

August 11, 1993

Brett Hunter Chevron USA P.O. Box 5004 San Ramon, CA 94583

Re:

Chevron Service Station #9-5542

7007 San Ramon Road Dublin, California SES Project #1-214-04

Dear Mr. Hunter:

This report presents the results of the quarterly ground water sampling at Chevron Service Station #9-5542, located at 7007 San Ramon Road in Dublin, California. Six wells, MW-2 through MW-6 and MW-8, were sampled (Figure 1).

On June 14 and July 25, 1993, SES personnel visited the site. Water level measurements were collected from six wells and all were checked for the presence of free-phase hydrocarbons. Free-phase hydrocarbons were not present in any of the site wells. Water level data are shown in Table 1 and ground water elevation contours are included on Figures 1 and 2.

The ground water samples were collected on July 25, 1993 in accordance with SES Standard Operating Procedure - Ground Water Sampling (attached). All analyses were performed by GTEL of Concord, California. Analytic results for ground water are presented in Table 2. The chain of custody document and laboratory analytic reports are attached. SES is not responsible for laboratory omissions or errors.

Thank you for allowing us to provide services to Chevron. Please call if you have any questions.

Sincerely,

Sierra Environmental Services

Richard E. Hilton

Staff Environmental Scientist

Chris J. Brame

Professional Engineer #C48846

REH/CJB/mc 21404QM.AU3

Attachments:

Figures Tables

SES Standard Operating Procedure

Chain of Custody Document and Laboratory Analytic Reports

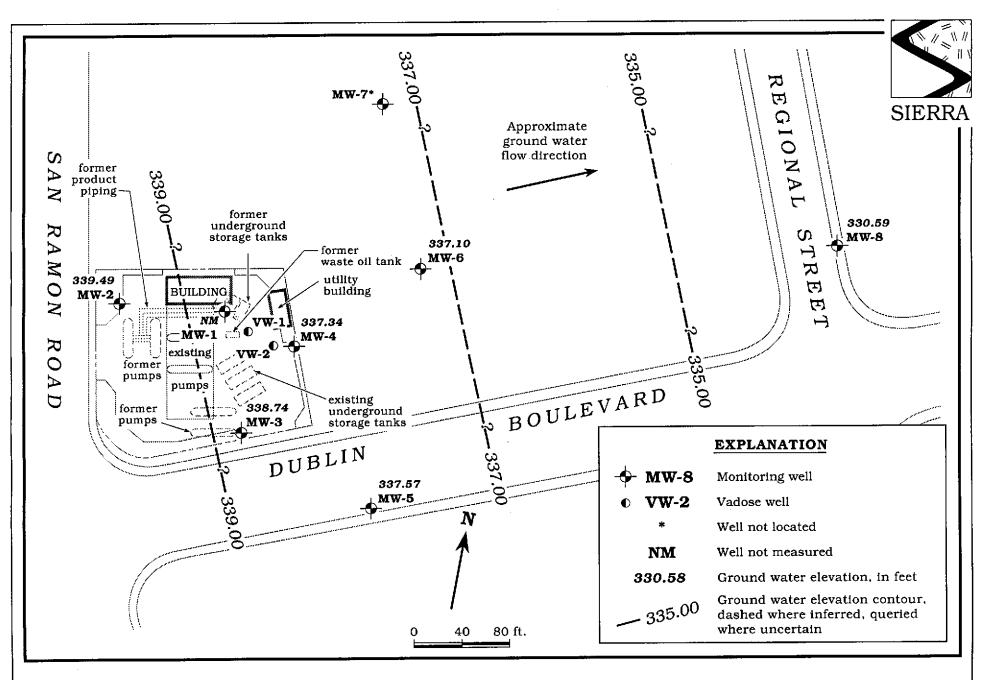


Figure 1. Monitoring Well Location and Ground Water Elevation Contour Map - June 14, 1993 - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California

