

**Chevron**Date: 4/3/95
3/30/95To: JENNIFER EBERLE
ACHCS
337-9335

Chevron U.S.A. Products Company
6001 Bollinger Canyon Road
Building L
San Ramon, CA 94583
P.O. Box 5004
San Ramon, CA 94583-0804

Marketing - Northwest Region
Voice 510 842-8134
Fax 510 842-8252

From: Mark Miller
Site Assessment and Remediation Engineer

Re: 9-4816: 301 17TH ST., OAKLAND

Message: INFO. YOU REQUESTED INCLUDING
1) LATEST ERMWD REPORT (11/29/94)
2) LATEST STATUS REPORT FROM WIEISS
(3/31/95 FAX)
3) SUMMARY OF SPH REMOVAL (2/13/95)
4) DESCRIPTION OF EXTRACTION WELLS &
PURPOSE OF EACH
LATEST SAMPLING RESULTS WILL BE
FIXED TO YOU DIRECTLY. WORK PLAN
WAS MAILED TO YOUR OFFICE TODAY.

13 Pages including cover sheet

November 29, 1994

Stan Archacki
East Bay Municipal Utility District
P.O. Box 24055
Oakland, California 94623-1055

Re: *Discharge Compliance Report*
August 1 through October 31, 1994
Former Chevron Service Station # 9-4816
301 14th Street
Oakland, California
WA Job #4-0582-55

Dear Mr. Archacki:

As required by East Bay Municipal Utility District (EBMUD) Wastewater Permit #502-97221, Weiss Associates, on behalf of Chevron Products Company, collects water samples monthly and submits this discharge compliance report semi-annually for the above referenced site. Treatment system operation began on August 9, 1994. A brief summary of the ground water treatment system design, operation, sampling and permit compliance are presented below. Tables summarizing system performance and laboratory analytical results are presented as Tables 1 and 2, respectively.

System Operation and Sampling

System Design: Ground water is extracted from wells and treated by a particle filter, and three aqueous phase carbon vessels connected in series. Treated ground water is then discharged to the sanitary sewer under EBMUD Wastewater Permit #502-97221.

Flow measurement: Between August 9 and November 1, 1994, the system treated 154,190 gallons of ground water at an average system flow rate of 1.27 gallons per minute (gpm). Table 1 Summarizes system performance, flow meter readings, average flow rates and comments pertaining to system operation. low ↗

Sampling Dates: August 9, August 18, August 22, August 30, and November 1, 1994.

Sample locations: System influent, midpoint 1 (between carbon vessels 1 and 2), midpoint 2 (between carbon vessels 2 and 3), and effluent to the sanitary sewer.

Stan Archacki
November 29, 1994

2

Weiss Associates



Sample handling: The samples were refrigerated and transported to a California certified laboratory under chain-of-custody.

Sample analyses: The samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G), benzene, ethylbenzene, toluene, and total xylenes (BTEX). On November 17, 1994, Weiss Associates notified Stan Archacki of East Bay Municipal Utility District that ground water samples were not taken in the month of September and the October samples were taken on November 1. Based on compliance of historical ground water samples, no further action was required of WA by East Bay Municipal Utilities District. Table 2 presents historical ground water extraction system analytic results. Certificate of analysis and chain-of-custody documents are also attached.

Hydrocarbon Removal: The ground water extraction system has removed and treated about 54.9 pounds of hydrocarbons (Table 1). *to date?*

Operational Notes: The treatment system was started on August 9, 1994 and operated continuously throughout the monitoring period.

Permit Compliance

Analytic results and flow data indicate that the treatment system is operating in compliance with discharge permit requirements (Tables 1 and 2). Copies of the analytic reports and chain-of-custody documents are presented in Attachment A.

Please call me at (510) 450-6164 if you have any questions or require additional information.

