STATION NO.: 9.8139 WELL/SAMPLE _____
 SAMPLER: DAL POINT DESIGNATION: mw-8

SAMPLING DEVELOPING BAILING FLOATING PRODUCT

Casing Diameter: Screened Int. (ft.): 21.5-30.5 Calc. Casing Vol. (gal.): 2.49
 2 inch X 7.27.92 (2" = .17) (3" = .38) (4" = .66) (6" = 1.5)
 3 inch _____ Initial DTW (ft.): 16.08 @ 1204 Calc. Purge Vol. (gal.): 9.96
 4 inch _____ Initial TD (ft.): 30.73 Final DTW (ft.): 16.45 @ 0950
 6 inch _____ Final TD (ft.): 30.71
 other _____
 Casing Elev. (ft.): 123.61 Water Column Height (ft.): 14.65
 TD (Actual) (ft.): 31 80 % Recovery (ft.): 19.01 Product Bailed (gal.): Ø

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
<u>0939</u>	<u>2.5</u>	<u>6.71</u>	<u>69.7</u>	<u>6.55 x 10²</u>	<u>TAN</u>	
<u>0942</u>	<u>5.0</u>	<u>6.74</u>	<u>69.7</u>	<u>6.42 x 10²</u>	<u>CAMEL</u>	
<u>0945</u>	<u>7.5</u>	<u>6.78</u>	<u>69.7</u>	<u>6.40 x 10²</u>	<u>CAMEL</u>	
<u>0948</u>	<u>10</u>	<u>6.79</u>	<u>69.3</u>	<u>6.43 x 10²</u>	<u>CAMEL</u>	
					<u>CAMEL</u>	

Odor? NONE

Actual Purge Vol. (gal.): 10

PURGE METHOD: SAMPLE METHOD:
 ____ Bailer (Teflon) X Bailer (Teflon)
 X Bailer (PVC) _____ Bailer (PVC)
 ____ Well Wizard _____ Dedicated Bailer
 ____ Dedicated Bailer _____ Other
 ____ Other

REMARKS: WS-81-5L SAMPLED @ 1020 ON 7.28.92

WEATHER: SUNNY, ~75°

WATER DATA SHEET

PROJECT NO.: 353

SAMPLE ID: WS - 74 - SL

LOCATION: 16304 Feather Blvd, San Leandro

DATE: 7-27-92

STATION NO.: 9-8139

WELL/SAMPLE

SAMPLER: DAL

POINT DESIGNATION: MW-7

SAMPLING

DEVELOPING

BAILING FLOATING PRODUCT

Casing Diameter:

- 2 inch
- 3 inch
- 4 inch
- 6 inch
- other

Screened Int. (ft.): 21.5-26.5 Calc. Casing Vol. (gal.): .62

(2" = .17) (3" = .38) (4" = .66) (6" = 1.5)

Initial DTW (ft.): 22.24 @ 0937 Calc. Purge Vol. (gal.): 2.50

Initial TD (ft.): 25.93

Final DTW (ft.): 24.72 @ 1050

Casing Elev. (ft.): 126.86

Water Column Height (ft.): 3.69

Final TD (ft.): 25.94

TD (Actual) (ft.): _____

80 % Recovery (ft.): 22.98

Product Bailed (gal.): Ø

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
<u>1042</u>	<u>.75</u>	<u>7.10</u>	<u>72.1</u>	<u>7.74 x 10²</u>	<u>PENTAC</u>	_____
<u>1044</u>	<u>1.50</u>	<u>7.14</u>	<u>71.8</u>	<u>7.40 x 10²</u>	<u>TAN</u>	_____
<u>1046</u>	<u>2.25</u>	<u>7.14</u>	<u>70.9</u>	<u>7.03 x 10²</u>	<u>TAN</u>	_____
<u>1048</u>	<u>2.75</u>	<u>7.13</u>	<u>71.5</u>	<u>7.43 x 10²</u>	<u>TAN</u>	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

