Received 1/15/92
505

Chevron U.S.A. Inc.
2410 Camino Ramon, San Ramon, California • Phone (510) 842-9500
Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

Marketing Department

January 8,1992

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

Re : **Chevron Service Station #9-8139**
16304 Foothill Rd.
San Leandro, California

Mr. Seery :

Enclosed is the quarterly ground water monitoring and sampling report dated December 30, 1991. Ground water samples from monitoring wells, MW-1, MW-7, and MW-8, were nondetect (ND) for total petroleum hydrocarbon as gasoline (TPH-G), benzene, toluene, ethylbenzene, and xylene (BTEX). **Samples from wells, MW-2, MW-3, MW-6, and MW-9, contained dissolved hydrocarbons in the following ranges: TPH-G from ND to 18000 ppb, benzene from ND to 2400 ppb, toluene from 0.5 ppb to 1200 ppb, ethylbenzene from ND to 86 ppb, and xylenes from ND to 2200 ppb.** Samples were not taken from wells, MW-4 and MW-5 because they were used as extraction wells. During this sampling period, depth to water ranged from 15.42 feet to 21.84 feet.

The ground water extraction and treatment system is operating as of August 11, 1991.

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

Sincerely,

Kenneth Kan

Kenneth Kan
Engineer

LKAN/MacFile 9-8139R

Enclosure

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

Mr. Bill Scudder, Chevron U.S.A., Inc.

Received 1/15/92
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QUARTERLY MONITORING REPORT
FOURTH QUARTER 1991

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

December 1991

Prepared for

CHEVRON USA, INC.

Prepared by

BURLINGTON ENVIRONMENTAL

950 B Gilman Street
Berkeley, California 94710

CHV149/297

BURLINGTON
ENVIRONMENTAL INC.
CHEMPRO Division

December 30, 1991
CHV149/297

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

Re: **QUARTERLY MONITORING REPORT**
Fourth Quarter 1991
Chevron Service Station No. 9-8139
16304 Foothill Boulevard
San Leandro, California

Dear Mr. Posluszny:

Burlington Environmental 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 November 13 and 14, 1991.

MONITORING ACTIVITIES

The groundwater extraction and treatment system began operation for sampling purposes only on July 19, 1991. After regulatory approval, the system initiated normal operations on August 11, 1991. The system consists of three groundwater extraction wells, an oil/water separator, aqueous-phase carbon adsorption units, and a post treatment water storage tank.

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.

950 'B' Gilman Street
Berkeley, CA 94710
(415) 524-9372 • FAX: (415) 524-7439

RESULTS

The groundwater elevation in the monitoring wells beneath and in the vicinity of the site on November 13 and 14, 1991, ranged from 105.05 to 111.29 feet above mean sea level (see Table 2). A contour map of these data is presented in Figure 3. Also included and contoured in Figure 3 are the average water level elevations collected in the three extraction wells on October 29, 1991. 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. Also shown is a pronounced groundwater depression in the vicinity of the extraction wells.

The results of the chemical analyses are presented in Table 1. No PSH were detected in any of the monitoring wells during the November quarterly sampling event. Figures 4 and 5 present isoconcentration contours for TPH and benzene, respectively. Chain-of-custody documentation and certified analytical results are presented in Appendix C.

Burlington appreciates the opportunity to provide Chevron with quality consulting and remediation services. Please feel free to contact us if we can provide further assistance.

Very truly yours,
BURLINGTON ENVIRONMENTAL

Felicia A Rein
Environmental Scientist II

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

Attachments: Table 1 - Groundwater Analyses and Analytical Techniques
Table 2 - Groundwater Elevation Data
Figure 1 - Site Location Map
Figure 2 - Site Vicinity Map
Figure 3 - Groundwater Elevation Contours
Figure 4 - TPH Isoconcentration Contours
Figure 5 - 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 ANALYSES AND ANALYTICAL TECHNIQUES

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

WELL NUMBER		SAMPLE NO.	DATE SAMPLED	TPH Gasoline	TPH Diesel	TOTAL OIL & GREASE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	TOTAL METALS Pb	Cr	Cd	Zn	ETHYLENE DIBROMIDE
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	1	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
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	ND(<.05)
		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	[illegible]	NA	NA	[illegible]	0.5	0.7	2.3	NA	NA	NA	NA	NA
MW-3		WS-3SL	12/5/89	[illegible]	NA	NA	[illegible]	[illegible]	360	[illegible]	NA	NA	NA	NA	ND(<.05)
	DUP	WS-5SL	12/5/89	[illegible]	NA	ND(<5000)	[illegible]	[illegible]	390	[illegible]	ND(<500)	ND(<100)	ND(<10)	40	ND(<.05)
		WS-3SL	5/24/90	[illegible]	NA	NA	[illegible]	[illegible]	250	[illegible]	NA	NA	NA	NA	NA
	DUP	WS-4SL	5/24/90	[illegible]	NA	NA	[illegible]	[illegible]	260	[illegible]	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
	DUP	WS42SL	8/22/91	19,000	NA	NA	[illegible]	1,800	420	1,700	NA	NA	NA	NA	NA
		WS49SL	11/13/91	[illegible]	NA	NA	[illegible]	[illegible]	450	[illegible]	NA	NA	NA	NA	NA
MW-4** (EW-3)		WS-4SL	12/5/89	[illegible]	NA	NA	390	1,300	460	1,800	NA	NA	NA	NA	ND(<.05)
		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
	DUP	WS23SL	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
	DUP	WS31SL	5/22/91	7,200	NA	NA	520	130	270	670	NA	NA	NA	NA	NA

(continued)

