Chevron

Chevron U.S.A. Inc.
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HAZARDOUS MATERIALS OFFICE
AUG 29 1991
HAYWARD FIRE DEPARTMENT

10/16/91

August 23, 1991

OK

Ms. Penny Silzer
Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite #500
Oakland, California 94612

Re: Chevron Service Station #9-0260
21995 Foothill Boulevard
Hayward, California 94541

Dear Ms. Silzer,

Please find attached a copy of the most recent quarterly monitoring report for the above referenced site. Chevron is currently monitoring a total of fifteen groundwater wells with eight being on-site and seven being offsite. Groundwater is at approximately 14 feet below grade and is moving to the southwest at a rate of 0.02 ft./ft.. Phase separated hydrocarbons are showing up in two monitoring wells.

WasteWater Treatment Systems UV-OX equipment started operating this morning for a five-week test after an inordinate amount of regulatory delays. We are pumping directly from MW-11 which contained Phase Separated Hydrocarbons and two additional wells. An oil water separator on-site is handling the PSH removal. We have taken a PSH sample from MW-11 and will take one from MW-8 for analysis. MW-8 is our most cross gradient well and it contains the most PSH.

I declare under penalty of perjury that the information contained in the attached report is true and correct, and that any recommended actions are appropriate under the current circumstances, to the best of my knowledge.

Should you have any questions, please feel free to call me at (415) 842-9040.

10/17/91
- Recieved message from Mr Posluzny
He will be defining the extent of contamination; However during operation of his UV Oxidation unit he discover arsenic in his discharge water that Oro loma sanitary will not take. Arsonic is apparently from an old apricot orchard on site

Very Truly Yours,

Walter F. Posluszny Jr.
Environmental Engineer
Chevron U.S.A., Inc.

cc: Mr. Hugh Murphy, Hayward Fire Dept.
File(MAC 9-0260R7)

WEISS ASSOCIATES
Geologic and Environmental Services
Fax: 415-547-5043 Phone: 415-547-5420
5500 Shellmound Street, Emeryville, CA 94608

July 29, 1991

Walter F. Posluszny, Jr.
Chevron U.S.A., Inc.
P.O. Box 5004
San Ramon, CA 94583-0804

Re: Third Quarter 1991
Ground Water Monitoring Report
Chevron Service Station #9-0260
21995 Foothill Boulevard
Hayward, California
WA Job #4-310-01

Dear Mr. Posluszny:

As you requested, Weiss Associates (WA) is providing this Ground Water Monitoring Report for the site referenced above (Figure 1). WA sampled the ground water monitoring wells (Figure 2) on June 2, 1991, in accordance with the requirements and procedures of the California Regional Water Quality Control Board - San Francisco Bay Region and local regulatory agencies.

SAMPLING PROCEDURES

Prior to purging and sampling the wells, WA measured the depth to ground water in each well to the nearest 0.01 ft using an electric sounder (Table 1). We also checked the wells for floating hydrocarbons or sheen. About 0.48 and 0.02 ft of floating hydrocarbons were measured in monitoring wells MW-8 and MW-11, respectively.

WA collected ground water samples for analysis after purging at least 3 well-casing volumes of ground water from each well. Each sample was decanted from a dedicated bailer into the appropriate clean sample containers and delivered to a California-certified laboratory following proper sample preservation and chain-of-custody procedures. Purged ground water was stored onsite in DOT-approved 55-gallon drums until properly disposed of offsite.

MONITORING AND ANALYTIC RESULTS

The top-of-casing elevation, depth to ground water and the ground water elevation for each well is presented in Table 1. The ground water elevation contours and ground water flow direction are shown on Figure 2. The ground water elevation contours indicate that ground water flows southwestward with a gradient of about 0.02 ft/ft. An isoconcentration contour map of benzene is included as Figure 3.

Current and historical ground water analytic results are summarized in Table 2. The water sample collection records, and the analytic report and chain-of-custody forms are included as Attachments A and B, respectively. Ground water elevation contour maps for the past year are included in Figure 4.

PROPOSED WORK SCHEDULE

The Fourth Quarter 1991 ground water sampling is scheduled for October 3, 1991. We will submit a report presenting the field and analytic data by mid-November 1991.

We appreciate this opportunity to provide hydrogeologic consulting services to Chevron USA and trust that this submittal meets your needs. Please call if you have any questions regarding this report.

REGISTERED GEOLOGIST
JAMES W. CARMODY
No. EG 1576
CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

Sincerely,
Weiss Associates

Mariette Shin
Staff Geologist

James W. Carmody, C.E.G.
Senior Project Hydrogeologist

MMS/JWC:cr

E:\ALL\CHEV\300\310QMJY1.WP

Attachments A - Water Sample Collection Records
B - Analytic Report and Chain-of-Custody Forms

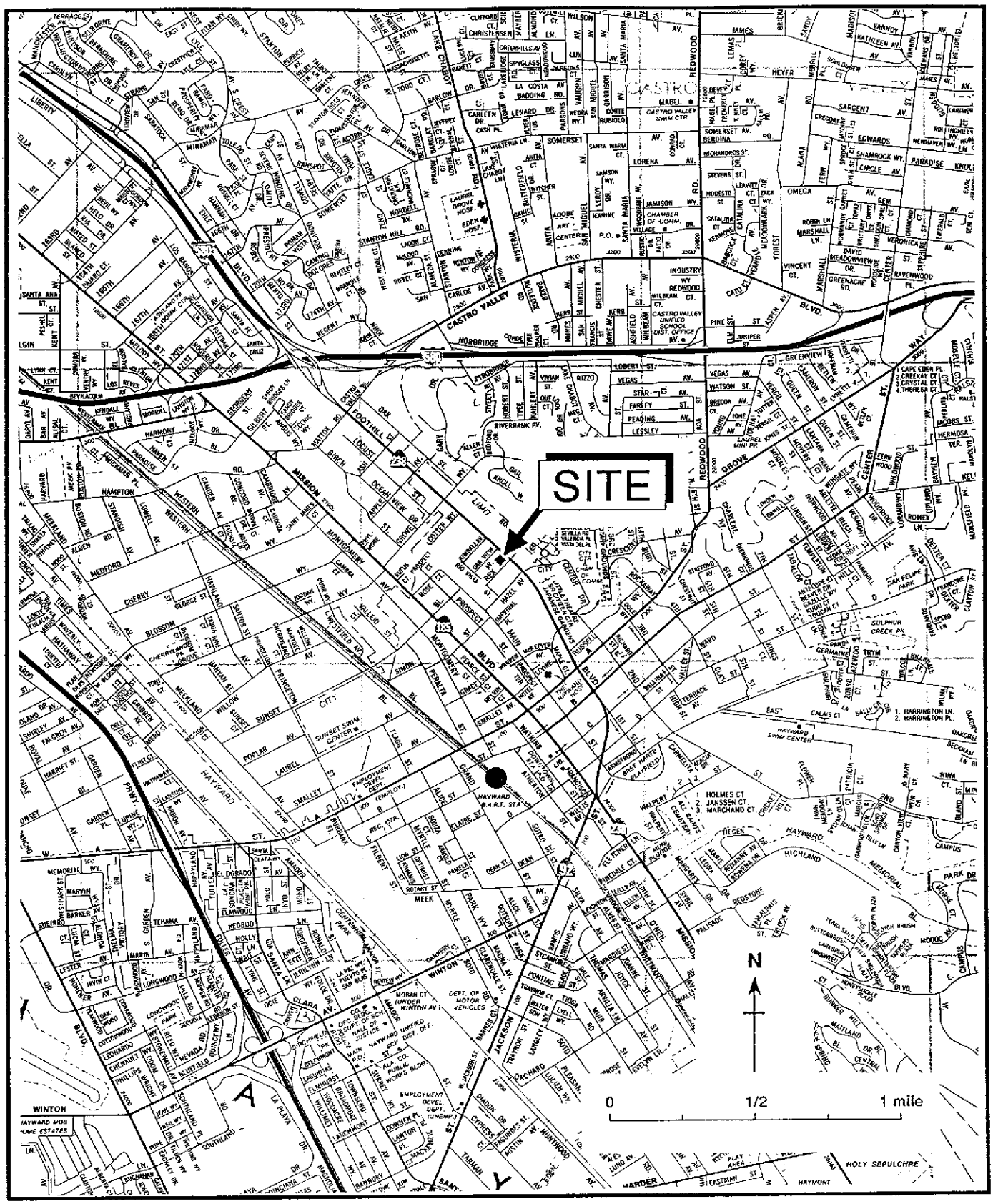


Figure 1. Site Location Map - Chevron Service Station #9-0260, 21995 Foothill Boulevard, Hayward, California