Sincerely,
Weiss Associates

Paul Nuti
Staff Engineer

PMN:pmm

J:\CHEVRON\0582\O&MS82R1\NO4.DOC

Attachments: Table 1 - Performance Summary
Table 2 - Summary of Analytic Results for Ground Water Extraction System
A - Laboratory Analytical Reports and Chain-of-Custody

cc: Mark Miller, Chevron USA Products Company

Table 1. Performance Summary, Former Chevron Service Station #9-4816, 301 14th Street, Oakland, CA

DATE	SYSTEM TOTALIZER READING (gal)	FLOW BETWEEN READINGS (gal)	DAYS BETWEEN READINGS (days)	AVERAGE FLOW (gpm)	SYSTEM INFLUENT TPH-G (ppm) (d)	TOTAL POUNDS OF TPH-G REMOVED (lbs) (a)	ESTIMATED CARBON CONSUMPTION (lbs/day) (b)	ESTIMATED POUNDS OF UNSPENT CARBON (lbs) (c)	COMMENTS
09-Aug-94	0	0.0	0	0.0	52.00	0	0	2000	System started, two 1000-lb and one 200-lb carbon drum
12-Aug-94	21,432.7	21,432.7	3	5.0 --	52.00	9.31	62.07	1814	
13-Aug-94	26,612.0	5,179.3	1	3.6	52.00	11.56	45.00	1769	
18-Aug-94	36,855.6	10,243.6	5	1.4	43.00	15.24	14.72	1695	Fixed small leak at manifold.
22-Aug-94	44,825.0	7,969.4	4	1.4	41.00	17.97	13.65	1641	
30-Aug-94	59,950.0	15,125.0	8	1.3	43.00	23.40	13.58	1532	
01-Nov-94	154,190.0	94,240.0	63	1.0	40.00	54.90	10.00	902	This is the October site visit

Notes:

- a = Total lbs TPH-G removed = [flow rate (gpm) * concentration of TPH-G (parts/1,000,000) * density of water (8.34lb/gal) * 1440 (min/day)]
- b = Carbon Consumption = [flow rate (gpm) * concentration of TPH-G (parts/1,000,000) * density of water (8.34lb/gal) * 1440 (min/day)] / 0.05 (adsorption capacity of TPH-G on carbon)
- c = Pounds Of Unspent Carbon = 2000 (lbs (two 1,000 lbs carbon vessels) - Carbon Consumption (lbs/day) * number of days (days)
- d = If no influent data is available, the influent concentration is assumed equal to the concentration when last sampled.

Abbreviations:

- gal = gallons
- gpm = gallons per minute
- = not available

Table 2. Summary of Analytic Results for Ground Water Extraction System, Former Chevron Service Station #9-4816, 301 14th Street, Oakland, California.

DATE SAMPLED	LAB	SYSTEM INFLUENT					SYSTEM MIDPOINT First Carbon Effluent					SYSTEM MIDPOINT Second Carbon Effluent					SYSTEM EFFLUENT Third Carbon Effluent				
		TPH-G	B	E	T	X	TPH-G	B	E	T	X	TPH-G	B	E	T	X	TPH-G	B	E	T	X
09-Aug-94	GTEL	52,000	20,000	1,600	11,000	7,300	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5
18-Aug-94	GTEL	43,000	16,000	620	5,500	2,800	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5
22-Aug-94	GTEL	41,000	18,000	990	7,300	3,900	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5
30-Aug-94	GTEL	43,000	14,000	820	6,700	3,500	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5
01-Nov-94	a SPA	40,000	9,500	580	5,200	2,700	<50	1.50	<0.5	1.10	0.90	<50	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
 B = Benzene by EPA Method 8020
 E = Ethylbenzene by EPA Method 8020
 T = Toluene by EPA Method 8020
 X = Xylenes by EPA Method 8020
 <n = Not detected at detection limit of n ppb
 GTEL = GTEL Environmental Laboratories Inc, Concord, California
 SPA = Superior Percision Analytical, Martinez, California
 mg/l = milligrams per liter
 --- = Not analyzed

Notes:

a = This is the October site visit.



Weiss Associates

Environmental and Geologic Services

5500 Shellmound Street, Emeryville, CA 94608-2411

Fax: 510-547-5043 Phone: 510-547-5420

FAX TRANSMITTAL

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DATE: 3-31-95

TO: Mark Miller

FAX PHONE: Chev

COMPANY: Chevron

BUSINESS PHONE:

FROM: Paul Nuti

PROJECT #:

SUBJECT:
301/4th Street
9-4816

PAGES 5
(including this cover)

Hard Copy to follow
if checked

COMMENTS & ACTIONS REQUIRED:

Mark

Here are the tables you requested.