Table 1
GROUNDWATER ANALYSES AND ANALYTICAL TECHNIQUES

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	TOTAL METALS Pb	Cr	Cd	Zn	ETHYLENE DIBROMIDE
EPA Detection Method:				8015	8015	413	602*	602*	602*	602*	7420	7190	7130	7950	504
MW-5**		WS-6SL *	5/25/90	28,000	NA	NA	920	1,100	460	1,300	NA	NA	NA	NA	2.40
(MW-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
MW-6		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
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)
	DUP	8WSSL *	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
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
	DUP	WS12SL	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)	1.0	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
MW-9		WS43SL	8/22/91	9600	NA	NA	46	170	98	1,200	NA	NA	NA	NA	ND(<.05)
		WS53SL	11/14/91	[illegible]	NA	NA	430	58	86	[illegible]	NA	NA	NA	NA	ND(<.05)
EW-1**		WS-9SL *	5/25/90	3,900	NA	NA	260	430	64	340	NA	NA	NA	NA	0.03

(continued)

Table 1
GROUNDWATER ANALYSES AND ANALYTICAL TECHNIQUES

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	TOTAL Pb	TOTAL Cr	METALS Cd	Zn	ETHYLENE DIBROMIDE
EPA Detection Method:			8015	8015	413	602*	602*	602*	602*	7420	7190	7130	7950	504
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)	D(<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
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

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
DUP = 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
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
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
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)

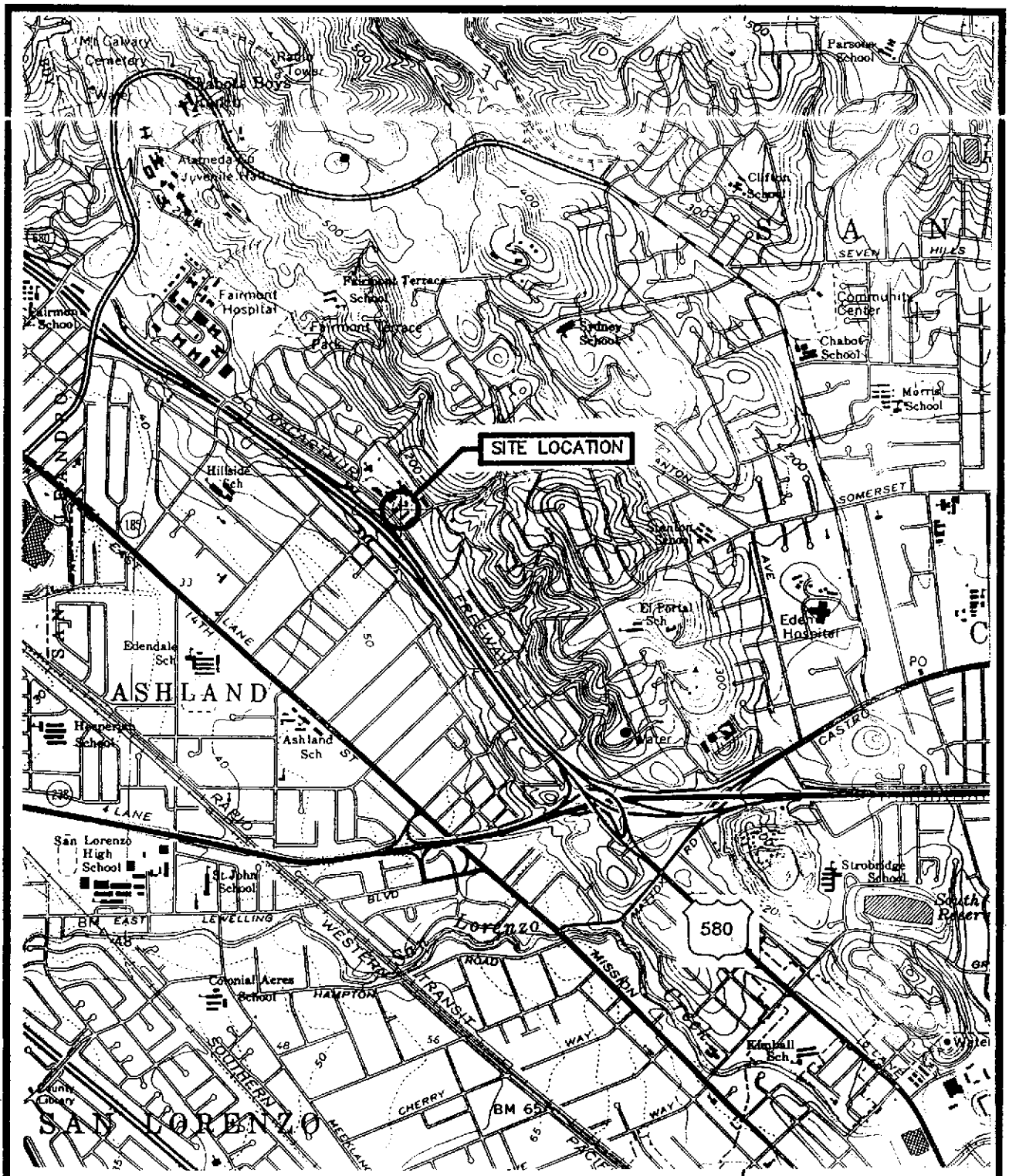
(continued)

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-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
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
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
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
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