Odor? NONE

Actual Purge Vol. (gal.): 2.75

- PURGE METHOD:
- Bailor (Teflon)
 - Bailor (PVC)
 - Well Wizard
 - Dedicated Bailor
 - Other _____

- SAMPLE METHOD:
- Bailor (Teflon)
 - Bailor (PVC)
 - Dedicated Bailor
 - Other _____

REMARKS: WS. 74 . SL sampled @ 1110 ON 7-27-92

WEATHER: SUNNY, Hazy, ~ 75°

WATER DATA SHEET

PROJECT NO.: 353

SAMPLE ID: WS-77-SL

LOCATION: 16304 Foothill Blvd, San Fernando

DATE: 7-27-92

STATION NO.: 9-8139

WELL/SAMPLE

SAMPLER: DAL

POINT DESIGNATION: MW-6

SAMPLING DEVELOPING BAILING FLOATING PRODUCT

Casing Diameter:

- 2 inch
- 3 inch
- 4 inch
- 6 inch
- other

Screened Int. (ft.): 24.6-29.2

Calc. Casing Vol. (gal.): 2.13

(2" = .17) (3" = .38) (4" = .66) (6" = 1.5)

Initial DTW (ft.): 16.52 @ 0951

Calc. Purge Vol. (gal.): 8.52

Initial TD (ft.): 29.05

Final DTW (ft.): 26.22 @ 1329

Casing Elev. (ft.): 124.18

Water Column Height (ft.): 12.53

Final TD (ft.): 29.07

TD (Actual) (ft.): _____

80 % Recovery (ft.): 19.02

Product Balled (gal.): Ø

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
<u>1316</u>	<u>2</u>	<u>7.98</u>	<u>75.8</u>	<u>7.86 x 10²</u>	<u>peated</u>	
<u>1319</u>	<u>4</u>	<u>7.88</u>	<u>75.3</u>	<u>7.25 x 10²</u>	<u>tan</u>	
<u>1323</u>	<u>6</u>	<u>7.81</u>	<u>74.4</u>	<u>6.94 x 10²</u>	<u>butterscotch</u>	
<u>1326</u>	<u>8.5</u>	<u>7.80</u>	<u>72.9</u>	<u>6.89 x 10²</u>	<u>butterscotch</u>	

Odor? NONE

Actual Purge Vol. (gal.): 8.5

PURGE METHOD:

- Bailer (Teflon)
- Bailer (PVC)
- Well Wizard
- Dedicated Bailer
- Other _____

SAMPLE METHOD:

- Bailer (Teflon)
- Bailer (PVC)
- Dedicated Bailer
- Other _____

REMARKS: WS-77-SL SAMPLES @ 1338 ON 7-27-92

WEATHER: SUNNY, HAZY, ~80°

WATER DATA SHEET

PROJECT NO.: 353

SAMPLE ID.: WS-76-5C

LOCATION: 16304 Foothill Blvd., San Leandro DATE: 7.27.92

STATION NO.: 9-8139

WELL/SAMPLE

SAMPLER: DAL

POINT DESIGNATION: MW-3

SAMPLING DEVELOPING BAILING FLOATING PRODUCT

Casing Diameter:	Screened Int. (ft.): <u>15.5-25.5</u>	Calc. Casing Vol. (gal.): <u>1.13</u> <small>(2" = .17) (3" = .38) (4" = .66) (6" = 1.5)</small>
2 inch <input checked="" type="checkbox"/>	Initial DTW (ft.): <u>19.00 @ 0944</u>	Calc. Purge Vol. (gal.): <u>4.52</u>
3 inch _____	Initial TD (ft.): <u>25.65</u>	Final DTW (ft.): <u>23.63 @ 1228</u>
4 inch _____	Water Column Height (ft.): <u>6.65</u>	Final TD (ft.): <u>25.64</u>
6 inch _____	Casing Elev. (ft.): <u>126.77</u>	Product Bailed (gal.): <u>Ø</u>
other _____	TD (Actual) (ft.): <u>25.5</u>	80 % Recovery (ft.): <u>20.33</u>

