



July 22, 1996

Ms. Jennifer Eberle
Alameda County Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Chevron U.S.A. Products Company
~~2410 Camino Ramon~~
~~San Ramon, CA 94583~~
P.O. Box 5004
San Ramon, CA 94583-0804

Marketing Department
Phone 510 842 9500

Re: Former Chevron Service Station # 9-4816
301 14th Street
Oakland, California

Dear Ms. Eberle:

Enclosed is a copy of the Project Status Report for April 1996, prepared by our consultant Terra Vac, summarizing the operation of the DVE system up to the time the system was demobilized. The sparging system continues to operate as outlined in the work plan for the site. I am also enclosing a copy of the report from Terra Vac, dated March 7, 1996, which lists the last specification data and removal rate tables, you can use for reference.

As per your letter of July 8, 1996, I am in agreement to meeting with you and our consultant to discuss the progress and effectiveness of the remediation system and what future actions should be taken at this site. I will contact you direct to set up a meeting.

If you have any questions or comments call me at (510) 842-9136

Sincerely,
CHEVRON PRODUCTS COMPANY

Philip R. Briggs
Site Assessment and Remediation Project Manager

Enclosure

cc. Ms. Bette Owen, Chevron

Mr. J. N. Robbins, Chevron

Ms. Beth D. Castleberry
Gray, Cary, ware & Freidenrich
400 Hamilton Avenue
Palo Alto, CA 94301-1825

ENVIRONMENTAL
PROFESSIONAL
96 JUL 23 PM 2:55



VAC

1651 Alvarado Street, San Leandro, CA 94577-2636
Tel (510) 351-8900 □ Fax (510) 351-0221

PROJECT STATUS

April 1996

Chevron 9-4816

301 14th Street

Oakland, California

Project Status

- Sparging system operating and delivering approximately 35 scfm compressed air via six operating sparge wells.
- DVE system has been de-mobilized with Alameda County approval.
- 1st Quarter 1996 Self Monitoring and Closure Report has been submitted to EBMUD.

Work Planned for April 1996

- Continued operation of sparging system.

Work Planned for Second Quarter 1996

- Continued operation of sparging system.

ENVIRONMENTAL
PROTECTION
96 JUL 23 PM 2:53

Table 1
 Operation Summary
 Former Chevron Station 9-4816
 301 14th Street
 Oakland, CA

TERRA VAC

Date	Run Time (days)	Sample	Extracted			Cumulative Extraction (lb)	Cumulative Water (gal)
			Flow (scfm)	Conc. (mg/l)	Rate (lb/day)		
10/03/95	0.0	start	558		0.0	0	
10/03/95	0.3	1	558	0.68	34.1	11	0
10/04/95	1.4	3	507	3.44	156.6	110	
10/05/95	2.3	5	596	12.36	661.4	481	4,270
10/05/95	2.3	stop	0		661.4	487	
10/06/95	2.3	start	487		661.4	487	4,412
10/06/95	2.4	7	467	13.30	557.6	545	4,412
10/09/95	5.5	9	306	7.56	207.5	1,760	16,360
10/10/95	6.3	11	358	5.73	183.9	1,915	22,264
10/16/95	12.5	nst	420		183.9	3,047	58,340
10/17/95	13.3	23	420	9.41	354.6	3,273	65,070
10/18/95	14.0	stop	0		354.6	3,508	
10/19/95	14.0	start	417		354.6	3,508	70,645
10/20/95	14.9	nst	401		354.6	3,840	75,215
10/31/95	25.9	nst	328		354.6	7,741	128,849
11/08/95	34.1	26	474	4.34	184.8	9,938	133,522
11/10/95	36.0	nst	402		184.8	10,302	141,028
11/15/95	40.8	38	459	0.20	8.2	10,761	161,110
11/20/95	45.8	50	461	0.02	0.8	10,784	177,738
11/27/95	53.0	nst	451		0.8	10,790	200,421
11/28/95	53.8	nst	302		0.8	10,791	203,113
11/29/95	55.0	54	311	2.00	55.9	10,826	211,866
12/06/95	62.0	nst	313		55.9	11,216	258,585
12/12/95	67.9	65	334	4.60	138.1	11,788	310,266
12/18/95	73.9	stop	0		138.1	12,617	
12/27/95	73.9	start	305		57.0	12,617	414,435
01/01/96	79.0	stop	305		57.0	12,907	
01/03/96	79.0	start	345		277.0	12,907	431,335
01/04/96	79.7	67	333	9.30	277.8	13,115	440,645
01/05/96	80.9	68	328	12.00	353.0	13,477	456,035
01/06/96	81.6	stop	0		353.0	13,727	
01/07/96	81.6	start	328		353.0	13,727	
01/08/96	82.7	69	348	9.30	290.9	14,076	480,784
01/12/96	86.9	70	352	7.90	249.9	15,219	523,918
01/18/96	92.8	nst	311		249.9	16,691	578,996
01/19/96	93.6	71	304	5.20	142.1	16,857	
01/22/96	96.9	72	302	4.40	119.4	17,282	619,317
01/26/96	100.7	73	299	3.60	96.8	17,690	655,448