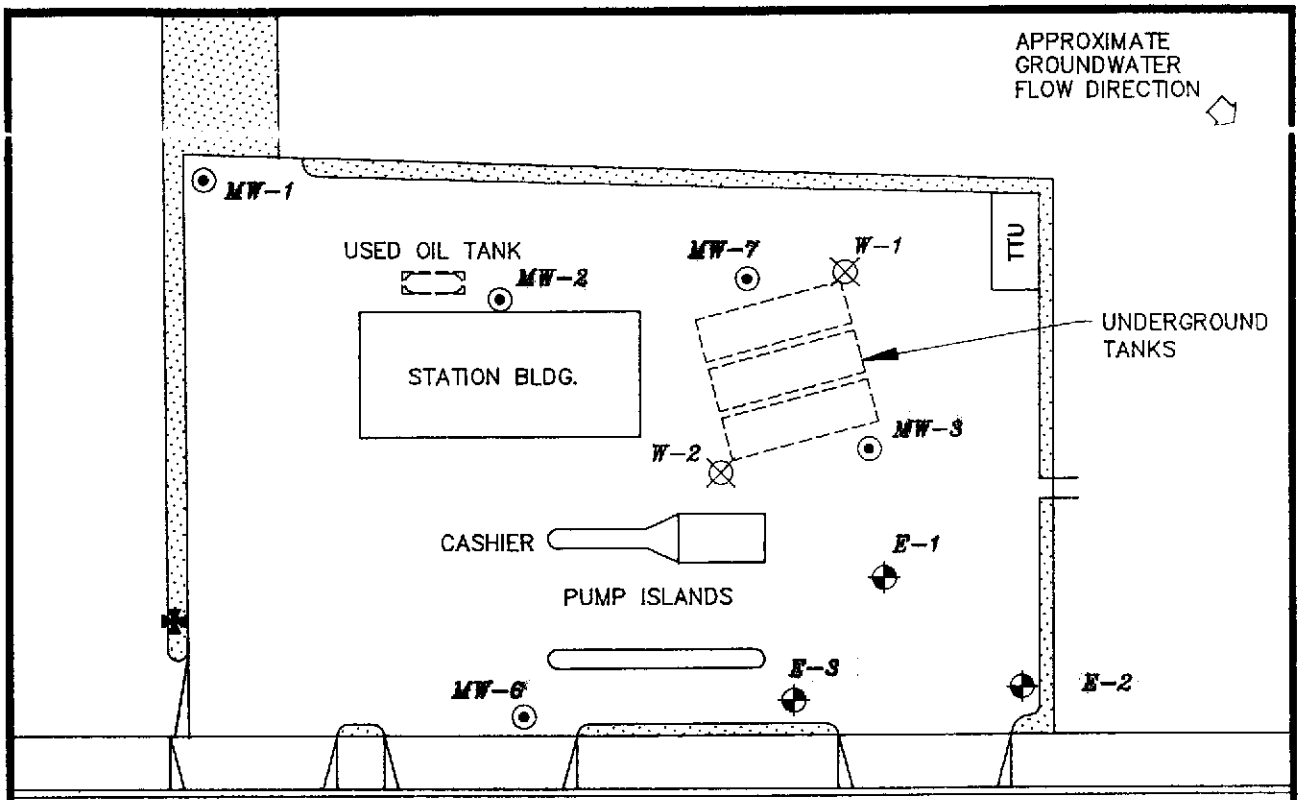
BURLINGTON ENVIRONMENTAL INC.
CHEMPRO Division

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

Reviewed By : Julia Low Date : 12/20/91

Figure 1

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



EXPLANATION

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

0 20 40Ft.

SCALE

BURLINGTON ENVIRONMENTAL INC.
CHEMPRO Division

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

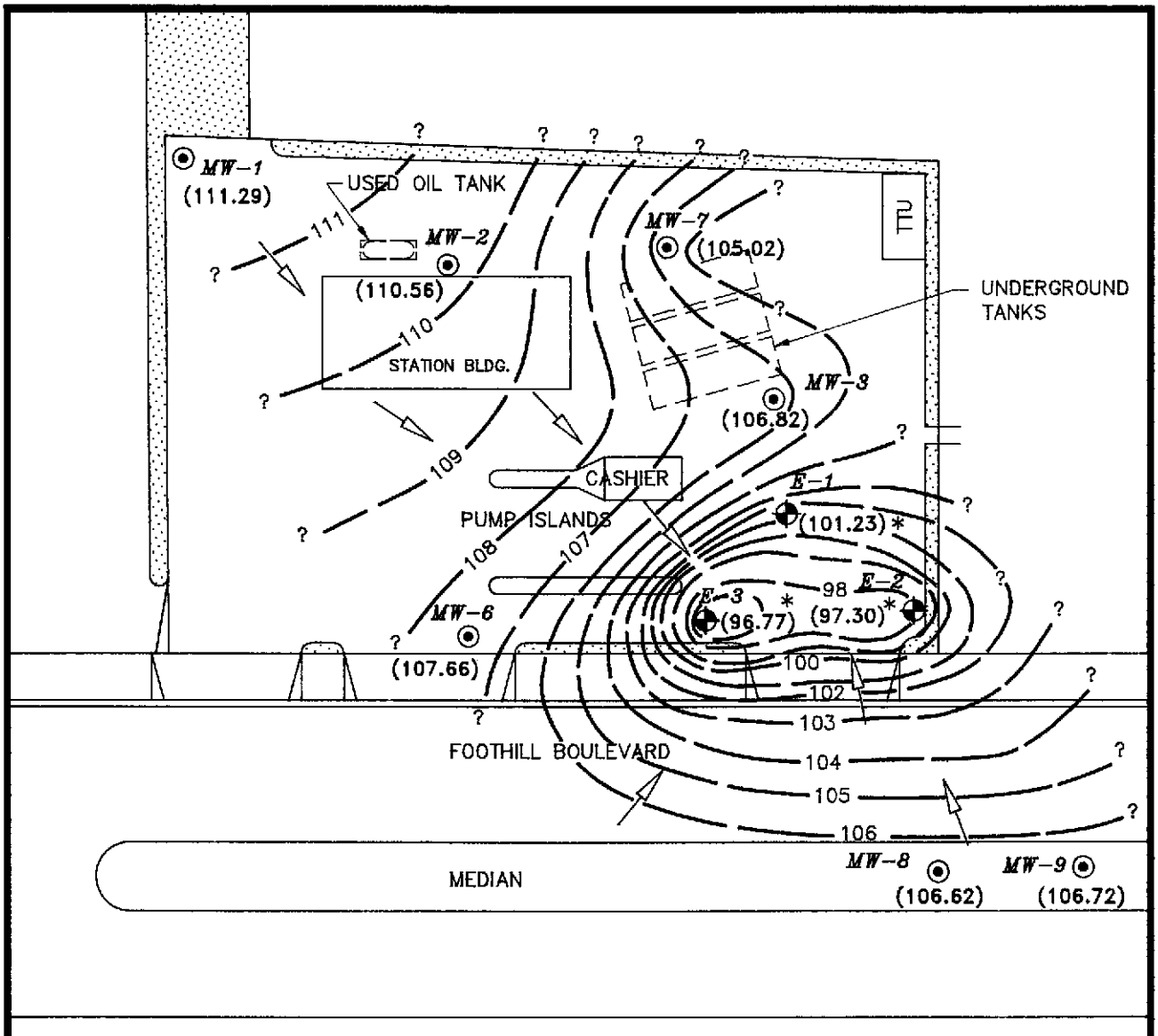
Reviewed By : [signature] Date : 12/28/91