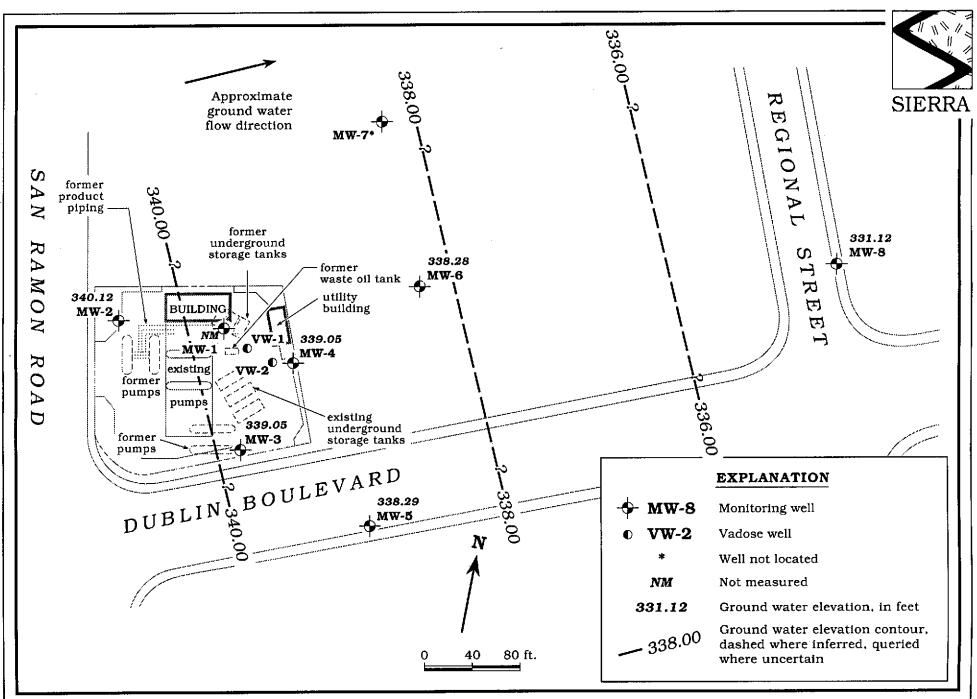


Figure 2. Monitoring Well Location and Ground Water Elevation Contour Map – July 25, 1993 – Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California



Table 1. Water Level Data and Well Construction Details - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California