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 Operation Summary
 Former Chevron Station 9-4816
 301 14th Street
 Oakland, CA

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Date	Run Time (days)	Sample	Extracted			Cumulative Extraction (lb)	Cumulative Water (gal)
			Flow (scfm)	Conc. (mg/l)	Rate (lb/day)		
02/02/96	107.7	74	275	3.45	85.3	18,326	724,129
02/09/96	114.8	75	289	2.30	59.6	18,842	793,548
02/11/96	116.9	stop	289		59.6	18,969	
02/14/96	116.9	start	287		59.6	18,969	818,038
02/15/96	117.9	86	291	1.11	29.0	19,012	828,787
02/16/96	118.9	87	308	1.67	46.2	19,050	842,387
02/23/96	125.8	stop	308		46.2	19,371	
02/25/96	125.8	start	302		46.2	19,371	911,570
02/26/96	126.7	98	324	0.57	16.6	19,398	920,135
03/01/96	130.7	109	317	0.29	8.3	19,447	958,235
03/02/96	131.6	stop	317		8.3	19,455	
03/05/96	131.6	start	291		8.3	19,455	989,335
03/07/96	133.6	stop	291		8.3	19,472	1,009,835
03/08/96	133.6	start	299		8.3	19,472	1,009,835
03/09/96	134.7	stop	299		8.3	19,481	1,019,529



VAC

1651 Alvarado Street, San Leandro, CA 94577-2636
Tel (510) 351-8900 □ Fax (510) 351-0221

March 7, 1996

Jennifer Eberle
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

Re: Former Chevron Station 9-4816
301 14th Street, Oakland, CA

ENVIRONMENTAL
PROTECTION
96 JUL 23 PM 2:53

Dear Ms. Eberle:

Attached please find the Project Status Report for March 1996. The operational data indicates that work plan goals for the DVE system have been achieved. Specifically, TPH extraction rates for the DVE system have dropped below 50 pounds per day and DVE system inlet composition have transitioned from lighter to heavier end compounds. Therefore, Terra Vac recommends that the DVE system be de-mobilized. Operation of the sparging system will continue as outlined in the work plan for the site.

Please contact us with your approval for demobilization of the DVE system or call if you have any questions regarding this project.

Sincerely,
Terra Vac Corporation

Mark Frye
Project Engineer

Chevron U.S.A. Products Company

Mark Miller
Site Assessment & Remediation Engineer

attachment: Project Status, March 1996

0305jebe
30-0220.17



VAC

1651 Alvarado Street, San Leandro, CA 94577-2636
Tel (510) 351-8900 □ Fax (510) 351-0221

PROJECT STATUS

March 1996
Chevron 9-4816
310 14th Street
Oakland, California

Project Status

- Work Plan goals for DVE system have been documented: removal rate below 50 pounds per day; transition to lighter end compounds.
- Sparging system operating and delivering approximately 125 scfm compressed air via six operating sparge wells.

Work Planned for March 1996

- De-mobilization of DVE system upon receipt of approval from Alameda County.
- Continued operation of sparging system.
- Submittal of 1st Quarter 1996 Self Monitoring and Closure Report to EBMUD.

Work Planned for Second Quarter 1996

- Continued operation of sparging system.