Figure 2

Project No. CHV149/158

Drawn By PPK | Date 6/28/91

Drawing No. A0615802



EXPLANATION

- ⊙ GROUNDWATER MONITORING WELL
- ⊕ GROUNDWATER EXTRACTION WELL
- (106.62) GROUNDWATER ELEVATION (FT-MSL) MEASURED ON: 11/13/91
- 100 GROUNDWATER ELEVATION CONTOUR LINE (FT-MSL) DASHED WHERE QUERIED CONTOUR INTERVAL = 1 ft
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- * AVERAGE DEPRESSED ELEVATIONS, AS MEASURED ON 10/29/91

N

0 20 40FT.

SCALE

Fourth Quarter 1991

BURLINGTON ENVIRONMENTAL INC.
CHEMPRO Division

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

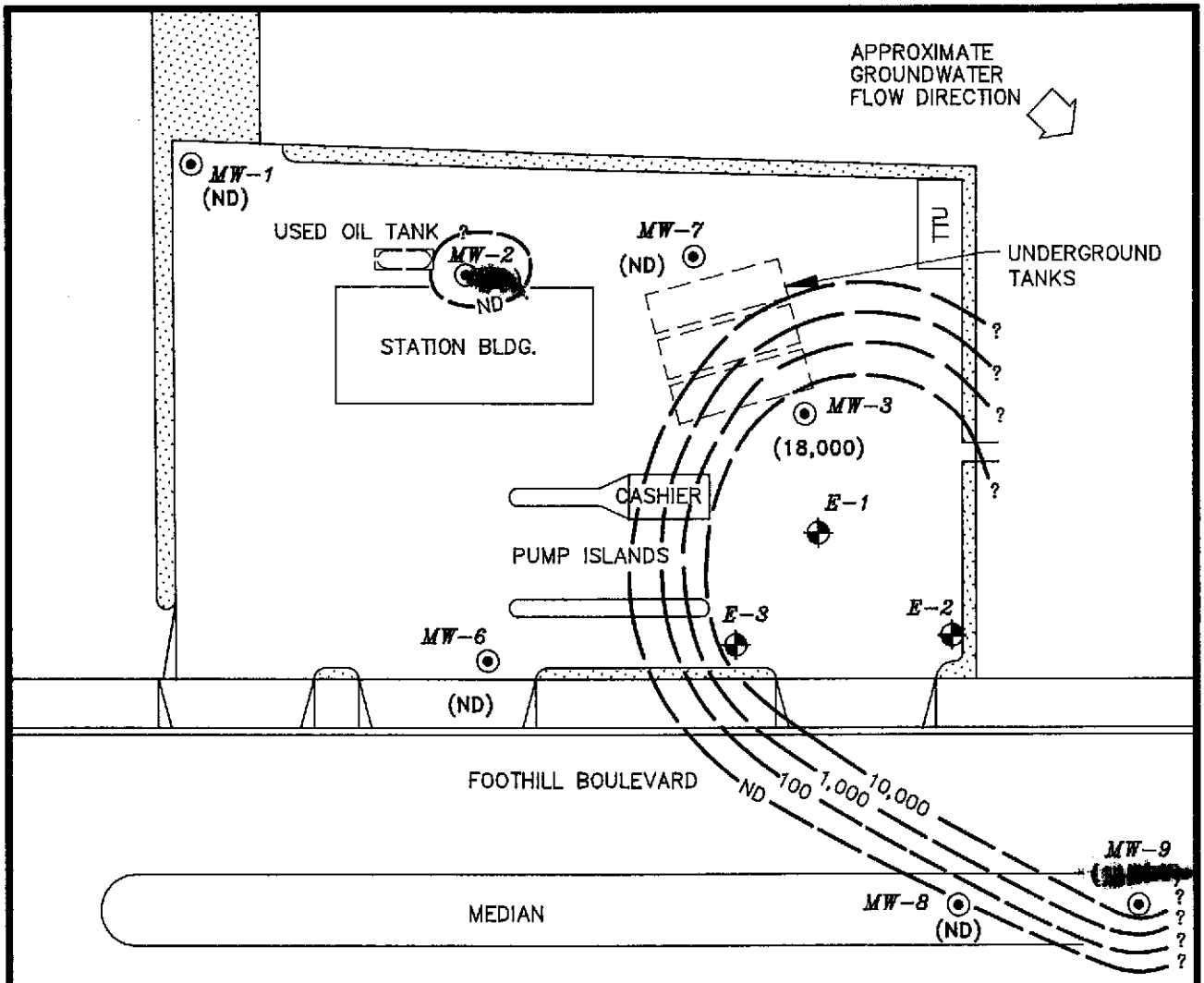
Figure 3

Project No. CHV-149

Drawn By PPK | Date 12/16/91

Reviewed By : Julia Low | Date : 12/28/91

Drawing No. A0629731



Fourth Quarter 1991

BURLINGTON ENVIRONMENTAL INC.
CHEMPRO Division

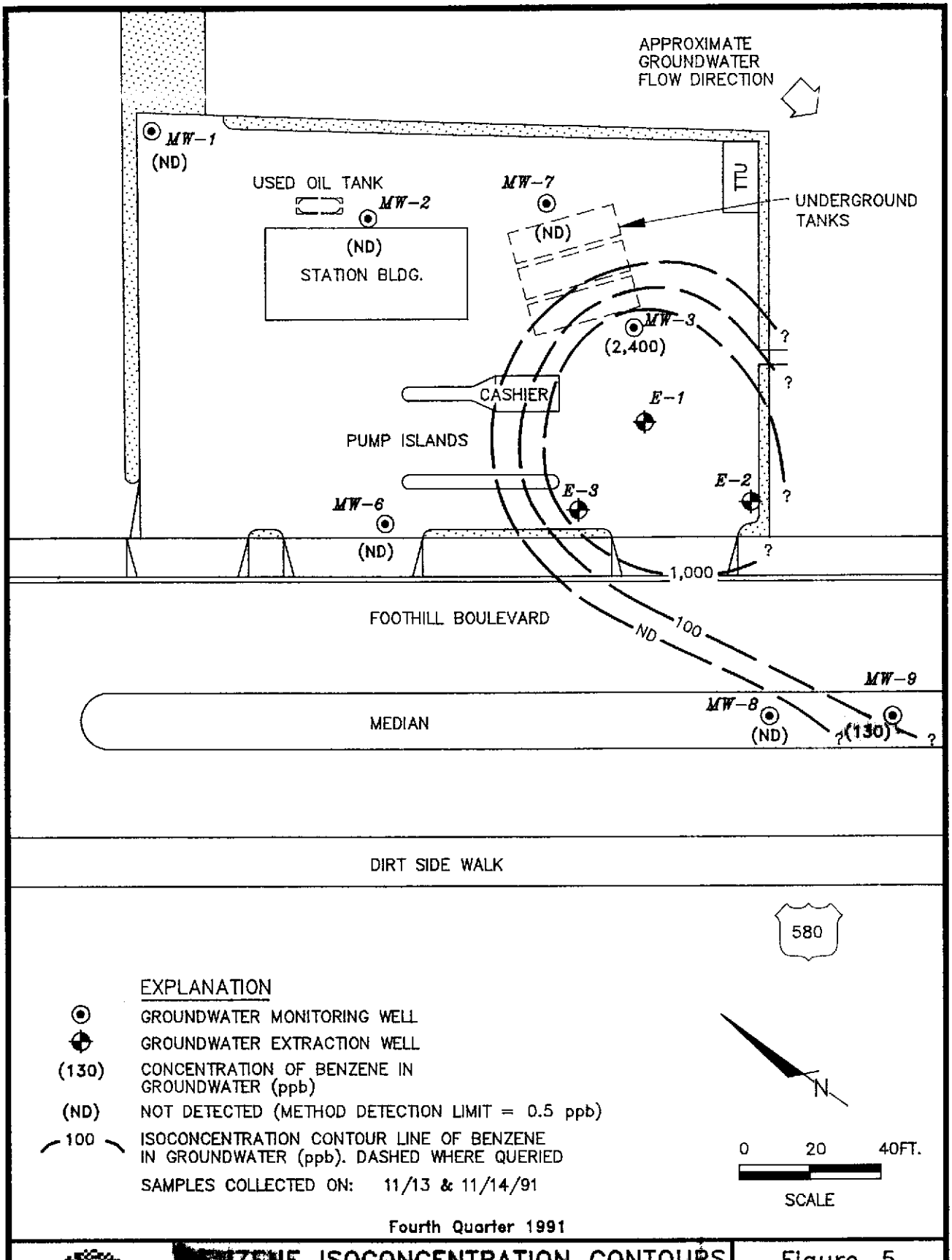
TPH ISOCONCENTRATION CONTOURS

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

Reviewed By : [signature] Date : 12/28/91

Figure 4

Project No.	CHV-149
Drawn By PPK	Date 12/16/91
Drawing No.	A0629732



Fourth Quarter 1991

BURLINGTON ENVIRONMENTAL INC.
CHEMPRO Division

BENZENE ISOCONCENTRATION CONTOURS

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

Figure 5

Project No. CHV-149

Drawn By PPK | Date 12/16/91

Reviewed By : [signature] Date : 12/28/91

Drawing No. A0629733

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 was 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 all equipment used in the well was washed with detergent, steam-cleaned, and rinsed with distilled water before purging or sampling the next well. The rinse water was treated onsite by pumping the water into a camlock fitting on the influent to the treatment system.

Quality Assurance Samples

A rinsate sample was collected to insure that contamination did not result from the sampling equipment. All sample bailers were steam cleaned initially, washed with TSP, and rinsed with distilled water before being dedicated in the 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.

No phase-separated hydrocarbons were detected in any of the monitoring wells. When PSH 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 0.01 foot in the field log book.

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 then emptied onsite by pumping the water through the system. 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 collected from monitoring well MW-6 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 Precision Analytical.