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
<u>1218</u>	<u>1</u>	<u>6.95</u>	<u>74.8</u>	<u>10.20 x 10²</u>	<u>PEWTER</u>	_____
<u>1221</u>	<u>2</u>	<u>6.91</u>	<u>74.4</u>	<u>10.17 x 10²</u>	<u>OLIVE</u>	_____
<u>1224</u>	<u>3</u>	<u>6.90</u>	<u>72.9</u>	<u>10.27 x 10²</u>	<u>OLIVE</u>	_____
<u>1227</u>	<u>4.5</u>	<u>6.89</u>	<u>72.4</u>	<u>10.29 x 10²</u>	<u>OLIVE</u>	_____
_____	_____	_____	_____	_____	_____	_____

Odor? MODERATE TO STRONG

Actual Purge Vol. (gal.): 4.5

PURGE METHOD:

- Baller (Teflon)
- Baller (PVC)
- Well Wizard
- Dedicated Baller
- Other _____

SAMPLE METHOD:

- Baller (Teflon)
- Baller (PVC)
- Dedicated Baller
- Other _____

REMARKS: WS-76-5C sampled @ 1245 on 7.27.92

WEATHER: SUNNY, Hazy, ~75°

WATER DATA SHEET

PROJECT NO.: 353

SAMPLE ID: WS-73-SL

LOCATION: 16304 Foothill Blvd., Simi Valley

DATE: 7.27.92

STATION NO.: 9-8139

WELL/SAMPLE

SAMPLER: DAL

POINT DESIGNATION: MW-2

SAMPLING DEVELOPING BAILING FLOATING PRODUCT

Casing Diameter:

- 2 inch
- 3 inch
- 4 inch
- 6 inch
- other

Screened Int. (ft.): 25-30

Calc. Casing Vol. (gal.): 2.55

(2" = .17) (3" = .38) (4" = .66) (6" = 1.5)

Initial DTW (ft.): 15.30 @ 0927

Calc. Purge Vol. (gal.): 10.2

Initial TD (ft.): 30.30

Final DTW (ft.): 23.12 @ 1012

Casing Elev. (ft.): 125.98

Water Column Height (ft.): 15

Final TD (ft.): 30.33

TD (Actual) (ft.): 30

80 % Recovery (ft.): 18.30

Product Bailed (gal.): ∅

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH. (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (ft dry)
<u>1000</u>	<u>2.50</u>	<u>7.81</u>	<u>70.8</u>	<u>1.15 x 10³</u>	<u>CLEAR</u>	
<u>1003</u>	<u>5.00</u>	<u>7.82</u>	<u>69.6</u>	<u>1.06 x 10³</u>	<u>TAN</u>	
<u>1006</u>	<u>7.50</u>	<u>7.83</u>	<u>69.2</u>	<u>8.56 x 10²</u>	<u>CAMEL</u>	
<u>1011</u>	<u>10.25</u>	<u>7.81</u>	<u>69.1</u>	<u>8.52 x 10²</u>	<u>CAMEL</u>	

Odor? NONE

Actual Purge Vol. (gal.): 10.25

PURGE METHOD:

- Bailer (Teflon)
- Bailer (PVC)
- Well Wizard
- Dedicated Bailer
- Other

SAMPLE METHOD:

- Bailer (Teflon)
- Bailer (PVC)
- Dedicated Bailer
- Other

REMARKS: WS-73-SL sampled @ 1030 on 7.27.92

WEATHER: SUNNY, HAZY, ~ 74°

WATER DATA SHEET

PROJECT NO.: 353

SAMPLE ID.: WS-75-SL

LOCATION: 16304 Foothill Blvd., San Leandro

DATE: 7-27-92

STATION NO.: 9-8139

WELL/SAMPLE

SAMPLER: DAL

POINT DESIGNATION: mw-1

SAMPLING

DEVELOPING

BAILING FLOATING PRODUCT

Casing Diameter:

- 2 inch
- 3 inch
- 4 inch
- 6 inch
- other

Screened Int. (ft.): 25-30

Calc. Casing Vol. (gal.): 2.25

(2" = .17) (3" = .38) (4" = .66) (6" = 1.5)

Initial DTW (ft.): 14.30 @ 0907

Calc. Purge Vol. (gal.): 9.02

Initial TD (ft.): 27.57

Final DTW (ft.): 17.06 @ 1122

Casing Elev. (ft.): 127.09

Water Column Height (ft.): 13.27

Final TD (ft.): 27.65

TD (Actual) (ft.): 30

80 % Recovery (ft.): 16.95

Product Bailed (gal.): 0

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
<u>0919</u>	<u>2.25</u>	<u>11.56</u>	<u>70.7</u>	<u>1.21 x 10³</u>	<u>CLEAR</u>	
<u>0922</u>	<u>1.75</u>	<u>11.89</u>	<u>69.5</u>	<u>2.10 x 10³</u>	<u>DEUTER</u>	<u>26.63</u>
<u>0959</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>20.82</u>
<u>1041</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>18.29</u>
<u>1122</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>17.06</u>

Odor? NONE

Actual Purge Vol. (gal.): 4

PURGE METHOD:

- Bailor (Teflon)
- Bailor (PVC)
- Well Wizard
- Dedicated Bailor
- Other

SAMPLE METHOD:

- Bailor (Teflon)
- Bailor (PVC)
- Dedicated Bailor
- Other

REMARKS:

WS-75-SL SAMPLED @ 1130 ON 7-27-92

WEATHER:

SUNNY, WAZY, ~72°

APPENDIX C

CHAIN-OF-CUSTODY RECORDS AND CERTIFIED ANALYTICAL REPORTS



Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

Burlington/Chempro
Attn: Felicia Rein

Project CHV-149-353
Reported 08/03/92

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
13322- 1	TB-LB	07/27/92	07/30/92 Water
13322- 3	WS-73-SL	07/27/92	08/03/92 Water
13322- 4	WS-74-SL	07/27/92	07/30/92 Water
13322- 5	WS-75-SL	07/27/92	07/30/92 Water
13322- 6	WS-76-SL	07/27/92	07/30/92 Water
13322- 7	WS-77-SL	07/27/92	07/31/92 Water
13322- 8	WS-78-SL	07/28/92	07/30/92 Water
13322- 9	WS-79-SL	07/28/92	07/30/92 Water
13322-10	WS-80-SL	07/28/92	07/30/92 Water
13322-11	WS-81-SL	07/28/92	07/31/92 Water

RESULTS OF ANALYSIS

Laboratory Number: 13322- 1 13322- 3 13322- 4 13322- 5 13322- 6

Gasoline:	ND<0.5	ND<50	ND<50	ND<50	26000
Benzene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	4900
Toluene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1100
Ethyl Benzene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1200
Xylenes:	ND<0.5	1.1	ND<0.5	ND<0.5	3600
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L

Laboratory Number: 13322- 7 13322- 8 13322- 9 13322-10 13322-11

Gasoline:	ND<50	ND<50	ND<50	2800	ND<50
Benzene:	1.2	ND<0.5	ND<0.5	59	ND<0.5
Toluene:	0.6	ND<0.5	ND<0.5	1.6	ND<0.5
Ethyl Benzene:	ND<0.5	ND<0.5	ND<0.5	18	ND<0.5
Xylenes:	1.9	ND<0.5	ND<0.5	280	ND<0.5
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L



Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

C E R T I F I C A T E O F A N A L Y S I S

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2
QA/QC INFORMATION
SET: 13322

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
ug/L = parts per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/L

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/L

ANALYTE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	200 ng	87/95	9%	76-111
Benzene:	200 ng	100/100	0%	78-110
Toluene:	200 ng	94/96	2%	78-111
Ethyl Benzene:	200 ng	91/92	1%	78-118
Xylenes:	600 ng	93/94	1%	73-113

Richard Srna, Ph.D.

Richard Srna
Laboratory Director