MW-1		Date casured	DTW (ft)	TOC (msl)	GWE (msl)	Product Thickness* (ft)	Screen Interval <	Sand Pack Interval feet below grade	Bentonite/Grout Interval >
6/21/91 26.23 337.75 0 7/17/91 26.53 337.45 0 10/4/91 27.90 336.08 0 12/19/91 28.12 335.86 0 3/19/92 24.63 339.35 0 6/19/92 26.23 364.32 <sup>2</sup> 338.09 0 9/22/92 27.73 336.59 0 12/18/92 26.76 337.56 0 3/22/93 <sup>4</sup>	W-1 5/	/31/91	25.67	363.98¹	338.31	0	20.0 - 35.0	19.5 - 35.5	0 - 19.5
7/17/91 26.53 337.45 0 10/4/91 27.90 336.08 0 12/19/91 28.12 335.86 0 3/19/92 24.63 339.35 0 6/19/92 26.23 364.32 338.09 0 9/22/92 27.73 336.59 0 12/18/92 26.76 337.56 0 3/22/93 6/14/93 6/14/93 7/25/93  MW-2 5/31/91 25.51 364.19 338.68 0 22.0 - 37.0 20.0 - 37.0 0 - 37.0  6/21/91 26.13 338.06 0 7 7/17/91 26.46 337.73 0 6 6/21/91 27.79 336.40 0 12/19/91 28.06 336.13 0 339.73 0 6 6 19/92 26.10 364.64 339.73 0 6 6 19/92 26.10 364.64 339.73 0 6 6 19/92 26.10 364.64 338.54 0 0 12/18/92 26.32 338.32 0 32/293 21.39 343.29 0 6 6/14/93 25.15 339.49 0 6 12/18/92 26.32 340.12 0  MW-3 5/31/91 23.20 361.92 336.72 0 20.0 - 35.0 19.0 - 35.0 0 - 35.0 19.0 - 35.0 0 - 36.19/92 24.59 337.73 0 0 12/19/91 24.13 337.79 0 0 20.0 - 35.0 19.0 - 35.0 0 - 35.0 19.0 - 35.0 0 - 36.19/92 24.59 335.94 0 337.73 0 0 37.717/91 24.59 337.717/91 24.59 337.717/91 24.59 337.717/91 24.59 337.717/91 24.59 337.717/91 24.59 337.717/91 24.5					337.75	O			
10/4/91 27.90 336.08 0 12/19/91 28.12 335.86 0 3/13/92 24.63 339.35 0 6/19/92 26.23 364.32 <sup>2</sup> 338.09 0 9/22/92 27.73 336.59 0 12/18/92 26.76 337.56 0 3/22/93 <sup>4</sup>			26.53						
12/19/91 28.12 335.86 0 3/19/92 24.63 339.35 0 6/19/92 26.23 364.32° 338.09 0 9/22/92 27.73 336.59 0 12/18/92 26.76 337.56 0 3/22/93⁴ 6/14/93⁴ 7/25/93⁴  MW-2 5/31/91 25.51 364.19¹ 338.68 0 22.0 - 37.0 20.0 - 37.0 0 - 37.0 10/4/91 27.79 336.40 0 0 12/19/91 28.06 337.73 0 10/4/91 27.79 336.40 0 0 12/19/91 28.06 339.73 0 6/19/92 24.46 339.73 0 12/18/92 27.60 364.64² 338.54 0 9/22/92 27.60 364.64² 338.32 0 12/18/92 26.32 338.32 0 12/18/93 21.39 343.29 0 6/14/93 25.15 339.49 0 7/25/93 24.52 340.12 0  MW-3 5/31/91 23.20 361.92¹ 338.72 0 20.0 - 35.0 19.0 - 35.0 0 - 36.0  MW-3 5/31/91 24.13 337.73 0 9/20/91 24.13 337.73 0 9/20/91 25.98 335.94 0 12/19/91 26.24 339.68 0 33/19/92 24.46 339.49 0 12/19/91 25.98 335.94 0 12/19/91 26.24 335.68 0 3/19/92 24.32 362.26² 339.42 0	10	0/4/91	27.90						
3/19/92 24.63 339.35 0 6/19/92 26.23 364.32 <sup>2</sup> 338.09 0 9/22/92 27.73 336.59 0 12/18/92 26.76 337.56 0 3/22/93 <sup>4</sup>			28.12						
6/19/92 26.23 364.32 <sup>2</sup> 338.09 0 9/22/92 27.73 336.59 0 12/18/92 26.76 337.56 0 3/22/93 <sup>4</sup> 6/14/93 <sup>4</sup> 7/25/93 <sup>4</sup> MW-2 5/31/91 25.51 364.19 <sup>1</sup> 338.68 0 22.0 - 37.0 20.0 - 37.0 0 - 37.0  MW-2 6/21/91 26.13 38.06 0 0 7/17/91 26.46 337.73 0 0 10/4/91 27.79 336.40 0 0 12/19/91 28.06 336.13 0 0 3/19/92 24.46 339.73 0 0 6/19/92 26.10 364.64 <sup>2</sup> 338.54 0 0 12/18/92 26.62 339.33 0 0 6/14/93 25.15 339.49 0 7/25/93 24.52 340.12 0  MW-3 5/31/91 23.20 361.92 <sup>1</sup> 338.72 0 20.0 - 35.0 19.0 - 35.0 0 - 35.0  MW-3 5/31/91 23.20 361.92 <sup>1</sup> 338.72 0 20.0 - 35.0 19.0 - 35.0 0 - 35.0  MW-3 6/19/92 24.43 337.79 0 0 7/17/91 24.59 337.73 0 9/20/91 25.98 335.94 0 12/19/91 26.24 335.68 0 33/19/92 22.46 339.68 0 33/19/92 22.46 339.68 0 33/19/92 22.46 339.46 0 6/19/92 24.32 362.26 <sup>2</sup> 337.94 0 9/22/92 25.84 336.42 0 0									
9/22/92 27.73 336.59 0 12/18/92 26.76 337.56 0 3/22/934 6/14/934 7/25/934 7/25/934  MW-2 5/31/91 25.51 364.19 <sup>3</sup> 338.68 0 22.0 - 37.0 20.0 - 37.0 0 - 6/21/91 26.13 338.06 0 7/17/91 26.46 337.73 0 10/4/91 27.79 336.40 0 12/19/91 28.06 336.13 0 3/19/92 24.46 339.73 0 6/19/92 26.10 364.64 <sup>2</sup> 338.54 0 9/22/92 27.60 337.04 0 12/18/92 26.52 338.32 0 3/18/92 27.60 337.04 0 12/18/92 26.52 338.32 0 6/14/93 25.15 339.49 0 7/25/93 24.52 340.12 0  MW-3 5/31/91 23.20 361.92 <sup>1</sup> 338.72 0 20.0 - 35.0 19.0 - 35.0 0 -  MW-3 5/31/91 24.13 337.79 0 9/20/91 25.98 335.94 0 12/19/91 24.59 337.73 0 9/20/91 25.98 335.68 0 3/19/92 22.46 339.46 0 6/19/92 24.32 362.26 <sup>2</sup> 337.94 0 9/22/92 25.84			26.23	$364.32^{2}$					