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 log books 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 Log Book

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

FIELD REPORT
WATER LEVEL / FLOATING PRODUCT SURVEY

PROJECT NO.: 297 LOCATION: 16304 Foothill Blvd., SAN LEANDRO SAMPLER: DAC/CS

STATION NO.: 9.8139 DATE: 11-13 - 11-14-91 TIME AND DATE OF SYSTEM START-UP:

WELL ID	TOTAL DEPTH (Feet)	WELL DIAMETER (in)	DEPTH TO WATER (Feet)	DEPTH TO FLOATING PRODUCT (Feet)	FLOATING PRODUCT THICKNESS (Feet)	TIME	COMMENTS
MW-1	27.59	2	15.80	—	—	0950	11-13-91
MW-2	30.31	2	15.42	—	—	1025	11-13-91
MW-7	25.92	2	21.84	—	—	1235	11-13-91
MW-3	25.65	2	19.95	—	—	1332	11-13-91
MW-6	28.99	2	16.52	—	—	0817	11-14-91
MW-8	30.80	2	16.99	—	—	0956	11-14-91
MW-9	26.73	2	17.48	—	—	1059	11-14-91

WATER DATA SHEET

PROJECT NO.: 297 SAMPLE ID.: WS-46-SL

LOCATION: 16304 Foothill Blvd, San Leandro DATE: 11-13-91

STATION NO.: 9-8139 WELL/SAMPLE

SAMPLER: DAL/CS POINT DESIGNATION: MW-2

[X] SAMPLING [ ] DEVELOPING [ ] BAILING FLOATING PRODUCT

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

Screened Int. (ft.): 25-30

Initial DTW (ft.): 15.42 @ 1025

Initial TD (ft.): 30.31

Casing Elev. (ft.): 125.98 Water Column Height (ft.): 14.89

TD (Actual) (ft.): 30 80 % Recovery (ft.): 18.39

Calc. Casing Vol. (gal.): 2.53
(2" = .17) (3" = .38) (4" = .66) (6" = 1.5)

Calc. Purge Vol. (gal.): 10.12

Final DTW (ft.): 30.45 @ 1119

Final TD (ft.): 17.41

Product Bailed (gal.): Ø

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
10:46	2.5	9.14	66.7	4.21×10^2	CAMEL	
11:00	5.0	8.74	66.8	3.92×10^2	CAMEL	
11:03	7.5	8.65	66.5	3.83×10^2	CAMEL	
11:14	10.25	8.62	66.4	3.73×10^2	CAMEL	

Odor? NONE

Actual Purge Vol. (gal.): 10.25

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

SAMPLE METHOD:
X Bailer (Teflon)
___ Bailer (PVC)
___ Dedicated Bailer
___ Other ___

REMARKS: WS-46-SL sampled @ 1130 on 11-13-91.

WATER DATA SHEET

PROJECT NO.: 297 SAMPLE ID.: WS - 47 - SL

LOCATION: 16304 Foothill Blvd, SanLeandro DATE: 11.13.91

STATION NO.: 9.8139 WELL/SAMPLE

SAMPLER: DAL/CS POINT DESIGNATION: mw-1

[X] SAMPLING [ ] DEVELOPING [ ] BAILING FLOATING PRODUCT

Casing Diameter:
2 Inch X
3 Inch ___
4 Inch ___
6 Inch ___
other ___

Screened Int. (ft.): 25-30

Initial DTW (ft.): 15.80 @ 0950

Initial TD (ft.): 27.59

Casing Elev. (ft.): 127.09

Water Column Height (ft.): 11.79

TD (Actual) (ft.): 30

80 % Recovery (ft.): 18.16

Calc. Casing Vol. (gal.): 2.0
(2" = .17) (3" = .38) (4" = .66) (6" = 1.5)

Calc. Purge Vol. (gal.): 8.02

Final DTW (ft.): 17.15 @ 12:14

Final TD (ft.): 27.53

Product Bailed (gal.): Ø

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
1000	2	11.03	68.4	7.10×10^2	lt. pewter	
1007	3	12.12	67.3	8.13×10^2	DEN TEAL/CHARCY	26.69
1104	-	-	-	-	-	20.60
1138	-	-	-	-	-	18.56
1216	-	-	-	-	-	17.15

Odor? NONE

Actual Purge Vol. (gal.): 3

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

SAMPLE METHOD:
X Bailer (Teflon)
___ Bailer (PVC)
___ Dedicated Bailer
___ Other ___

REMARKS: WS. 47. SL Sampled @ 1225 on 11.13.91.

WATER DATA SHEET

PROJECT NO.: 297 SAMPLE ID.: WS - 48 - SL

LOCATION: 16304 Foothill Blvd., SAN LEANDRO DATE: 11-13-91

STATION NO.: 9.8139 WELL/SAMPLE

SAMPLER: DAL/CS POINT DESIGNATION: MW-7

[X] SAMPLING [ ] DEVELOPING [ ] BAILING FLOATING PRODUCT

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

Screened Int. (ft.): 21.5-26.5

Initial DTW (ft.): 21.84 @ 1235

Initial TD (ft.): 25.92

Casing Elev. (ft.): 126.86

Water Column Height (ft.): 4.08

TD (Actual) (ft.): ____

80 % Recovery (ft.): 22.35

Calc. Casing Vol. (gal.): 0.69
(2" = .17) (3" = .38) (4" = .66) (6" = 1.5)

Calc. Purge Vol. (gal.): 2.77

Final DTW (ft.): 24.72 @ 1318

Final TD (ft.): 25.90

Product Bailed (gal.): Ø

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
1252	.75	8.05	70.7	3.44×10^2	H. CAMEL	
1301	1.50	8.05	70.1	3.32×10^2	CAMEL	
1308	2.25	8.02	69.1	3.26×10^2	CAMEL	
1314	3.00	8.02	69.0	3.27×10^2	CAMEL	

Odor? NONE

Actual Purge Vol. (gal.): 3

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

SAMPLE METHOD:
X Bailer (Teflon)
___ Bailer (PVC)
___ Dedicated Bailer
___ Other ____