11/30/90

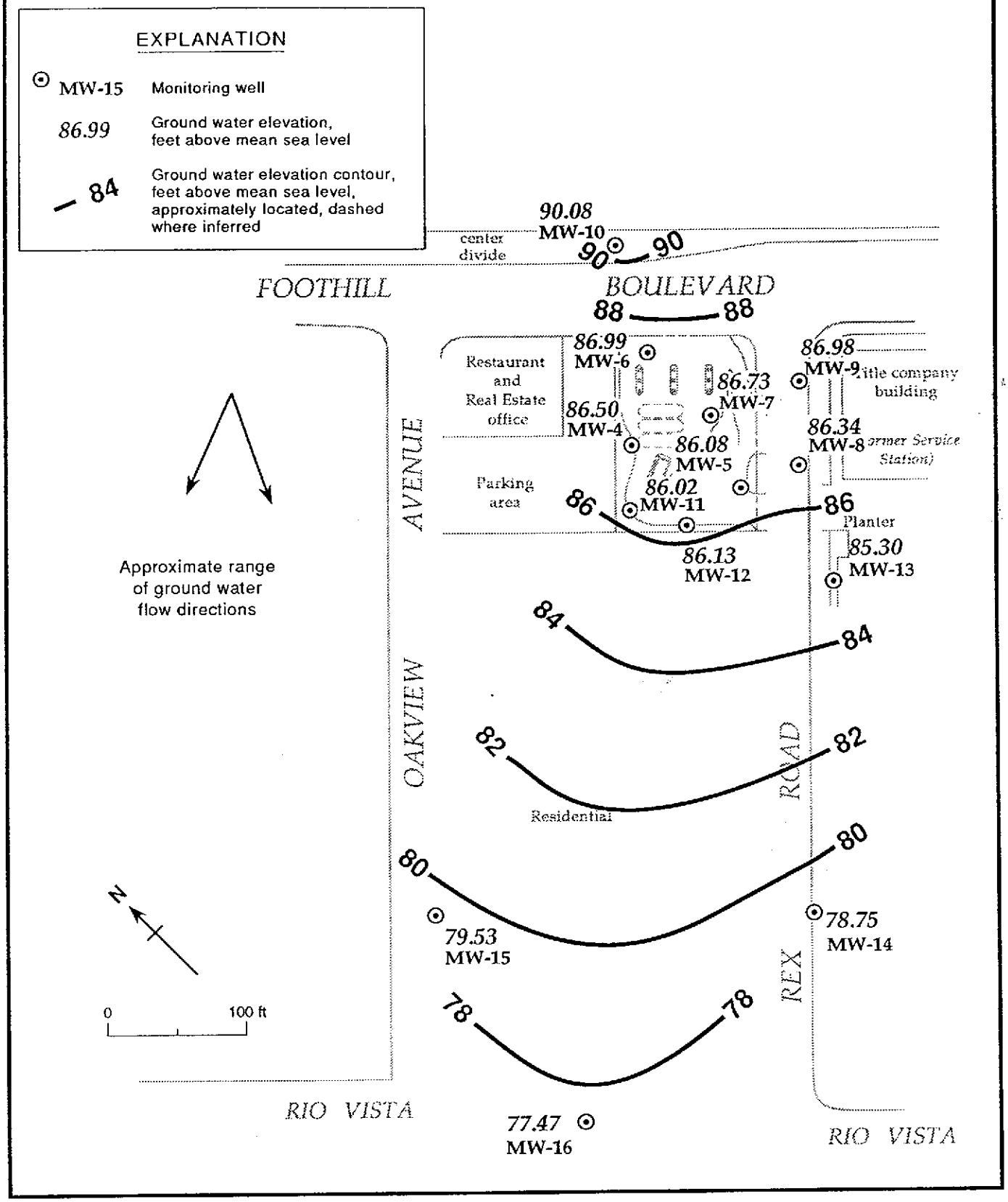


Figure 2. Ground Water Elevation Contours - June 2, 1991 - Chevron Service Station #9-0260, 21995 Foothill Boulevard, Hayward, California

7/26/91

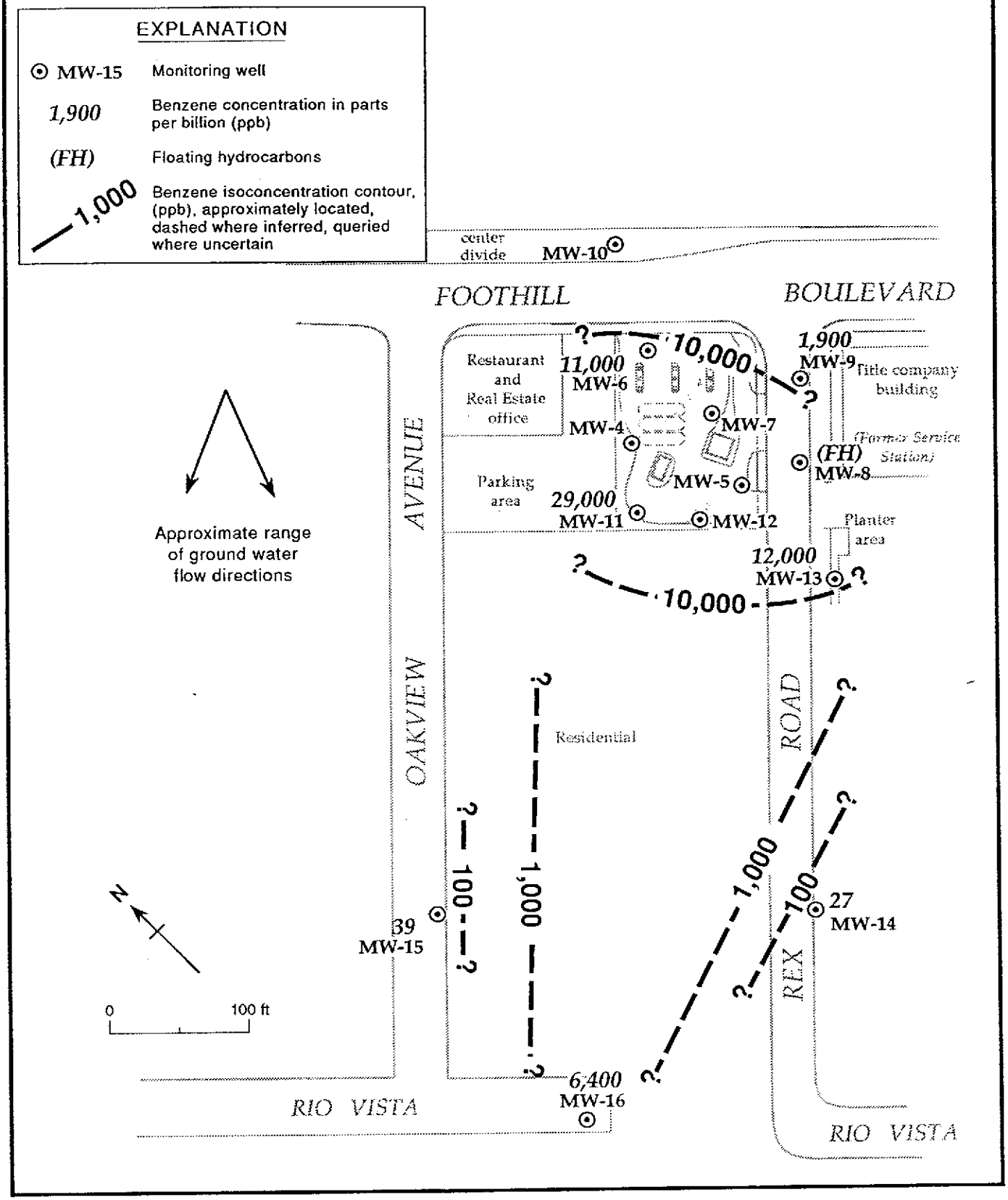
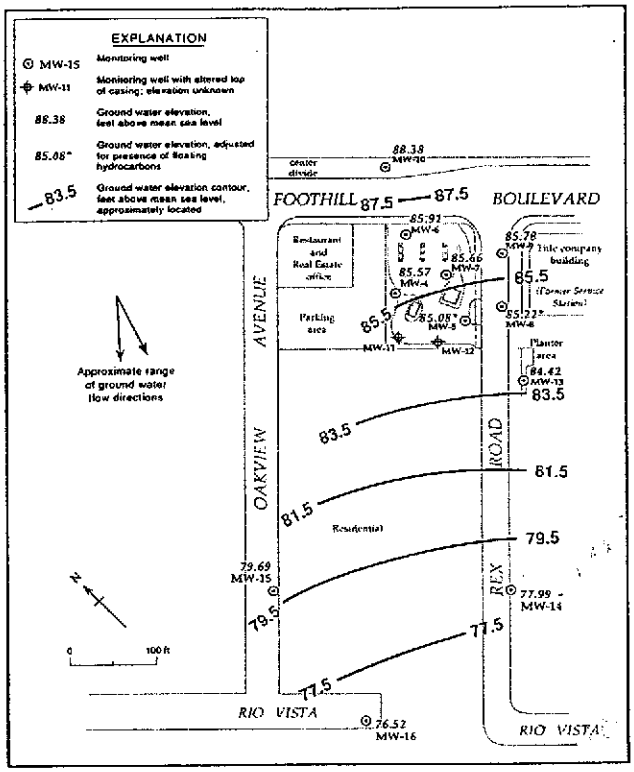
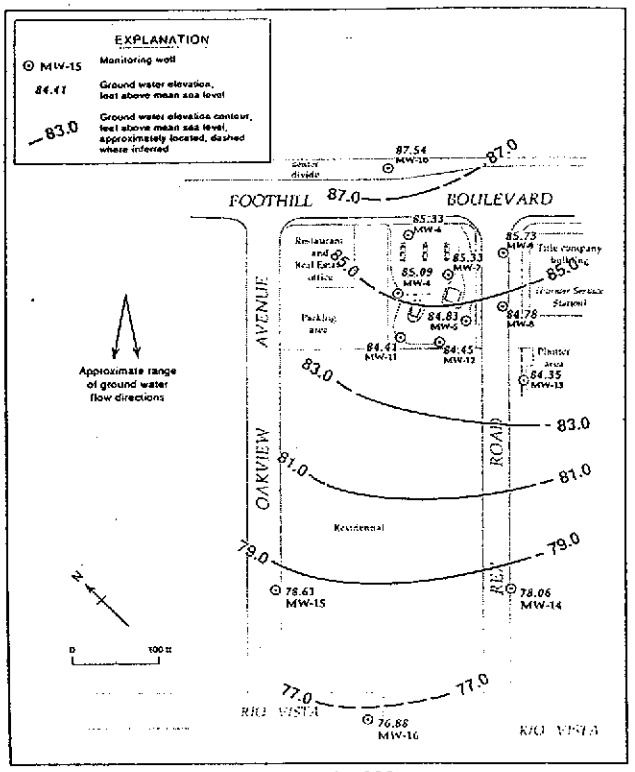