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3/22/93 <sup>4</sup>			26.76		337.56	0	,		
T/25/93*            MW-2       5/31/91       25.51       364.19¹       338.68       0       22.0 - 37.0       20.0 - 37.0       0 - 37.									
7/25/93*            MW-2       5/31/91       25.51       364.19³       338.68       0       22.0 - 37.0       20.0 - 37.0       0 - 37.	6/	/14/93 <sup>4</sup>							
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7/17/91 26.46 337.73 0 10/4/91 27.79 336.40 0 12/19/91 28.06 336.13 0 3/19/92 24.46 339.73 0 6/19/92 26.10 364.64 <sup>2</sup> 338.54 0 9/22/92 27.60 337.04 0 12/18/92 26.32 338.32 0 12/18/92 26.32 338.32 0 3/22/93 21.39 343.29 0 6/14/93 25.15 339.49 0 7/25/93 24.52 340.12 0  MW-3 5/31/91 23.20 361.92 <sup>1</sup> 338.72 0 20.0 - 35.0 19.0 - 35.0 0 - 6/21/91 24.13 337.79 0 7/17/91 24.59 337.73 0 9/20/91 25.98 335.94 0 12/19/91 26.24 335.68 0 3/19/92 22.46 339.46 0 6/19/92 24.32 362.26 <sup>2</sup> 337.94 0 9/22/92 25.84 336.42 0			26.13			_			
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6/19/92 26.10 364.64 <sup>2</sup> 338.54 0 9/22/92 27.60 337.04 0 12/18/92 26.32 338.32 0 3/22/93 21.39 343.29 0 6/14/93 25.15 339.49 0 7/25/93 24.52 340.12 0  MW-3 5/31/91 23.20 361.92 <sup>1</sup> 338.72 0 20.0 - 35.0 19.0 - 35.0 0 - 6/21/91 24.13 337.79 0 7/17/91 24.59 337.73 0 9/20/91 25.98 335.94 0 12/19/91 26.24 335.68 0 3/19/92 22.46 339.46 0 6/19/92 24.32 362.26 <sup>2</sup> 337.94 0 9/22/92 25.84 336.42 0									
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12/18/92 26.32 338.32 0 3/22/93 21.39 343.29 0 6/14/93 25.15 339.49 0 7/25/93 24.52 340.12 0  MW-3 5/31/91 23.20 361.92¹ 338.72 0 20.0 - 35.0 19.0 - 35.0 0 - 6/21/91 24.13 337.79 0 7/17/91 24.59 337.73 0 9/20/91 25.98 335.94 0 12/19/91 26.24 335.68 0 3/19/92 22.46 339.46 0 6/19/92 24.32 362.26² 337.94 0 9/22/92 25.84 336.22 0									
3/22/93 21.39 343.29 0 6/14/93 25.15 339.49 0 7/25/93 24.52 340.12 0  MW-3 5/31/91 23.20 361.92¹ 338.72 0 20.0 - 35.0 19.0 - 35.0 0 - 6/21/91 24.13 337.79 0 7/17/91 24.59 337.73 0 9/20/91 25.98 335.94 0 12/19/91 26.24 335.68 0 3/19/92 22.46 339.46 0 6/19/92 24.32 362.26² 337.94 0 9/22/92 25.84 336.22 0			26.32						
7/25/93 24.52 340.12 0  MW-3 5/31/91 23.20 361.92\(^1\) 338.72 0 20.0 - 35.0 19.0 - 35.0 0 - 6/21/91 24.13 337.79 0 7/17/91 24.59 337.73 0 9/20/91 25.98 335.94 0 12/19/91 26.24 335.68 0 3/19/92 22.46 339.46 0 6/19/92 24.32 362.26\(^2\) 337.94 0 9/22/92 25.84 336.42 0			21.39					•	
7/25/93 24.52 340.12 0  MW-3 5/31/91 23.20 361.92\(^1\) 338.72 0 20.0 - 35.0 19.0 - 35.0 0 - 6/21/91 24.13 337.79 0 7/17/91 24.59 337.73 0 9/20/91 25.98 335.94 0 12/19/91 26.24 335.68 0 3/19/92 22.46 339.46 0 6/19/92 24.32 362.26\(^2\) 337.94 0 9/22/92 25.84 336.42 0	6/	/14/93	25.15						
6/21/91 24.13 337.79 0 7/17/91 24.59 337.73 0 9/20/91 25.98 335.94 0 12/19/91 26.24 335.68 0 3/19/92 22.46 339.46 0 6/19/92 24.32 362.26² 337.94 0 9/22/92 25.84 336.42 0			24.52		340.12	0			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	W-3 5/	3/31/91	23.20	361.92 <sup>1</sup>	338.72	ο ·	20.0 - 35.0	19.0 - 35.0	0 - 19.0
7/17/91 24.59 337.73 0 9/20/91 25.98 335.94 0 12/19/91 26.24 335.68 0 3/19/92 22.46 339.46 0 6/19/92 24.32 362.26 <sup>2</sup> 337.94 0 9/22/92 25.84 336.42 0			24.13					•	
9/20/91     25.98     335.94     0       12/19/91     26.24     335.68     0       3/19/92     22.46     339.46     0       6/19/92     24.32     362.26²     337.94     0       9/22/92     25.84     336.42     0									
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			25.98		335.94				
$3/19/92$ $22.46$ $339.46$ 0 $6/19/92$ $24.32$ $362.26^2$ $337.94$ 0 $9/22/92$ $25.84$ $336.42$ 0									
$6/19/92$ $24.32$ $362.26^2$ $337.94$ $0$ $9/22/92$ $25.84$ $336.42$ $0$			22.46						
9/22/92 25.84 336.42 0			24.32	$362.26^{2}$		0			
			25.84					•	
			24.40		337.86	0			
3/22/93 19.72 342.54 0									
6/14/93 23.52 338.74 0			23.52						
7/25/93 23.21 339.05 0	7/	/25/93	23.21		339.05	0	•		
WW-4 5/51/51 24.07 662.70	W-4 5,	5/31/91	24.67	$362.70^{1}$			20.0 - 35.0	19.0 - 35.0	0 - 19.0
6/21/91 25.31 337.39 0									
7/17/91 25.73 336.97 0					336.97	0		•	