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

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03/01/96	130.7	109	313	0.29	8.1	19,447	958,235

Table 3
 Speciation Data
 Former Chevron Station 9-4816
 301 14th Street
 Oakland, CA

Date	10/17/95	11/20/95	11/29/95	12/12/95	02/09/96	03/01/96
CR-1						
TPH-g Conc. (mg/L)	9.93	NS	NS	10.90	8.11	1.04
lighter than benzene	61%			73%	26%	27%
benzene to toluene	24%			15%	24%	39%
toluene to xylene	12%			10%	23%	24%
heavier than xylene	4%			3%	26%	11%
VEW-1						
TPH-g Conc. (mg/L)	6.19	0.43	NS	NS	1.46	0.47
lighter than benzene	34%	61%			1%	43%
benzene to toluene	21%	29%			6%	30%
toluene to xylene	31%	9%			36%	12%
heavier than xylene	14%	2%			57%	14%
VEW-2						
TPH-g Conc. (mg/L)	4.47	0.35	NS	NS	25.08	0.76
lighter than benzene	71%	62%			33%	26%
benzene to toluene	19%	32%			36%	40%
toluene to xylene	7%	5%			24%	26%
heavier than xylene	3%	2%			7%	8%
VEW-3						
TPH-g Conc. (mg/L)	11.89	0.52	5.30	4.60	0.38	0.25
lighter than benzene	56%	48%	44%	8%	1%	9%
benzene to toluene	26%	37%	35%	21%	16%	27%
toluene to xylene	12%	12%	17%	40%	17%	26%
heavier than xylene	6%	2%	4%	32%	66%	38%

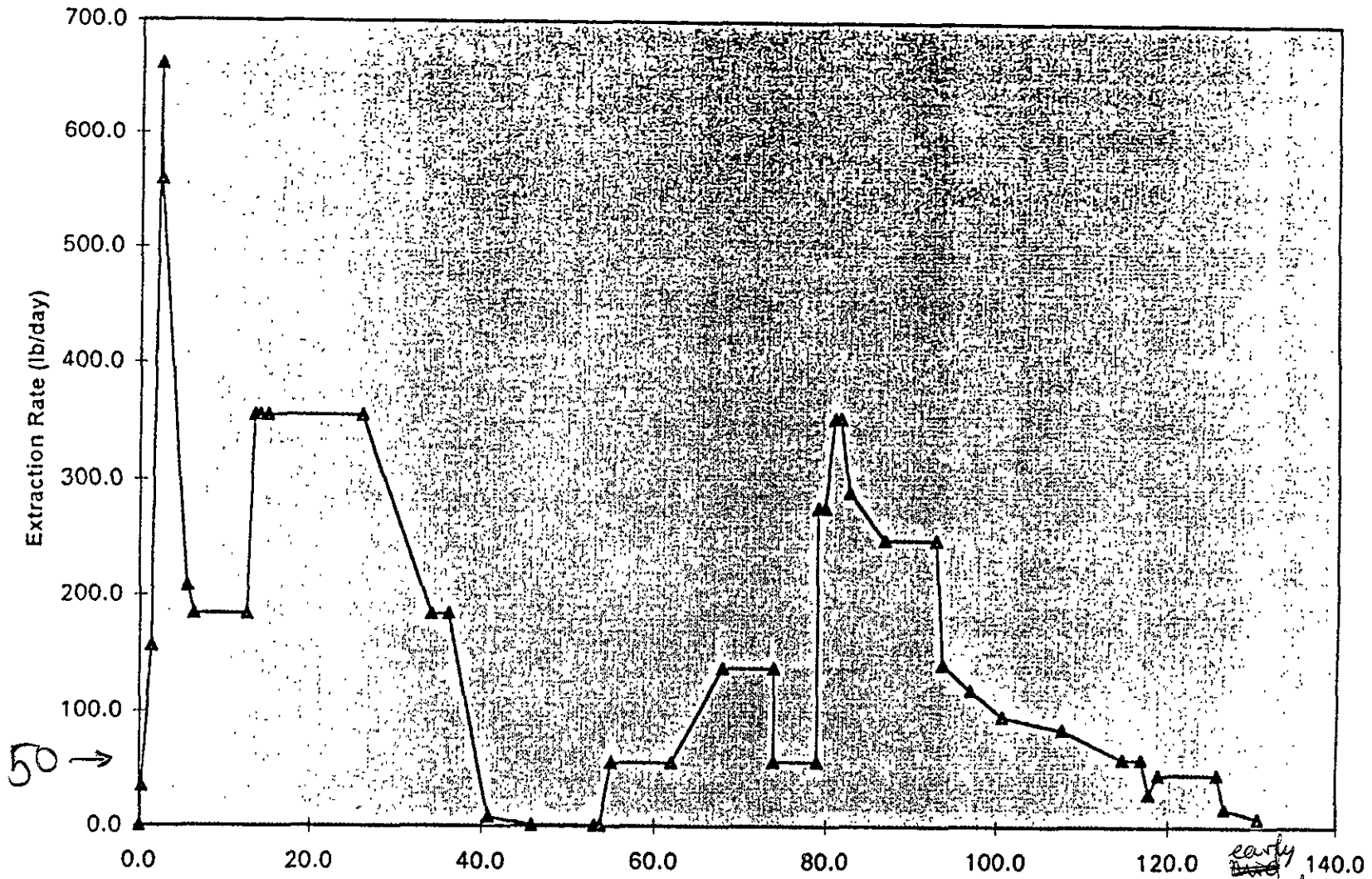
Table 3
 Speciation Data
 Former Chevron Station 9-4816
 301 14th Street
 Oakland, CA