Figure 3. Benzene Isoconcentration Contours - July 2, 1991 - Chevron Service Station #9-0260, 21995 Foothill Boulevard, Hayward, California

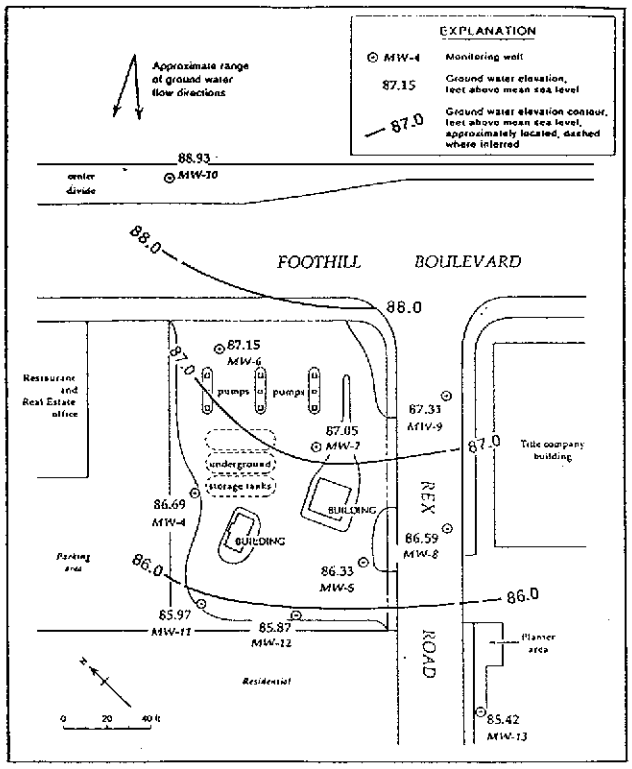
7/29/91



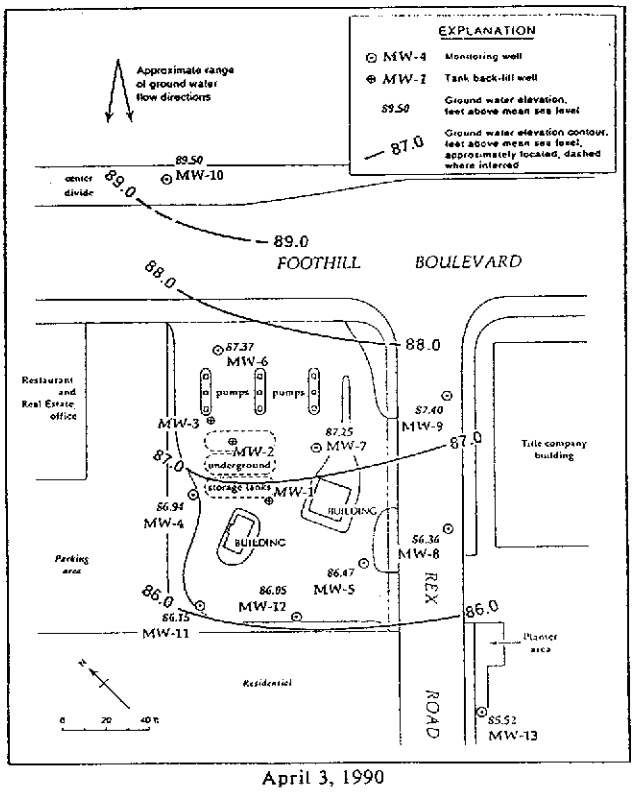
January 4, 1991



November 6, 1990



July 3, 1990



April 3, 1990

Figure 4. Previous Ground Water Elevation Contour Maps - Chevron Service Station #9-0260, 21995 Foothill Boulevard, Hayward, California

TABLE 1. Ground Water Elevation Data, Chevron Service Station #9-0260, 21995 Foothill Boulevard, Hayward, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Thickness of Floating Hydrocarbons (ft)	Water Elevation (ft above msl)
MW-4	06/15/88	100.75	12.92	---	87.83
	09/27/88		14.22	---	86.53
	01/05/89		13.20	---	87.55
	04/06/89		12.32	---	88.43
	06/28/89		14.25	---	86.50
	10/03/89		14.75	---	86.00
	01/04/90		14.75	---	86.00
	04/03/90		13.81	---	86.94
	07/03/90		14.06	---	86.69
	11/06/90		15.66	---	85.09
	01/04/91		15.18	---	85.57
	04/03/91		11.00	---	89.75
	07/02/91		14.25	---	86.50
MW-5	06/15/88	99.97	12.30	---	87.67
	09/27/88		13.25	---	86.72
	01/05/89		12.70	---	87.27
	04/06/89		12.22	---	87.75
	06/28/89		13.81	---	86.16
	10/03/89		14.27	---	85.70
	01/04/90		14.31	---	85.66
	04/03/90		13.50	---	86.47
	07/03/90		13.64	---	86.33
	11/06/90		15.14	---	84.83
	01/04/91		14.90	0.01	85.08[a]
	04/03/91		11.56	---	88.41
	07/02/91		13.89	---	86.08
MW-6	06/15/88	101.43	13.51	---	87.92
	09/27/88		14.56	---	86.87
	01/05/89		13.48	---	87.95
	04/06/89		12.60	---	88.83
	06/28/89		14.58	---	86.85
	10/03/89		13.03	---	88.40
	01/04/90		15.08	---	86.35
	04/03/90		14.06	---	87.37
	07/03/90		14.28	---	87.15
	11/06/90		16.10	---	85.33
	01/04/91		15.52	---	85.91
	04/03/91		11.03	---	90.40
	07/02/91		14.44	---	86.99

-- Table 1 continues on next page --

TABLE 1. Ground Water Elevation Data, Chevron Service Station #9-0260, 21995 Foothill Boulevard, Hayward, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Thickness of Floating Hydrocarbons (ft)	Water Elevation (ft above msl)
MW-7	06/15/88	100.91	12.57	---	88.34
	09/27/88		13.60	---	87.31
	01/05/89		12.98	---	87.93
	04/06/89		12.34	---	88.57
	06/28/89		14.08	---	86.83
	10/03/89		14.53	---	86.38
	01/04/90		14.49	---	86.42
	04/03/90		13.66	---	87.25
	07/03/90		13.86	---	87.05
	11/06/90		15.58	---	85.33
	01/04/91		15.25	---	85.66
	04/03/91		11.41	---	89.50
	07/02/91		14.18	---	86.73
MW-8	01/05/89	99.67	12.02	---	87.65
	04/06/89		11.78	---	87.89
	06/28/89		13.40	---	86.27
	10/03/89		13.84	0.11	85.92[a]
	01/04/90		13.99	0.10	85.76[a]
	04/03/90		13.07	0.30	86.84[a]
	07/03/90		13.11	0.04	86.59[a]
	11/06/90		14.77	0.15	85.02[a]
	01/04/91		14.59	0.18	85.22[a]
	04/03/91		11.53	0.05	88.18[a]
	07/02/91		13.71	0.48	86.34
MW-9	01/05/89	101.15	12.63	---	88.52
	04/06/89		12.46	---	88.69
	06/28/89		14.04	---	87.11
	10/03/89		14.61	---	86.54
	01/04/90		14.59	---	86.56
	04/03/90		13.75	---	87.40
	07/03/90		13.84	---	87.31
	11/06/90		15.42	---	85.73
	01/04/91		15.37	---	85.78
	04/03/91		12.27	---	88.88
	07/02/91		14.17	---	86.98