REMARKS: WS-48-SL SAMPLED @ 1330 ON 11-13-91

WATER DATA SHEET

PROJECT NO.: 297 SAMPLE ID.: WS - 49 - SL

LOCATION: 16304 Foothill Blvd, San Leandro DATE: 11·13·91

STATION NO.: 9·8139 WELL/SAMPLE

SAMPLER: DAL/CS POINT DESIGNATION: MW-3

[X] SAMPLING [ ] DEVELOPING [ ] BAILING FLOATING PRODUCT

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

Screened Int. (ft.): 15.5-25.5

Initial DTW (ft.): 19.95 @ 1332

Initial TD (ft.): 25.65

Water Column Height (ft.): 5.70

80 % Recovery (ft.): 21.09

Calc. Casing Vol. (gal.): 0.969
(2" = .17) (3" = .38) (4" = .66) (6" = 1.5)

Calc. Purge Vol. (gal.): 3.876

Final DTW (ft.): 23.88 @ 1410

Final TD (ft.): 25.68

Product Bailed (gal.): Ø

Casing Elev. (ft.): 126.77

TD (Actual) (ft.): 25.5

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
1342	1	7.78	70.9	3.78×10^2	GR./CHARCOAL	
1353	2	7.68	68.4	3.60×10^2	" "	
1401	3	7.80	68.3	3.56×10^2	" "	
1409	4	7.84	67.5	3.45×10^2	GR. / CHARCOAL	

Odor? MODERATE to STRONG

Actual Purge Vol. (gal.): 4

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

SAMPLE METHOD:
X Bailer (Teflon)
___ Bailer (PVC)
___ Dedicated Bailer
___ Other ____

REMARKS: WS. 49. SL SAMPLED @ 1425 ON 11·13·91

WATER DATA SHEET

WS·51·SL (DUPLICATE)

PROJECT NO.: 297 SAMPLE ID.: WS - 50 - SL

LOCATION: 16304 Foothill BLVD, SAN LEANDRO DATE: 11·14·91

STATION NO.: 9.8139 WELL/SAMPLE

SAMPLER: DAL/CS POINT DESIGNATION: MW-6

[X] SAMPLING [ ] DEVELOPING [ ] BAILING FLOATING PRODUCT

Casing Diameter:
2 Inch X
3 Inch ____
4 Inch ____
6 Inch ____
other ____

Screened Int. (ft.): 24.6 - 29.6

Initial DTW (ft.): 16.52 @ 0817

Initial TD (ft.): 28.99

Casing Elev. (ft.): 124.18

Water Column Height (ft.): 12.47

TD (Actual) (ft.): 29.2

80 % Recovery (ft.): 26.09

Calc. Casing Vol. (gal.): 2.11
(2" = .17) (3" = .38) (4" = .66) (6" = 1.5)

Calc. Purge Vol. (gal.): 8.47

Final DTW (ft.): 21.00 @ 0917

Final TD (ft.): 28.90

Product Bailed (gal.): 8.5

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
0859	2	6.65	61.6	3.02×10^2	CAMEL	
0908	4	6.76	60.1	2.85×10^2	CAMEL	
0913	6	6.90	59.6	2.84×10^2	CAMEL	
0915	8.5	7.01	60.8	2.84×10^2	CAMEL	

Odor? NONE

Actual Purge Vol. (gal.): 8.5

PURGE METHOD:
- ___ Bailer (Teflon)
- X Bailer (PVC)
- ___ Well Wizard
- ___ Dedicated Bailer
- ___ Other ____

SAMPLE METHOD:
- X Bailer (Teflon)
- ___ Bailer (PVC)
- ___ Dedicated Bailer
- ___ Other ____

REMARKS: WS·50·SL SAMPLED @ 0925 ON 11·14·91
WS·51·SL SAMPLED @ 0940 ON 11·14·91

WATER DATA SHEET

PROJECT NO.: 297 SAMPLE ID.: WS - 52 - SL

LOCATION: 16304 Foothill Blvd, San Leandro DATE: 11.14.91

STATION NO.: 9.8139 WELL/SAMPLE

SAMPLER: DAL/CS POINT DESIGNATION: MW-8

[X] SAMPLING [ ] DEVELOPING [ ] BAILING FLOATING PRODUCT

Casing Diameter:
2 Inch X
3 Inch
4 Inch
6 Inch
other

Screened Int. (ft.): 21.5 - 30.5

Initial DTW (ft.): 16.99 @0956

Initial TD (ft.): 30.80

Casing Elev. (ft.): 123.61

Water Column Height (ft.): 13.81

TD (Actual) (ft.): 31

80 % Recovery (ft.): 19.75

Calc. Casing Vol. (gal.): 2.34
(2" = .17) (3" = .38) (4" = .66) (6" = 1.5)

Calc. Purge Vol. (gal.): 9.39

Final DTW (ft.): 17.01 @1035

Final TD (ft.): 30.80

Product Bailed (gal.): 0

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
10:03	2	7.90	61.0	3.16×10^2	CAMEL	
10:07	4.5	7.65	61.8	3.08×10^2	CAMEL	
10:22	7.0	7.64	61.6	3.03×10^2	CAMEL	
10:31	9.5	7.60	61.2	3.04×10^2	CAMEL	

Odor? NONE

Actual Purge Vol. (gal.): 9.5

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

SAMPLE METHOD:
X Bailer (Teflon)
___ Bailer (PVC)
___ Dedicated Bailer
___ Other

REMARKS: WS-52-SL SAMPLED @ 1045 ON 11.14.91.