I put the graphs in for your info also.

NOTE: Please call _____ at (510) 450-6000 if you do not receive all pages

Table 1. Performance Summary, Former Chevron Service Station #9-4816, 301 14th Street, Oakland, CA

DATE	SYSTEM TOTALIZER READING (gal)	FLOW BETWEEN READINGS (gal)	DAYS BETWEEN READINGS (days)	AVERAGE FLOW (gpm)	SYSTEM INFLUENT TPH-G (gpm) (d)	TOTAL POUNDS OF TPH-G REMOVED (lbs) (a)	ESTIMATED CARBON CONSUMPTION (lbs/day) (b)	ESTIMATED POUNDS OF UNSPENT CARBON (lbs) (c)	COMMENTS
09-Aug-94	0	0.0	0	0.0	\$2.00	0	0	2000	System started, two 1000-lb and one 200-lb carbon drums
12-Aug-94	21,432.7	21,432.7	3	5.0	\$2.00	9.31	62.07	1814	
13-Aug-94	26,612.0	5,179.3	1	3.6	\$2.00	11.56	45.00	1769	
18-Aug-94	36,855.6	10,243.6	5	1.4	43.00	15.24	14.72	1695	Fixed small leak at manifold.
22-Aug-94	44,825.0	7,969.4	4	1.4	41.00	17.97	13.65	1641	
30-Aug-94	59,950.0	15,125.0	8	1.3	43.00	23.48	13.58	1532	
01-Nov-94	154,190.0	94,240.0	63	1.0	40.00	54.90	10.00	902	This is the October site visit
23-Nov-94	185,951.1	31,761.1	22	1.0	21.00	60.47	5.07	791	
13-Dec-94	221,904.0	35,952.9	20	1.2	20.00	66.47	6.01	671	Pulled pumps CR-1 and VIEW-3, SIPH in extraction wells.
23-Jan-95	262,660.0	40,756.0	41	0.7	20.00	73.28	3.32	534	
07-Feb-95	280,987.5	18,327.5	15	0.8	33.00	78.34	6.74	433	
07-Mar-95	284,408.5	3,421.0	28	0.1	36.00	79.37	0.73	413	Replaced and turned on pump CR-1

Notes:

a = Total lbs TPH-G removed = {flow rate (gpm) * concentration of TPH-G (parts/1,000,000) * density of water (8.34lb/gal) * 1440 (min/day)}

b = Carbon Consumption = {flow rate (gpm) * concentration of TPH-G (parts/1,000,000) * density of water (8.34lb/gal) * 1440 (min/day)} / 0.05 (adsorption capacity of TPH-G on carbon)

c = Pounds Of Unspent Carbon = 2000 (lbs (two 1,000 lbs carbon vessels)) - Carbon Consumption (lbs/day) * number of days (days)

d = If no influent data is available, the influent concentration is assumed equal to the concentration when last sampled.

Abbreviations:

gal = gallons

gpm = gallons per minute

- = not available

Table 2. Summary of Analytic Results for Ground Water Extraction System, Former Chevron Service Station #9-4816, 301 14th Street, Oakland, California.

DATE SAMPLED	LAB	SYSTEM INFLUENT					SYSTEM MIDPOINT First Carbon Effluent					SYSTEM MIDPOINT Second Carbon Effluent					SYSTEM EFFLUENT Third Carbon Effluent				
		TPH-G	B	E	T	X	TPH-G	B	E	T	X	TPH-G	B	E	T	X	TPH-G	B	E	T	X
parts per billion (ppb)																					
Date:		TPH-G	Benzene																		
09-Aug-94	GTEL	52,000	20,000	1,600	11,000	7,300	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5
18-Aug-94	GTEL	43,000	16,000	620	5,900	2,800	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5
22-Aug-94	GTEL	41,000	18,000	990	7,300	3,900	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5
30-Aug-94	GTEL	43,000	14,000	820	6,700	3,500	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5
01-Nov-94	SPA	40,000	9,300	580	5,200	2,700	<50	1.50	<0.5	1.10	0.90	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5
23-Nov-94	GTEL	21,000	8,900	510	5,300	3,000	<50	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5
13-Dec-94	GTEL	20,000	6,400	360	2,800	2,000	11,000	88	350	640	2,200	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	3.30
23-Jan-95	GTEL	20,000	11,000	540	3,100	1,400	<50	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5
07-Feb-95	GTEL	33,000	14,000	960	4,900	3,600	120	5.8	4.3	8.3	25.0	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5
07-Mar-95	GTEL	36,000	10,000	770	6,300	4,200	130	16.0	3.5	12.0	22.0	<50	<0.5	<0.5	<0.5	<1.5	<50	<0.5	<0.5	<0.5	<1.5