-- Table 1 continues on next page --

TABLE 1. Ground Water Elevation Data, Chevron Service Station #9-0260, 21995 Foothill Boulevard, Hayward, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Thickness of Floating Hydrocarbons (ft)	Water Elevation (ft above msl)
MW-10	01/05/89	102.36	12.64	---	89.72
	04/06/89		11.38	---	90.98
	06/28/89		13.64	---	88.72
	10/03/89		13.85	---	88.51
	01/04/90		13.75	---	88.61
	04/03/90		12.86	---	89.50
	07/03/90		13.43	---	88.93
	11/06/90		14.82	---	87.54
	01/04/91		13.98	---	88.38
	04/03/91		9.79	---	92.57
	07/02/91		12.28	---	90.08
MW-11	06/28/89	99.97	14.33	---	85.64
	10/03/89		14.61	---	85.36
	01/04/90		14.55	---	85.42
	04/03/90		13.82	---	86.15
	07/03/90		14.00	---	85.97
	11/06/90		15.56	---	84.41
	01/04/91	b	14.88	0.30	---
	04/03/91		10.75	0.21	---
	07/02/91		13.97	0.02	---
MW-12	06/28/89	99.64	14.10	---	85.54
	10/03/89		14.30	---	85.34
	01/04/90		14.35	---	85.29
	04/03/90		13.59	---	86.05
	07/03/90		13.77	---	85.87
	11/06/90		15.19	---	84.45
	01/04/91	b	14.52	0.06	---
	04/03/91		10.91	---	---
	07/02/91		13.51	---	---
MW-13	06/28/89	98.47	13.22	---	85.25
	10/03/89		13.54	---	84.93
	01/04/90		13.64	---	84.83
	04/03/90		12.95	---	85.52
	07/03/90		13.05	---	85.42
	11/06/90		14.12	---	84.35
	01/04/91		14.05	---	84.42
	04/03/91		11.41	---	87.06
	07/02/91		13.17	---	85.30

-- Table 1 continues on next page --

TABLE 1. Ground Water Elevation Data, Chevron Service Station #9-0260, 21995 Foothill Boulevard, Hayward, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Thickness of Floating Hydrocarbons (ft)	Water Elevation (ft above msl)
MW-14	08/29/90	99.68	21.39	---	78.29
	11/06/90		21.62	---	78.06
	01/04/91		21.69	---	77.99
	04/03/91		19.53	---	80.15
	07/02/91		20.93	---	78.75
MW-15	08/29/90	96.06	16.58	---	79.48
	11/06/90		17.43	---	78.63
	01/04/91		16.37	---	79.69
	04/03/91		12.46	---	83.60
	07/02/91		16.53	---	79.53
MW-16	08/29/90	98.15	20.89	---	77.26
	11/06/90		21.27	---	76.88
	01/04/91		21.63	---	76.52
	04/03/91		19.32	---	78.83
	07/02/91		20.68	---	77.47

[a] = Ground water elevation corrected for floating hydrocarbons by the formula: Ground Water Elevation = Top-of-casing elevation - Depth to ground water + (0.8 x hydrocarbon thickness)

[b] = Top of casing cut down; elevation unknown

TABLE 2. Analytic Results for Ground Water, Chevron Service Station #90260, 21995 Foothill Boulevard, Hayward, California

Sample ID and Sampling Frequency	Sample Date	Analytical Lab	Depth to Water (ft)	TPH-G	B	E	T	X	EDC	EDB	VOCs
				<----------parts per billion (µg/L)---------->							
MW-4	02/05/88	B&C		88,000	24,000	1,700	19,000	10,000	---	---	---
(Semi-Annually	06/15/88	B&C	12.92	95,000	45,000	2,100	30,000	17,000	---	---	---
2nd & 4th	09/27/88[a]	CCAS	14.22	500,000	41,000	<5,000	27,000	16,000	<5,000	<5,000	---
quarters)	09/27/88[ab]	CCAS	14.22	88,000	1,200	1,600	4,100	12,000	270	230	---
	01/05/89	SAL	13.20	64,000	41,000	2,700	29,000	14,000	---	---	---
	06/28/89	SAL	14.25	110,000	34,000	2,400	24,000	13,000	---	---	---
	10/03/89	SAL	14.75	240,000	36,000	3,200	31,000	19,000	---	---	---
	01/04/90	SAL	14.75	130,000	33,000	2,400	28,000	14,000	---	---	---
	04/03/90	SAL	13.81	110,000	41,000	2,900	32,000	17,000	---	---	---
	07/03/90	SAL	14.06	180,000	32,000	2,600	30,000	15,000	---	---	---
	11/06/90	SAL	15.66	170,000	31,000	2,700	30,000	17,000	---	---	---
	04/03/91	SAL	11.00	130,000	21,000	2,300	24,000	14,000	---	---	---
MW-5	02/05/88	B&C		80,000	16,000	2,600	15,000	17,000	---	---	---
(Semi-Annually	06/15/88	B&C	12.30	77,000	42,000	2,500	38,000	16,000	---	---	---
2nd & 4th	09/27/88[a]	CCAS	13.25	470,000	39,000	<5,000	32,000	16,000	<5,000	<5,000	---
quarters)	09/27/88[ab]	CCAS	13.25	48,000	1,800	1,600	3,500	10,000	410	420	---
	01/05/89	SAL	12.70	82,000	44,000	2,400	37,000	14,000	---	---	---
	06/28/89	SAL	13.81	80,000	36,000	2,400	24,000	13,000	---	---	---
	10/03/89	SAL	14.27	240,000	40,000	2,600	35,000	15,000	---	---	---
	01/04/90	SAL	14.31	130,000	37,000	2,400	31,000	13,000	---	---	---
	04/03/90	SAL	13.50	120,000	41,000	2,500	33,000	14,000	---	---	---
	07/03/90	SAL	13.64	200,000	28,000	1,800	25,000	10,000	---	---	---
	11/06/90	SAL	15.14	370,000	38,000	4,700	36,000	31,000	---	---	---
	04/03/91	SAL	11.56	140,000	36,000	2,700	32,000	17,000	---	---	---
MW-6	02/05/88	B&C		53,000	5,100	2,100	4,400	14,000	---	---	---
(Semi-Annually	06/15/88	B&C	13.51	33,000	9,200	520	5,500	20,000	---	---	---
1st & 3rd	09/27/88[a]	CCAS	14.56	17,000	2,200	1,700	2,800	5,100	130	<10	---
quarters)	01/05/89	SAL	13.48	37,000	5,000	2,200	3.400	10,000	---	---	---
	06/28/89	SAL	14.58	80,000	7,000	2,000	4,100	9,700	---	---	---
	10/03/89	SAL	13.03	110,000	8,500	2,600	5,100	14,000	---	---	---
	01/04/90	SAL	15.08	59,000	5,200	2,000	2,600	11,000	---	---	---
	04/03/90	SAL	14.06	31,000	6,600	2,200	2,600	12,000	---	---	---
	07/03/90	SAL	14.28	66,000	5,800	2,000	2,900	9,800	---	---	---
	01/04/91	SAL	15.52	50,000	5,600	1,800	2,200	9,400	---	---	---
	07/02/91	**SAL**	**14.44**	**81,000**	**11,000**	**2,100**	**2,700**	**13,000**	---	---	---
MW-7	02/05/88	B&C		81,000	34,000	2,400	36,000	16,000	---	---	---
(Semi-Annually	06/15/88	B&C	12.57	77,000	40,000	1,400	41,000	24,000	---	---	---
2nd & 4th	09/27/88[a]	CCAS	13.60	30,000	9,700	400	8,900	4,100	2,600	<10	---
quarters)	01/05/89	SAL	12.98	96,000	36,000	2,800	38,000	16,000	---	---	---
	06/28/89	SAL	14.08	110,000	31,000	2,600	30,000	16,000	---	---	---
	10/03/89	SAL	14.53	230,000	34,000	2,400	34,000	15,000	---	---	---
	01/04/90	SAL	14.49	150,000	41,000	2,400	40,000	15,000	---	---	---
	04/03/90	SAL	13.66	100,000	31,000	2,100	28,000	16,000	---	---	---
	07/03/90	SAL	13.86	190,000	30,000	1,800	27,000	13,000	---	---	---
	11/06/90	SAL	15.58	160,000	27,000	1,900	25,000	15,000	---	---	---
	04/03/91	SAL	11.41	240,000	40,000	2,400	36,000	18,000	---	---	---