Table 1. Water Level Data and Well Construction Details - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California (continued)

Well ID	Date Measured	DTW (ft)	TOC (msl)	GWE (msl)	Product Thickness* (ft)	Screen Interval	Sand Pack Interval feet below grade	Bentonite/Grout Interval '-
MW-4	10/4/91	27.08	<del>.</del>	335.62	0			
(cont)	12/19/91	27.24		335.46	0			
	3/19/92	23.66	·	339.04	0		•	
	6/19/92	25.33	$363.07^{2}$	337.74	0			
	9/22/92	26.90		336.17	0			
	12/18/92	25.62		337.45	0			
	3/22/93	20.80		342.27	0			
	6/14/93	25.73		337.34	0			
	7/25/93	24.02		339.05	0			
MW-5	6/21/91	23.17	$359.95^{1}$	336.78	0	21.0 - 36.0	19.5 - 36.0	0 - 19.5
1711 0	7/17/91	23.68		336.27	0			
	10/4/91	25.20	•	334.75	0		•	
	12/19/91	25.20		334.75	0			
	3/19/92	21.21		338.74	0			
	6/19/92	23.42	360.28 <sup>2</sup>	336.86	0			
	9/22/92	24.97		335.31	0			
	12/18/92	23.52		336.76	0			
	3/22/93	19.10	•	341.18	0			
	6/14/93	22.71		337.57	0			
	7/25/93	21.99		338.29	0		•	
MW-6	6/21/91	23.55	360.221	336.67	. 0	20.0 - 35.0	18.5 - 35.0	0 - 18.5
14144-0	7/17/91	24.00		336.22	0			-
	10/4/91	25.29		334.93	0			
	12/19/91	25.34		334.88	0			
	3/19/92	22.05		338.17	0			
	6/19/92	23.52	$360.58^{2}$	337.06	0			
	9/22/92	25.60		334.98	0			
	12/18/92	24.18		336.40	0			
	3/22/93	19.36		341.22	0			
	6/14/93	23.48		337.10	. 0			
	7/25/93	22.30		338.28	0		•	
MW-7	6/21/91	23.45	360.63¹	337.18	. 0	20.0 - 35.0	18.5 - 35.0	0 - 18.5
747 44 - 1	7/17/91	23.90		336.73	0			
	10/4/91	25.03		335.60	0			
	12/19/91	25.10		335.53	0		· ·	
	3/19/92	22.74		337.89	0			
	$6/19/92^3$		$360.99^{2}$					
	9/22/923							