Date	10/17/95	11/20/95	11/29/95	12/12/95	02/09/96	03/01/96
VEW-4						
TPH-g Conc. (mg/L)	5.36	0.14	NS	NS	10.96	0.81
lighter than benzene	44%	64%			8%	18%
benzene to toluene	27%	32%			16%	34%
toluene to xylene	18%	3%			34%	36%
heavier than xylene	10%	1%			43%	13%
VEW-5						
TPH-g Conc. (mg/L)	11.95	0.05	1.90	5.48	NS	0.27
lighter than benzene	23%	47%	54%	46%		9%
benzene to toluene	26%	37%	27%	31%		27%
toluene to xylene	34%	10%	12%	20%		26%
heavier than xylene	18%	6%	7%	3%		38%
C-1						
TPH-g Conc. (mg/L)	25.17	1.20	14.80	2.22	0.74	0.11
lighter than benzene	34%	16%	34%	5%	3%	0%
benzene to toluene	38%	28%	32%	21%	3%	16%
toluene to xylene	22%	46%	25%	43%	25%	43%
heavier than xylene	6%	11%	10%	32%	69%	41%
C-2						
TPH-g Conc. (mg/L)	6.24	0.27	NS	NS	1.60	0.12
lighter than benzene	62%	53%			0%	2%
benzene to toluene	24%	30%			5%	3%
toluene to xylene	10%	14%			43%	40%
heavier than xylene	4%	3%			52%	56%

Table 3
 Speciation Data
 Former Chevron Station 9-4816
 301 14th Street
 Oakland, CA

Date	10/17/95	11/20/95	11/29/95	12/12/95	02/09/96	03/01/96
C-3						
TPH-g Conc. (mg/L)	9.93	0.62	10.60	8.77	2.94	3.05
lighter than benzene	50%	37%	37%	57%	8%	33%
benzene to toluene	29%	28%	28%	27%	17%	32%
toluene to xylene	16%	28%	23%	11%	28%	22%
heavier than xylene	6%	8%	10%	6%	48%	13%
C-5						
TPH-g Conc. (mg/L)	10.01	0.61	NS	NS	NS	NS
lighter than benzene	61%	40%				
benzene to toluene	25%	30%				
toluene to xylene	10%	22%				
heavier than xylene	4%	8%				
MW-12						
TPH-g Conc. (mg/L)	NS	NS	NS	8.72	0.65	0.48
lighter than benzene				39%	0%	0%
benzene to toluene				34%	8%	9%
toluene to xylene				16%	31%	40%
heavier than xylene				11%	61%	52%
INLET						
TPH-g Conc. (mg/L)	9.41	0.02	2.00	4.57	2.35	0.29
lighter than benzene	39%	44%	46%	62%	18%	33%
benzene to toluene	27%	25%	32%	24%	21%	35%
toluene to xylene	23%	20%	17%	12%	27%	22%
heavier than xylene	11%	11%	6%	2%	35%	11%

Figure 2
 Removal Rate
 Former Chevron Station 9-4816
 301 14th Street
 Oakland, CA



50 →
 10-3-95

12-3-95
 AS started (approx)
 ↑ late Jan 96

↑
 early March 1996
 < 50 lb/day

TERRA VAC

FIGURE 3
Cumulative Removal Rate
Former Chevron Station 9-4816
301 14th Street
Oakland, CA