--Table 2 continues on next page--

TABLE 2. Analytic Results for Ground Water, Chevron Service Station #90260, 21995 Foothill Boulevard, Hayward, California (continued)

Sample ID and Sampling Frequency	Sample Date	Analytical Lab	Depth to Water	TPH-G	B	E	T	X	EDC	EDB	VOCs
				<----------parts per billion (µg/L)---------->							
MW-8	10/27/88[a]	CCAS		190,000	27,000	2,200	43,000	15,000	<500	<500	---
(Semi-Annually	01/05/89	SAL	12.02	87,000	24,000	3,000	39,000	15,000	---	---	---
2nd & 4th	06/28/89	SAL	13.40	120,000	22,000	2,900	35,000	16,000	---	---	---
quarters)	10/03/89[c]		13.84	---	---	---	---	---	---	---	---
	01/04/89[c]		13.99	---	---	---	---	---	---	---	---
	04/03/90[c]		13.07	---	---	---	---	---	---	---	---
	07/03/90[c]		13.11	---	---	---	---	---	---	---	---
	11/06/90[c]		14.77	---	---	---	---	---	---	---	---
	04/03/91[b]	---	11.53	---	---	---	---	---	---	---	---
MW-9	10/27/88[a]	CCAS		50,000	2,000	2,000	9,900	14,000	<500	<500	---
(Semi-Annually	01/05/89	SAL	12.63	55,000	670	3,400	8,900	16,000	---	---	---
1st & 3rd	06/28/90	SAL	14.04	100,000	510	2,600	4,500	13,000	---	---	---
quarters)	10/03/89	SAL	14.61	130,000	540	3,200	8,000	17,000	---	---	---
	01/04/90	SAL	14.59	83,000	600	2,600	4,600	14,000	---	---	---
	04/03/90	SAL	13.75	52,000	1,600	3,100	5,400	16,000	---	---	---
	07/03/90	SAL	13.84	100,000	520	3,200	5,400	16,000	---	---	---
	01/04/91	SAL	15.37	59,000	1,100	2,500	5,600	13,000	---	---	---
	07/02/91	**SAL**	**14.17**	**130,000**	**1,900**	**3,600**	**7,600**	**20,000**	---	---	---
MW-10	10/27/88[a]	CCAS	<500	26	<5	13	<5	<5	<5	---	---
(Annually	01/05/89	SAL	12.64	<1,000	<0.3	<0.3	<0.3	<0.3	---	---	---
1st quarter)	06/28/89	SAL	13.64	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/03/89	SAL	13.85	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/04/90	SAL	13.75	<50	0.5	<0.5	1.1	1.7	---	---	---
	04/03/90	SAL	12.86	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/04/91	SAL	13.98	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
MW-11	06/28/89	SAL	14.33	60,000	36,000	2,500	13,000	12,000	---	---	ND[d]
(Semi-Annually	10/03/89	SAL	14.61	14,000	4,200	240	1,400	1,300	---	---	---
1st & 3rd	01/04/90	SAL	14.55	82,000	33,000	2,000	11,000	10,000	---	---	---
quarters)	04/03/90	SAL	13.82	78,000	35,000	2,300	12,000	12,000	---	---	---
	07/03/90	SAL	14.00	140,000	32,000	2,100	12,000	10,000	---	---	---
	01/04/91[c]		14.88	---	---	---	---	---	---	---	---
	04/03/91[c]	---	10.75	---	---	---	---	---	---	---	---
	07/02/91	**SAL**	**13.97**	**340,000**	**29,000**	**3,700**	**14,000**	**24,000**	---	---	---
MW-12	06/28/89	SAL	14.10	55,000	30,000	2,900	21,000	19,000	---	---	ND[d]
(Semi-Annually	10/03/89	SAL	14.30	170,000	30,000	2,700	23,000	15,000	---	---	---
2nd & 4th	01/04/90	SAL	14.35	110,000	24,000	2,300	19,000	12,000	---	---	---
quarters)	04/03/90	SAL	13.59	89,000	41,000	3,300	28,000	17,000	---	---	---
	07/03/90	SAL	13.77	170,000	27,000	2,200	20,000	12,000	---	---	---
	11/06/90	SAL	15.19	110,000	28,000	2,400	21,000	14,000	---	---	---
	04/09/91	SAL	10.91	170,000	39,000	2,400	17,000	14,000	---	---	---

- Table 2 continues on next page --

TABLE 2. Analytic Results for Ground Water, Chevron Service Station #90260, 21995 Foothill Boulevard, Hayward, California (continued)

Sampling ID and Sampling Frequency	Sample Date	Analytical Lab	Depth to Water (ft)	TPH-G	B	E	T	X	EDC	EDB	VOCs
				<----------parts per billion (µg/L)---------->							
MW-13	06/28/89	SAL	13.22	54,000	12,000	1,900	10,000	15,000	---	---	ND[d]
(Semi-Annually	10/03/89	SAL	13.54	120,000	10,000	2,300	10,000	15,000	---	---	---
1st & 3rd	01/04/90	SAL	13.64	87,000	6,800	2,000	10,000	12,000	---	---	---
quarters)	04/03/90	SAL	12.95	53,000	12,000	2,900	14,000	17,000	---	---	---
	07/03/90	SAL	13.05	90,000	8,400	2,000	11,000	11,000	---	---	---
	01/04/91	SAL	14.05	72,000	5,500	2,300	12,000	12,000	---	---	---
	07/02/91	**SAL**	**13.17**	**120,000**	**12,000**	**2,500**	**13,000**	**14,000**	---	---	---
MW-14	08/29/90	SAL	21.39	970	4	0.7	2	2	1	---	ND[e]
(Quarterly)	11/06/90	SAL	21.62	920	10	4	10	9	---	---	---
	01/04/91	SAL	21.69	1,000	<0.5	2.6	4.0	4.2	---	---	---
	04/03/91	SAL	19.53	1,200	380	7	6	18	---	---	---
	07/02/91	**SAL**	**20.93**	**460**	**27**	**1.2**	**1.0**	**1.0**	---	---	---
MW-15	08/29/90	SAL	16.58	2,000	26	72	2	110	<0.5	---	0.6[f]
(Quarterly)	11/06/90	SAL	17.43	1,300	40	45	5	63	---	---	---
	01/04/91	SAL	16.37	1,700	46	58	2.8	86	---	---	---
	04/03/91	SAL	12.46	2,100	74	44	0.8	85	---	---	---
	07/02/91	**SAL**	**16.53**	**1,700**	**39**	**35**	**<0.5**	**46**	---	---	---
MW-16	08/29/90	SAL	20.89	11,000	6,000	1,100	51	20	<0.5	---	ND[g]
(Quarterly)	11/06/90	SAL	21.27	15,000	6,300	1,300	340	540	---	---	---
	01/04/91	SAL	21.63	16,000	6,800	1,300	820	1,500	---	---	---
	04/03/91	SAL	19.32	45,000	7,300	1,800	2,200	4,900	---	---	---
	07/02/91	**SAL**	**20.68**	**30,000**	**6,400**	**1,500**	**530**	**1,800**	---	---	---
Bailer Blank	01/05/89	SAL		<1,000	<0.3	<0.3	<0.3	<0.3	---	---	---
Trip Blank	01/05/89	SAL		<1,000	<0.3	<0.3	<0.3	<0.3	---	---	---
	10/03/89	SAL		<500	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/04/89	SAL		<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/03/90	SAL		<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/03/90	SAL		<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/06/90	SAL		<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/04/91	SAL		<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/03/91	SAL		<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/02/91	**SAL**		**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	---	---	---
DHS MCLs				NE	1	680	100[h]	1,750	0.5	0.02	100[i]

- Table 2 continues on next page --

TABLE 2. Analytic Results for Ground Water, Chevron Service Station #90260, 21995 Foothill Boulevard, Hayward, California (continued)

Abbreviations:

TPH-G = Total Petroleum Hydrocarbons as Gasoline by Modified EPA Method 8015
B = Benzene by Method 602 or 8020
E = Ethylbenzene by EPA Method 602 or 8020
T = Toluene by EPA Method 602 or 8020
X = Xylenes by EPA Method 602 or 8020
EDC = 1,2-dichloroethane by EPA Method 524.2/8240
EDB = Ethylene dibromide by EPA Method 524.2/8240
VOCs = Volatile Organic Compounds by EPA Method 8010
--- = Not analyzed
DHS MCL = Department of Health Services Maximum Contaminant Level
NE = DHS action level not established
<n = Not detected at detection limit of n ppb
ppb = parts per billion

Analytical Laboratory:

B&C = Brown and Caldwell Laboratories of Emeryville, California
CCAS = Central Coast Analytical Services of San Luis Obispo, California
SAL = Superior Analytical Laboratory of San Francisco and Martinez, California

Notes:

[a] = Samples analyzed only by Fuel Fingerprint Analysis - EPA Method 524.2/8240 for total fuel and aromatic volatile hydrocarbons
[b] = Samples from MW-4 and MW-5 were analyzed a second time after the holding time expired to confirm the high TPH-G reported in the original analysis. Although the samples were preserved with $NaHSO_4$ and refrigerated, the second analysis was not conducted until 52 days after sample collection.
[c] = Well not sampled due to the presence of floating hydrocarbons.
[d] = Not detected at detection limits ranging from 500 to 2,000 ppb.
[e] = Not detected at detection limits ranging from 0.5 to 4.0 ppb.
[f] = Chloroform detected at 0.6 ppb. No other VOCs were detected.
[g] = Not detected at detection limits ranging from 25 to 500 ppb.
[h] = DHS Recommended Action Level for Drinking Water.
[i] = DHS MCL for Chloroform = 100 ppb - MCLs vary for other compounds.

ATTACHMENT A

WATER SAMPLE COLLECTION RECORDS

WEISS ASSOCIATES

/ATER SAMPLING DATA

/ell Name MW-6 Date 7/2/91 Time of Sampling 1301

ob Name CHEV. HAYWARD Job Number 4-310-01 Initials RJ

ample Point Description M (M = Monitoring Well)

ocation NORTH END OF SITE

/ELL DATA: Depth to Water 14.44 ft (static) pumping) Depth to Product – ft.

roduct Thickness – Well Depth 16.5 ft (spec) Well Depth – ft(sounded) Well Diameter 4 in

Initial Height of Water in Casing 2.06 ft. = volume 1.35 gal.

3 Casing Volumes to be Evacuated. Total to be evacuated 4.04 gal.

:VACUATION METHOD: Pump # and type – Hose # and type –

Bailer# and type 3"x3' PVC Dedicated Y (Y/N)

Other

:vacuation Time: Stop 1221 1300

Start 1219 1257

Total Evacation Time 5

Total Evacuated Prior to Sampling 4.5 gal.

Evacuation Rate .9 gal. per minute

)epth to Water during Evacuation – ft. – time

)epth to Water at Sampling 15.4 ft. 1304 time

:vacuated Dry? YES After – gal. Time –

0% Recovery = – * continued bailing until 3 casing volumes purged

o Recovery at Sample Time – Time –

Formulas/Conversions

r = well radius in ft.

h = ht of water col in ft.

vol. in cyl. = $\pi r^2 h$

7.48 gal/ft^3

V_2" casing = 0.163 gal/ft

V_3" casing = 0.367 gal/ft

V_4" casing = 0.653 gal/ft

$V_{4.5}$" casing = 0.826 gal/ft

V_6" casing = 1.47 gal/ft

V8 casing = 2.61 gal/ft

:HEMICAL DATA: Meter Brand/Number

:alibration: 4.0 7.0 10.0

Measured:

SC/µmhos	pH	T°C	Time	Volume Evacuated (gal.)

AMPLE: Color CLEAR Odor SLIGHT

)escription of matter in sample: VERY FINE PARTICLES

ampling Method: DECANT FROM PVC BAILER

ample Port: Rate – gpm Totalizer – gal.

Time –

# of Cont.	Sample ID	Cont. Type[1]	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analytic Method	Turn[5]	LAB
2	071-6	w/cv	40ml	N	Y	HCl	8015/602	N	SAL

Sample Type Codes: W = Water, S = Soil, Describe Other

Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other

Cap Codes: PT = Plastic, Teflon lined;

= Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)

Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

WEISS ASSOCIATES

WATER SAMPLING DATA

Well Name MW-9 Date 7/2/91 Time of Sampling 1355

Job Name CHEV. HAYWARD Job Number 4-310-01 Initials RJ

Sample Point Description _____ (M = Monitoring Well)

Location IN REX ROAD TO THE NORTH

WELL DATA: Depth to Water 14.17 ft (static/pumping) Depth to Product — ft.

Product Thickness — Well Depth 19.2 ft (spec) Well Depth _____ ft(sounded) Well Diameter 4 in

Initial Height of Water in Casing 5.03 ft. = volume 3.28 gal.

3 Casing Volumes to be Evacuated. Total to be evacuated 9.85 gal.

EVACUATION METHOD: Pump # and type — Hose # and type —

Bailer# and type 3" X 3' PVC Dedicated Y (Y/N)

Other _____

Evacuation Time: Stop 1207 1325 1355

Start 1204 1320 1350

Total Evacation Time 13

Total Evacuated Prior to Sampling 10 gal.

Evacuation Rate .77 gal. per minute

Depth to Water during Evacuation _____ ft. _____ time

Depth to Water at Sampling 17.63 ft. 1356 time

Evacuated Dry? Yes After — gal. Time —

80% Recovery = ~ *continued bailing until 3 casing volumes purged

% Recovery at Sample Time — Time —

Formulas/Conversions

r = well radius in ft.

h = ht of water col in ft.

vol. in cyl. = $\pi r^2 h$

7.48 gal/ft^3

V_2" casing = 0.163 gal/ft

V_3" casing = 0.367 gal/ft

V_4" casing = 0.653 gal/ft

$V_{4.5}$" casing = 0.826 gal/ft

V_6" casing = 1.47 gal/ft

V8 casing = 2.61 gal/ft

CHEMICAL DATA: Meter Brand/Number _____

Calibration: _____ 4.0 _____ 7.0 _____ 10.0

Measured:	SC/µmhos	pH	T°C	Time	Volume Evacuated (gal.)

SAMPLE: Color GREY TINT Odor SLIGHT

Description of matter in sample: NONE DETECTED

Sampling Method: STOP COCK ON DED. PVC BAILER

Sample Port: Rate — gpm Totalizer — gal.

Time —

# of Cont.	Sample ID	Cont. Type[1]	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analytic Method	Turn[5]	LAB
2	071-9	w/cv	40 ml	N	Y	HCl	8015/602	N	SAL

1 Sample Type Codes: W = Water, S = Soil, Describe Other
Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other
Cap Codes: PT = Plastic, Teflon lined;
2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

WEISS ASSOCIATES

WATER SAMPLING DATA

Well Name MW-11 Date 7/2/91 Time of Sampling 1357

Job Name CHEV. HAYWARD Job Number 4-310-01 Initials OC

Sample Point Description M (M = Monitoring Well)

Location SE CORNER OF STATION

WELL DATA: Depth to Water 13.97 ft (static) pumping) Depth to Product — ft.

Product Thickness — Well Depth 19.61 ft (spec) Well Depth — ft(sounded) Well Diameter 4 in

Initial Height of Water in Casing 5.64 ft. = volume 3.68 gal.

3 Casing Volumes to be Evacuated. Total to be evacuated 11.05 gal.

EVACUATION METHOD: Pump # and type — Hose # and type —

Bailer# and type 3X36" PVC Dedicated YES (Y/N)

Other

Evacuation Time: Stop 1241 1340 1355

Start 1235 1335 1354

Total Evacation Time 12 MIN

Total Evacuated Prior to Sampling 11.5 gal.

Evacuation Rate 1.0 gal. per minute

Depth to Water during Evacuation — ft. — time

Depth to Water at Sampling 15.18 ft. 1358 time

Evacuated Dry? YES After 5.0 gal. Time 1241

80% Recovery = * CONTD BAILING UNTIL 3 CAS VOLS.

% Recovery at Sample Time Time PURGED

Formulas/Conversions

r = well radius in ft.

h = ht of water col in ft.

vol. in cyl. = $\pi r^2 h$

7.48 gal/ft^3

V_2" casing = 0.163 gal/ft

V_3" casing = 0.367 gal/ft

V_4" casing = 0.653 gal/ft

$V_{4.5}$" casing = 0.826 gal/ft

V_6" casing = 1.47 gal/ft

V8 casing = 2.61 gal/ft

CHEMICAL DATA: Meter Brand/Number

Calibration: 4.0 7.0 10.0

Measured:	SC/µmhos	pH	T°C	Time	Volume Evacuated (gal.)