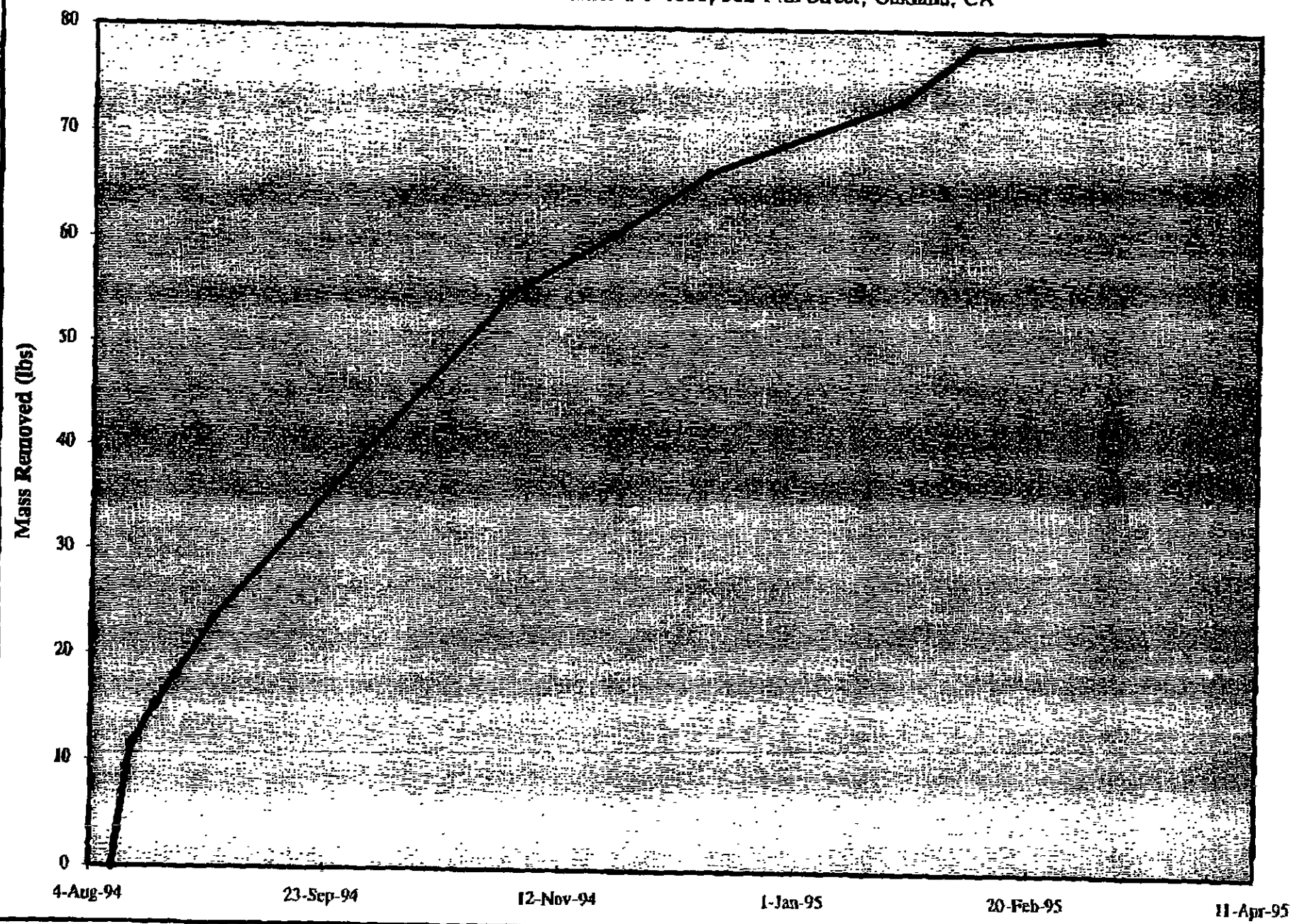
Abbreviations:

- TPH-G = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
- B = Benzene by EPA Method 8020
- E = Ethylbenzene by EPA Method 8020
- T = Toluene by EPA Method 8020
- X = Xylenes by EPA Method 8020
- <n = Not detected at detection limit of n ppb
- GTEL = GTEL Environmental Laboratories Inc., Concord, California
- SPA = Superior Precision Analytical, Martinez, California
- mg/l = milligrams per liter
- = Not analyzed

Notes:

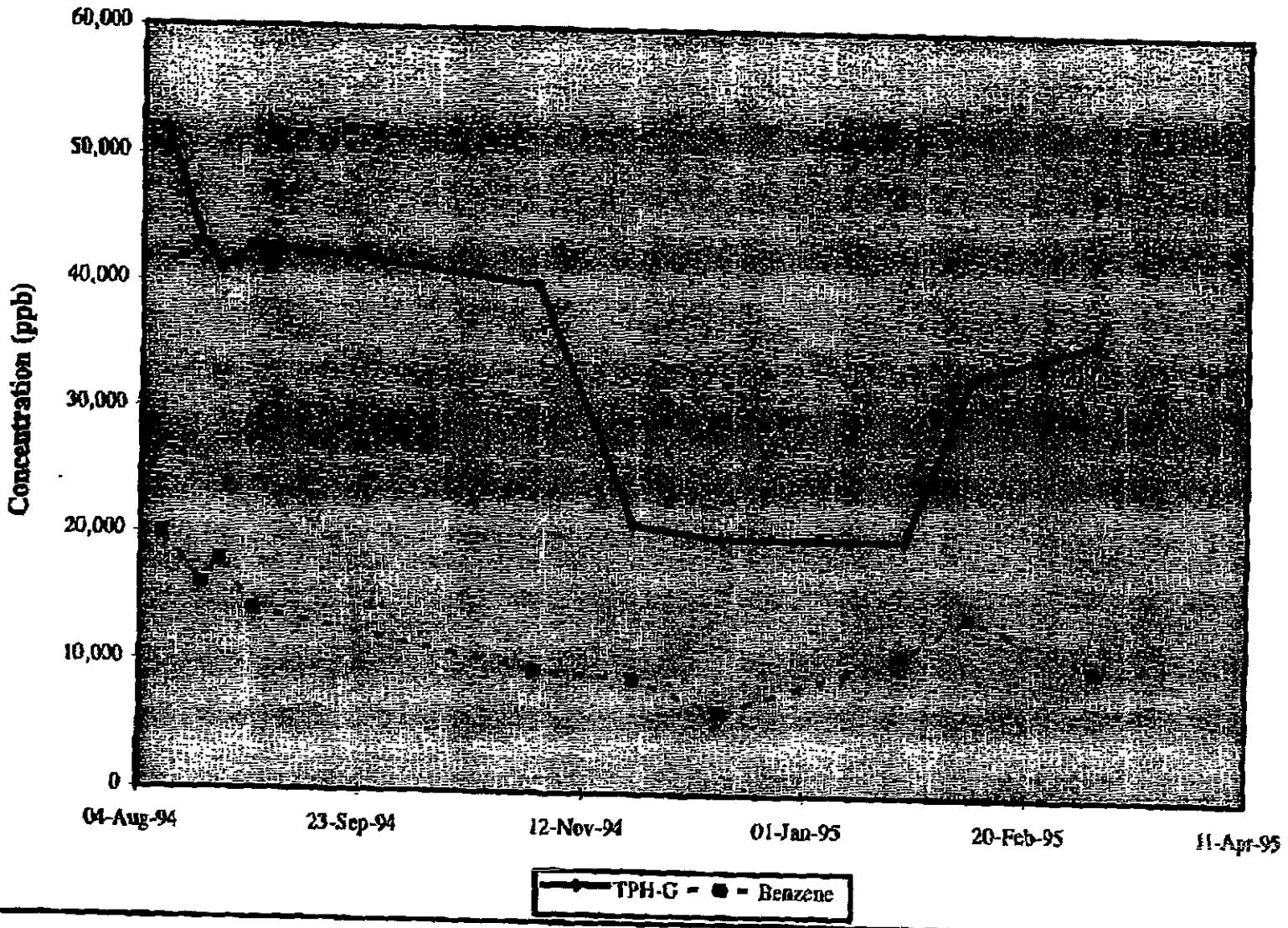
* = This is the October site visit.