WATER DATA SHEET

PROJECT NO.: 297 SAMPLE ID.: WS - 53 - SL

LOCATION: 16304 Foothill Blvd, San Leandro DATE: 11 - 14 - 91

STATION NO.: 9-8139 WELL/SAMPLE

SAMPLER: DAL/CS POINT DESIGNATION: MW-9

[X] SAMPLING [ ] DEVELOPING [ ] BAILING FLOATING PRODUCT

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

Screened Int. (ft.): 17-27

Initial DTW (ft.): 17.48 @ 1059

Initial TD (ft.): 26.73

Casing Elev. (ft.): 124.20

Water Column Height (ft.): 9.25

TD (Actual) (ft.): 27

80 % Recovery (ft.): 19.33

Calc. Casing Vol. (gal.): 1.5725
(1" = .17) (3" = .38) (4" = .66) (6" = 1.5)

Calc. Purge Vol. (gal.): 6.29

Final DTW (ft.): 17.48 @ 1115

Final TD (ft.): 26.73

Product Bailed (gal.): 0

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	pH (units)	TEMP. (degrees F)	E.C. (umhos/cm)	COLOR	DTW (if dry)
1100	1.5	7.52	64.3	3.15×10^2	CAMEL	
1103	3.0	7.36	65.9	3.22×10^2	CAMEL	
1108	4.5	7.31	66.3	3.26×10^2	CAMEL	
1110	7.0	7.30	66.5	3.25×10^2	CAMEL	

Odor? NONE

Actual Purge Vol. (gal.): 7.0

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

SAMPLE METHOD:
- X Bailer (Teflon)
- Bailer (PVC)
- X Dedicated Bailer
- Other

REMARKS: WS-53-SL Sampled @ 1130 on 11-14-91

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

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

LABORATORY NO.: 12546
CLIENT: Burlington/Chempro
CLIENT JOB NO.: 297

DATE RECEIVED: 11/14/91
DATE REPORTED: 11/18/91

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
12546- 1	TB-7-SL	11/13/91	11/15/91
12546- 2	RS-7-SL	11/13/91	11/15/91
12546- 3	WS-46-SL	11/13/91	11/15/91
12546- 4	WS-47-SL	11/13/91	11/15/91
12546- 5	WS-48-SL	11/13/91	11/15/91
12546- 6	WS-49-SL	11/13/91	11/15/91
12546- 7	WS-50-SL	11/14/91	11/15/91
12546- 8	WS-51-SL	11/14/91	11/15/91
12546- 9	WS-52-SL	11/14/91	11/15/91
12546-10	WS-53-SL	11/14/91	11/15/91

Laboratory Number:	12546 1	12546 2	12546 3	12546 4	12546 5
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	ND<50	58	ND<50	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
TOLUENE:	ND<0.5	ND<0.5	0.5	ND<0.5	ND<0.5
ETHYL BENZENE:	ND<0.5	ND<0.5	0.7	ND<0.5	ND<0.5
XYLENES:	ND<0.5	ND<0.5	2.3	ND<0.5	ND<0.5

Laboratory Number:	12546 6	12546 7	12546 8	12546 9	12546 10
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	18000	ND<50	ND<50	ND<50	11000
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	2400	ND<0.5	ND<0.5	ND<0.5	130
TOLUENE:	1200	ND<0.5	0.6	ND<0.5	58
ETHYL BENZENE:	450	ND<0.5	ND<0.5	ND<0.5	86
XYLENES:	2200	ND<0.5	1.1	ND<0.5	1500

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

QA/QC INFORMATION
SET: 12546

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

OIL AND GREASE ANALYSIS By Standard Methods Method 503E:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA-SW846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/l
Standard Reference: NA

EPA-SW846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/l
Standard Reference: 07/23/91

SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/l
Standard Reference: 06/13/91

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	NA	NA	NA	NA	NA
Diesel	NA	NA	NA	NA	NA
Gasoline	07/23/91	200ng	68/76	11.4	59-121
Benzene	06/13/91	200ng	82/82	0.4	70-125
Toluene	06/13/91	200ng	84/85	1.2	74-116
Ethyl Benzene	06/13/91	200ng	78/78	0.2	75-120
Total Xylene	06/13/91	600ng	89/88	1.2	75-119

Richard Srna, Ph.D.
Cecilia Y. Jacquin (for)
Laboratory Director

Fax copy of Lab Report and COC to Chevron Contact: ☐ No 72576 **Chain-of-Custody-Record**

Chevron U.S.A. Inc.
P.O. BOX 5004
San Ramon, CA 94583
FAX (415)842-9591

Chevron Facility Number 9-8139
Facility Address 16304 Foothill Blvd., SAN LEANDRO
Consultant Project Number 297
Consultant Name CHEMPRO
Address 950-B Gilman St., BERKELEY, CA.
Project Contact (Name) F. REIN
(Phone) 524-9872 (Fax Number) 524-7439

Chevron Contact (Name) W. POSLUSZNY
(Phone) 842-9527
Laboratory Name SPECTRUM
Laboratory Release Number 4758680
Samples Collected by (Name) D.A. LAMB / C. SAYRE
Collection Date 11-13 - 11-14-91
Signature

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed: BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	Remarks
TB-7-SL	1	1	W	G	0700	HCL	Y	X								11-13-91
RS-7-SL	2	3	W	G	0910	HCL	Y	X								11-13-91
WS-46-SL	3	3	W	G	1130	HCL	Y	X								11-13-91
WS-47-SL	4	3	W	G	1225	HCL	Y	X								11-13-91
WS-48-SL	5	3	W	G	1330	HCL	Y	X								11-13-91
WS-49-SL	6	3	W	G	1425	HCL	Y	X								11-13-91
WS-50-SL	7	3	W	G	0925	HCL	Y	X								11-14-91
WS-51-SL	8	3	W	G	0940	HCL	Y	X								11-14-91
WS-52-SL	9	3	W	G	1045	HCL	Y	X								11-14-91
WS-53-SL	10	3	W	G	1130	HCL	Y	X								11-14-91

Please initial: DW
Samples Stored in ice. JB
Appropriate containers. yes
Samples preserved. yes
VOA's without headspace. yes
Comments: OK

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	CHEMPRO	11/14/91 1330		Express-IT	11/14/91/1330
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	Express-IT	11/14/91/1403			
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time
	Express-IT	11-14-91 14:10			11/14/91 14:10

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
(10 Days)
As Contracted