SAMPLE: Color LT. CLOUDY Odor STRONG

Description of matter in sample: RAINBOW SHEEN / FINE POWDERY SILT

Sampling Method: FROM DED. BLR. PORT

Sample Port: Rate — gpm Totalizer — gal.

Time

# of Cont.	Sample ID	Cont. Type[1]	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analytic Method	Turn[5]	LAB
2	071-11	W/CV	40ml	N	Y	HCl	8015/602	N	SAL

1 Sample Type Codes: W = Water, S = Soil, Describe Other
Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other
Cap Codes: PT = Plastic, Teflon lined;
2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

1ST BAILER FULL HAD BETWEEN 1/8" & 1/4" PRODUCT ON TOP

WEISS ASSOCIATES

WATER SAMPLING DATA

Well Name MW-13 Date 7/2/91 Time of Sampling 1332

Job Name CHEV. HAYWARD Job Number 4-310-01 Initials DC

Sample Point Description M (M = Monitoring Well)

Location NEAR PLANTER OFF REX ROAD

WELL DATA: Depth to Water 13.17 ft (static, pumping) Depth to Product — ft.

Product Thickness — Well Depth 17.77 ft (spec) Well Depth — ft(sounded) Well Diameter 4 in

Initial Height of Water in Casing 4.6 ft. = volume 3.00 gal.

3 Casing Volumes to be Evacuated. Total to be evacuated 9.00 gal.

EVACUATION METHOD: Pump # and type — Hose # and type —

Bailer# and type 3X36" PVC Dedicated YES (Y/N)

Other

Evacuation Time: Stop 1225 1247 1325

Start 1222 1245 1324

Total Evacation Time 6 MIN

Total Evacuated Prior to Sampling 9.0 gal.

Evacuation Rate 1.5 gal. per minute

Depth to Water during Evacuation — ft. — time

Depth to Water at Sampling 14.23 ft. 1331 time

Evacuated Dry? YES After 4.5 gal. Time 1225

80% Recovery = 1 * CONTD BAILING UNTIL 3 CAS. VOLS. PURGED.

% Recovery at Sample Time Time

Formulas/Conversions

r = well radius in ft.

h = ht of water col in ft.

vol. in cyl. = $\pi r^2 h$

7.48 gal/ft^3

V_2" casing = 0.163 gal/ft

V_3" casing = 0.367 gal/ft

V_4" casing = 0.653 gal/ft

$V_{4.5}$" casing = 0.826 gal/ft

V_6" casing = 1.47 gal/ft

V8 casing = 2.61 gal/ft

CHEMICAL DATA: Meter Brand/Number

Calibration: 4.0 7.0 10.0

Measured:	SC/µmhos	pH	T°C	Time	Volume Evacuated (gal.)

SAMPLE: Color NONE Odor LIGHT

Description of matter in sample: NONE

Sampling Method: DECANT FROM DED. BLR. PORT

Sample Port: Rate / gpm Totalizer / gal.

Time /

# of Cont.	Sample ID	Cont. Type[1]	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analytic Method	Turn[5]	LAB
2	071-13	W/CU	40ml	N	Y	HCl	8015/602	N	SAL

[1] Sample Type Codes: W = Water, S = Soil, Describe Other
Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other
Cap Codes: PT = Plastic, Teflon lined;
[2] = Volume per container; [3] = Filtered (Y/N); [4] = Refrigerated (Y/N)
[5] Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

WEISS ASSOCIATES

WATER SAMPLING DATA

Well Name MW-14 Date 7/2/91 Time of Sampling 1317

Job Name CHEV. HAYWARD Job Number 4-310-01 Initials DC

Sample Point Description M (M = Monitoring Well)

Location S END OF REX ROAD

WELL DATA: Depth to Water 20.93 ft (static, pumping) Depth to Product 0 ft.

Product Thickness 0 Well Depth 40.5 ft (spec) Well Depth 40.94 ft(sounded) Well Diameter 2 in

Initial Height of Water in Casing 20.01 ft. = volume 3.26 gal.

3 Casing Volumes to be Evacuated. Total to be evacuated 9.8 gal.

EVACUATION METHOD: Pump # and type — Hose # and type —

Bailer# and type 1½X60" PVC Dedicated YES (Y/N)

Other —

Evacuation Time: Stop 1308 — —

Start 1254 — —

Total Evacation Time 14 min

Total Evacuated Prior to Sampling 10 gal.

Evacuation Rate 0.7 gal. per minute

Depth to Water during Evacuation 21.21 ft. 1308 time

Depth to Water at Sampling — ft. — time

Evacuated Dry? NO After — gal. Time —

100% Recovery = —

% Recovery at Sample Time — Time —

Formulas/Conversions

r = well radius in ft.

h = ht of water col in ft.

vol. in cyl. = $\pi r^2 h$

7.48 gal/ft^3

V_2" casing = 0.163 gal/ft

V_3" casing = 0.367 gal/ft

V_4" casing = 0.653 gal/ft

$V_{4.5}$" casing = 0.826 gal/ft

V_6" casing = 1.47 gal/ft

V8 casing = 2.61 gal/ft

CHEMICAL DATA: Meter Brand/Number —

Calibration: — 4.0 — 7.0 — 10.0

Measured:	SC/µmhos	pH	T°C	Time	Volume Evacuated (gal.)

SAMPLE: Color MED-GR/GY Odor LT.

Description of matter in sample: 2/10% FINE SAND/SILT

Sampling Method: FROM PED. BLR. PORT - INSTALLED 7/2/91 - ALONOXED & RINSED

Sample Port: Rate — gpm Totalizer — gal.

Time —

# of Cont.	Sample ID	Cont. Type[1]	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analytic Method	Turn[5]	LAB
2	MW-14	W/CV	40mL	N	Y	HCl	8015/8020	N	SAL

Sample Type Codes: W = Water, S = Soil, Describe Other

Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other

Cap Codes: PT = Plastic, Teflon lined;

[2] = Volume per container; [3] = Filtered (Y/N); [4] = Refrigerated (Y/N)

[5] Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

WEISS ASSOCIATES

WATER SAMPLING DATA

Well Name MW-15 Date 7/2/91 Time of Sampling 1532

Job Name CHEV-HAYWARD Job Number 4-310-01 Initials DC

Sample Point Description M (M = Monitoring Well)

Location LEFT SIDE OAKVIEW AVE - ~ ½ WAY DOWN

WELL DATA: Depth to Water 16.53 ft (static, pumping) Depth to Product 0 ft.

Product Thickness 0 Well Depth 22 ft (spec) Well Depth ____ ft(sounded) Well Diameter 2 in

Initial Height of Water in Casing 5.47 ft. = volume 0.89 gal.

3 Casing Volumes to be Evacuated. Total to be evacuated 2.67 gal.

EVACUATION METHOD: Pump # and type — Hose # and type —

Bailer# and type 1½x60" PVC Dedicated YES (Y/N)

Other ____

Evacuation Time: Stop 1438

Start 1435

Total Evacation Time 3 MIN.

Total Evacuated Prior to Sampling 1.5 gal.

Evacuation Rate 0.5 gal. per minute

Depth to Water during Evacuation — ft. — time

Depth to Water at Sampling 20.08 ft. 1532 time (W)

Evacuated Dry? YES After 1.5 gal. Time 1438

80% Recovery = 1 ~~* GW EOC~~ 17.63 BTW

% Recovery at Sample Time 35 % Time 1525

Formulas/Conversions

r = well radius in ft.

h = ht of water col in ft.

vol. in cyl. = $\pi r^2 h$

7.48 gal/ft^3

V_2" casing = 0.163 gal/ft

V_3" casing = 0.367 gal/ft

V_4" casing = 0.653 gal/ft

$V_{4.5}$" casing = 0.826 gal/ft

V_6" casing = 1.47 gal/ft

V8 casing = 2.61 gal/ft

CHEMICAL DATA: Meter Brand/Number ____

Calibration: ____ 4.0 ____ 7.0 ____ 10.0

Measured:	SC/µmhos	pH	T°C	Time	Volume Evacuated (gal.)

SAMPLE: Color LT. GREY Odor LT.

Description of matter in sample: SMALL AMT. FINE SILT/SAND

Sampling Method: FROM DED. BLR. PORT - DED. 7/2/91 ALCONOXED & RINSED

Sample Port: Rate — gpm Totalizer — gal.

Time —

# of Cont.	Sample ID	Cont. Type[1]	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analytic Method	Turn[5]	LAB
2	071-15	w/cV	40mL	N	Y	HCL	8015/8020	N	SAL

1 Sample Type Codes: W = Water, S = Soil, Describe Other
Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other
Cap Codes: PT = Plastic, Teflon lined;
2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

WEISS ASSOCIATES

WATER SAMPLING DATA

Well Name MW-16 Date 7/2/91 Time of Sampling 1513

Job Name CHEV HAYWARD Job Number 4-310-01 Initials DC

Sample Point Description M (M = Monitoring Well)

Location AROUND CORNER ON RIO VISTA ST. OFF OAKVIEW - TURN LEFT

WELL DATA: Depth to Water 20.68 ft (static, pumping) Depth to Product 0 ft.