Ground Water Extraction: Total Hydrocarbon Removal Former Chevron Service Station # 9-4816, 302 14th Street, Oakland, CA



Ground Water Extraction: Influent TPH-G and Benzene Concentrations

Former Chevron Service Station # 9-4816, 301 14th Street, Oakland, CA





Weiss Associates

Environmental and Geologic Services

5500 Shellmound Street, Emeryville, CA 94608-2411

FAX: 510-547-5043 Phone: 510-450-6000

TRANSMITTAL

DATE: February 13, 1995 **PROJECT #:** 4-0582-55

To: Mark Miller **PHONE:** (510) 842-8134

COMPANY: Chevron **FAX:** Chevron
PO Box 5004
San Ramon, CA 94583

FROM: Paul Nuti, (510) 450-6164 *PN*

SUBJECT: SUMMARY OF SEPARATE PHASE HYDROCARBON REMOVAL
SS# 9-4816

VIA:	FAX:	AS:	FOR:
<input checked="" type="checkbox"/> Fax	# of pages: <u>2</u> (including this cover)	<input checked="" type="checkbox"/> Per our phone call	<input checked="" type="checkbox"/> Your information
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Please call (510) 450-6000 if there are any problems with transmission.

COMMENTS:

Dear Mark,

The following is the summary table for SPH removal at 301 14th Street, Oakland. The table includes data from our most recent site visit on 2-7-95 and shows the reoccurrence of separate phase hydrocarbons in wells CR-1 and VEW-3. Please call me at (510) 450-6164 if you have any questions or comments.

Thank You!

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Table J. Summary of Separate Phase Hydrocarbon Removal From Ground Water Monitoring Wells, Former Chevron Service Station #9-4816, 301 14th Street, Oakland, California.

DATE	WELL NUMBER C-1					WELL NUMBER CR-1					WELL NUMBER VIEW-3					GRAND TOTAL
	Depth to Water (ft)	Depth to SPH (ft)	SPH Thickness (ft)	Volume Of SPH Removed (gal)	Cumulative Total Gallons Removed (gal)	Depth to Water (ft)	Depth to SPH (ft)	SPH Thickness (ft)	Volume Of SPH Removed (gal)	Cumulative Total Gallons Removed (gal)	Depth to Water (ft)	Depth to SPH (ft)	SPH Thickness (ft)	Volume Of SPH Removed (gal)	Cumulative Total Gallons Removed (gal)	Cumulative Total SPH Removed From All Wells (gal)
20-Dec-94	21.20	20.70	0.50	0.3	0.3	21.62	20.73	0.89	2.0	2.0	20.43	NP	NP	0.0	0.0	2.3
28-Dec-94	20.93	20.65	0.30	0.3	0.6	21.29	20.70	0.59	0.5	2.5	21.73	20.41	1.32	2.0	2.0	5.1
03-Jan-95	20.65	NP	0.00	0.0	0.6	21.12	20.70	0.42	0.8	3.3	21.07	20.57	0.50	1.5	3.5	7.3
10-Jan-95	20.50	20.34	0.16	0.1	0.7	20.74	20.36	0.38	0.5	3.8	20.55	20.28	0.27	0.3	3.8	8.2
17-Jan-95	20.20	20.13	0.07	0.0	0.7	20.45	20.36	0.09	0.0	3.8	20.21	19.93	0.28	0.3	4.0	8.4
23-Jan-95	20.00	NP	0.00	0.0	0.7	19.40	NP	0.00	0.0	3.8	20.10	NP	0.00	0.0	4.0	8.4
07-Feb-95	19.73	NP	0.00	0.0	0.7	19.91	19.86	0.05	0.3	4.0	19.92	19.69	0.23	0.3	4.3	8.9

Abbreviations:
 SPH = separate phase hydrocarbons
 NP = No separate phase hydrocarbons
 NM = Not measured

Notes:

WEISS ASSOCIATES

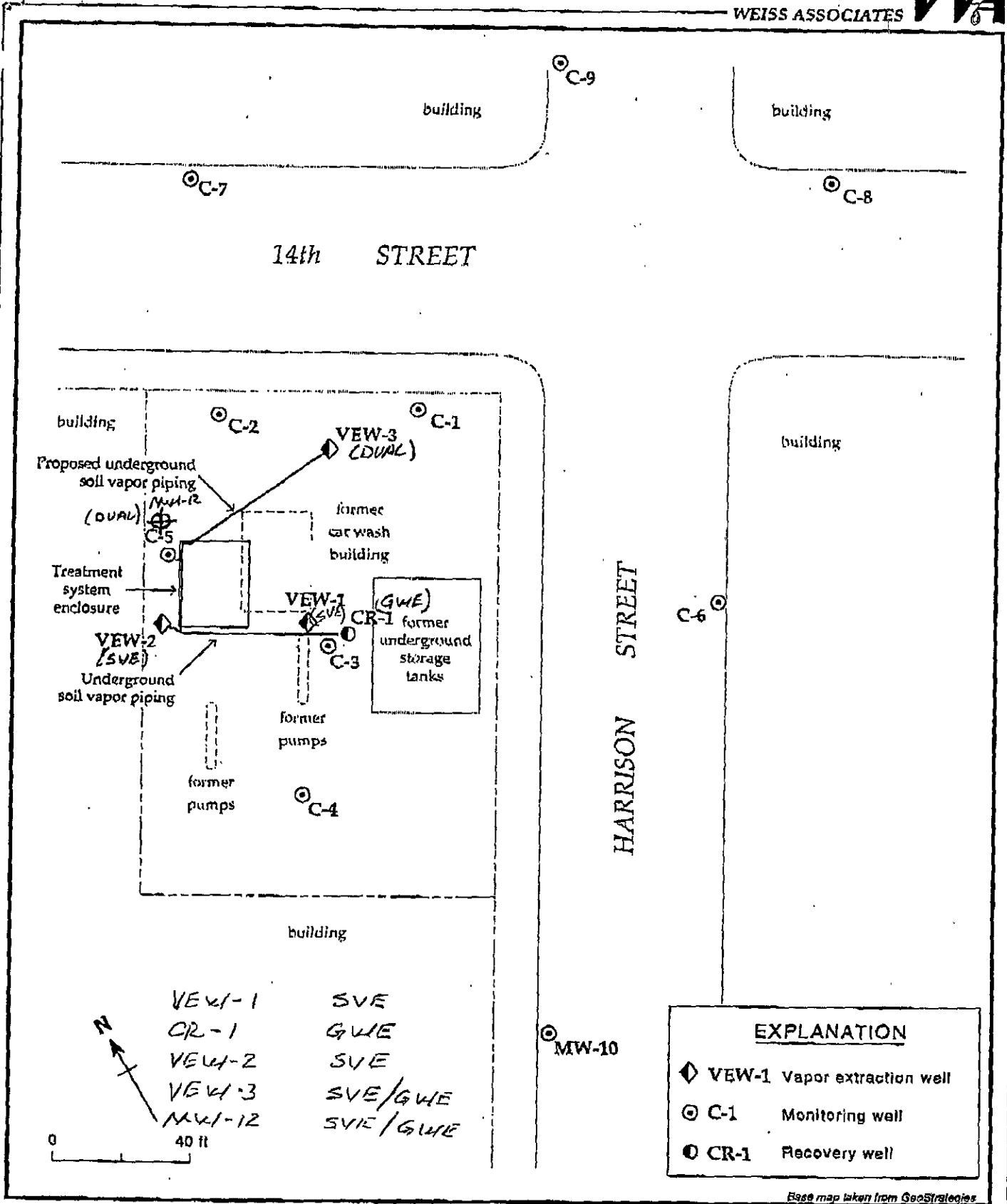


Figure 2. Monitoring and Extraction Well Locations - Former Chevron Service Station #9-4816, 301 14th Street, Oakland, California