Product Thickness 0 Well Depth 40 ft (spec) Well Depth ____ ft(sounded) Well Diameter 2 in

Initial Height of Water in Casing 19.37 ft. = volume 3.15 gal.

3 Casing Volumes to be Evacuated. Total to be evacuated 9.47 gal.

EVACUATION METHOD: Pump # and type — Hose # and type —

Bailer# and type 1½ x 5' PVC Dedicated ____ (Y/N)

Other ____

Evacuation Time: Stop 1510

Start ~~1435~~ 1435

Total Evacation Time 35

Total Evacuated Prior to Sampling 11 gal.

Evacuation Rate .31 gal. per minute

Depth to Water during Evacuation ____ ft. ____ time

Depth to Water at Sampling 23.37 ft. 1515 time

Evacuated Dry? N After — gal. Time —

80% Recovery = —

% Recovery at Sample Time — Time —

Formulas/Conversions

r = well radius in ft.

h = ht of water col in ft.

vol. in cyl. = $\pi r^2 h$

7.48 gal/ft^3

V_2" casing = 0.163 gal/ft

V_3" casing = 0.367 gal/ft

V_4" casing = 0.653 gal/ft

$V_{4.5}$" casing = 0.826 gal/ft

V_6" casing = 1.47 gal/ft

V8 casing = 2.61 gal/ft

CHEMICAL DATA: Meter Brand/Number ____

Calibration: ____ 4.0 ____ 7.0 ____ 10.0

Measured:	SC/µmhos	pH	T°C	Time	Volume Evacuated (gal.)

SAMPLE: Color LIGHT GREY Odor MODERATE

Description of matter in sample: NONE DETECTED

Sampling Method: FROM PORT COCK ON PVC BAILER

Sample Port: Rate ____ gpm Totalizer ____ gal.

Time

# of Cont.	Sample ID	Cont. Type[1]	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analytic Method	Turn[5]	LAB
2	071-16	w/cv	40ml	N	Y	HCl	8015/602	N	SAL

1 Sample Type Codes: W = Water, S = Soil, Describe Other
Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other
Cap Codes: PT = Plastic, Teflon lined;
2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

WEISS ASSOCIATES

WATER SAMPLING DATA

Well Name TRAVEL BLANK Date 7/2/91 Time of Sampling 0930

Job Name CHEV-HAYWARD Job Number 4-310-01 Initials OC

Sample Point Description _____ (M = Monitoring Well)

Location _____

WELL DATA: Depth to Water _____ ft (static, pumping) Depth to Product _____ ft.

Product Thickness _____ Well Depth _____ ft (spec) Well Depth _____ ft(sounded) Well Diameter _____ in

Initial Height of Water in Casing _____ ft. = volume _____ gal.

_____ Casing Volumes to be Evacuated. Total to be evacuated _____ gal.

EVACUATION METHOD: Pump # and type _____ Hose # and type _____

Bailer# and type _____ Dedicated _____ (Y/N)

Other _____

Evacuation Time: Stop _____ _____ _____

Start _____ _____ _____

Total Evacation Time _____

Total Evacuated Prior to Sampling N/A gal.

Evacuation Rate _____ gal. per minute

Depth to Water during Evacuation _____ ft _____ time

Depth to Water at Sampling _____ ft _____ time

Evacuated Dry? _____ After _____ gal. Time _____

80% Recovery = _____

% Recovery at Sample Time _____ Time _____

Formulas/Conversions

r = well radius in ft.

h = ht of water col in ft.

vol. in cyl. = $\pi r^2 h$

7.48 gal/ft^3

V_2" casing = 0.163 gal/ft

V_3" casing = 0.367 gal/ft

V_4" casing = 0.653 gal/ft

$V_{4.5}$" casing = 0.826 gal/ft

V_6" casing = 1.47 gal/ft

V8 casing = 2.61 gal/ft

CHEMICAL DATA: Meter Brand/Number _____

Calibration: _____ 4.0 _____ 7.0 _____ 10.0

Measured:	SC/µmhos	pH	T°C	Time	Volume Evacuated (gal.)

SAMPLE: Color _____ Odor _____

Description of matter in sample: NONE

Sampling Method: _____

Sample Port: Rate _____ gpm Totalizer _____ gal.

Time _____

# of Cont.	Sample ID	Cont. Type[1]	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analytic Method	Turn[5]	LAB
2	071-21	W/CV	40mL	N	Y	HCL	8015/8020	N	SAL

1 Sample Type Codes: W = Water, S = Soil, Describe Other
Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other
Cap Codes: PT = Plastic, Teflon lined;
2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

ATTACHMENT B

ANALYTIC REPORT AND CHAIN-OF-CUSTODY FORMS

SUPERIOR ANALYTICAL LABORATORY, INC.
1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081 DOHS #1332

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 12044
CLIENT: Weiss Associates
CLIENT JOB NO.: 4-310-01

DATE RECEIVED: 07/03/91
DATE REPORTED: 07/11/91

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
12044- 1	071-06	07/02/91	07/09/91
12044- 2	071-09	07/02/91	07/09/91
12044- 3	071-11	07/02/91	07/09/91
12044- 4	071-13	07/02/91	07/11/91
12044- 5	071-14	07/02/91	07/11/91
12044- 6	071-15	07/02/91	07/09/91
12044- 7	071-16	07/02/91	07/09/91
12044- 8	071-21	07/02/91	07/09/91

Laboratory Number:	12044 1	12044 2	12044 3	12044 4	12044 5
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	81000	130000	340000	120000	460
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	11000	1900	29000	12000	27
TOLUENE:	2700	7600	14000	13000	1.0
ETHYL BENZENE:	2100	3600	3700	2500	1.2
XYLENES:	13000	20000	24000	14000	1.0

Laboratory Number:	12044 6	12044 7	12044 8
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)		
OIL AND GREASE:	NA	NA	NA
TPH/GASOLINE RANGE:	1700	30000	ND<50
TPH/DIESEL RANGE:	NA	NA	NA
BENZENE:	39	6400	ND<0.5
TOLUENE:	ND<0.5	530	ND<0.5
ETHYL BENZENE:	35	1500	ND<0.5
XYLENES:	46	1800	ND<0.5

SUPERIOR ANALYTICAL LABORATORY, INC.
1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081 DOHS #1332

CERTIFICATE OF ANALYSIS

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

QA/QC INFORMATION
SET: 12044

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: 08/24/90

SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/l
Standard Reference: 04/09/91

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	NA	NA	NA	NA	NA
Diesel	NA	NA	NA	NA	NA
Gasoline	08/24/90	200ng	98/97	1.4	63-111
Benzene	04/09/91	200ng	109/104	4.7	72-119
Toluene	04/09/91	200ng	108/102	5.3	70-116
Ethyl Benzene	04/09/91	200ng	108/101	6.7	73-119
Total Xylene	04/09/91	600ng	111/103	7.5	71-118

Richard Srna, Ph.D.
Laboratory Director

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

Chevron Facility Number 9-0260
Facility Address 21995 FOOTHILL BLVD HAYWARD
Consultant Project Number 4-310-01
Consultant Name WEISS ASSOCIATES
Address 5500 SHELLMOUND ST EMERYVILLE
Project Contact (Name) MARIETTE SHIN
(Phone) 415-547-5420 (Fax Number) 415-547-5043

Chevron Contact (Name) WALT POSLUSZNY
(Phone) 415-842-9040
Laboratory Name SUPERIOR ANALYTICAL
Laboratory Release Number 2564320
Samples Collected by (Name) D. CHARLES & R. JENSON
Collection Date 7/2/91
Signature David Charles

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)	BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Chlorinated HC (8010)	Non Chlorinated HC (8020)	Total Lead (AA)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	Remarks
071-06	2	W	G	1301	HCL	Y	X							
071-09				1355										
071-11				1357										
071-13				1332										
071-14				1317										
071-15				1532										
071-16				1513										
071-21				0930										

Please Initial
Samples Stored in Ice.
Appropriate containers.
Samples preserved.
VOA's without headspace.
Comments:

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
David Charles	Weiss Assoc.	7/2/91 1630	Joyce Hemsford	Weiss Assoc.	7/3/91 10:10
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Joyce Hemsford	Weiss Assoc.	7/3/91 10:10	[signature]	X519 Express-IT	7/3/91 1052
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time
[signature]	X519 Express-IT	7/3/91 1052	[signature]		7/3/91 1:05 pm

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

COC-1.DWG/11-90/HCH

Returned to secure locked area