Table 1. Water Level Data and Well Construction Details - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California (continued)

Well ID	Date Measured	DTW (ft)	TOC (msl)	GWE (msl)	Product Thickness* (ft)	Screen Interval	Sand Pack Interval feet below grade	Bentonite/Grout Interval >
MW-7	12/18/92³							
(cont)	3/22/93 <sup>5</sup>		•					
(COLIC)	6/14/93 <sup>5</sup>	<b></b>						
	7/25/93 <sup>5</sup>							
MW-8	12/12/91	22.54			О .			
M111	6/19/92	20.47	$354.89^2$	334.42	0			•
	9/22/92	29.80		325.09	0		•	
	12/18/92	21.18		333.71	0			
	3/22/93	16.91	*	337.98	0		•	
	6/14/93	24.30		330.59	0		* .	
	7/25/93	23.77		331.12	Ò		,	

#### EXPLANATION:

DTW = Depth to water

TOC = Top of casing elevation

GWE = Ground water elevation

msl = Measurements referenced relative

to mean sea level

--- = Not available/not applicable

#### NOTES:

Well construction details for MW-1 through MW-4 were compiled from a draft report prepared by Chempro, undated.

- \* Product thickness was measured with an MMC flexi-dip interface probe.
  - Top of casing elevations for monitoring wells MW-1 through MW-7 were surveyed by Ron Miller, Professional Engineer #15816 on June 26, 1991.
- Top of casing elevations for monitoring wells MW-1 through MW-8 were surveyed by Kier & Wright of Pleasanton, California on December 12, 1991. Survey data received by SES on April 30, 1992.
- Well could not be located on this date due to surface conditions from recent discing.
- 4 Monitoring well inaccessible due to downhole equipment, therefore no water level measurement was collected.
- <sup>5</sup> Monitoring well not located since March 1992 sampling event.



Table 2. Analytic Results for Ground Water - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California

S10	Date	Analytic	Analytic	TPPH(G)	O&G	В	т	E	х	Other HVOCs	1,2-DCA	EDB	OL
Sample ID	Date	Method	Lab	<				ppb					>
MW-1	4/3-4/90	8015/602/504	*	46,000	·	8,400	7,400	860	5,600			1.04	
(D)	4/3-4/90	8015/602/504	*	43,000		8,400	7,200	840	5,200			1.1	
(12)	5/31/91	8015/8020/8010	SAL	31,000		7,400	2,500	630	2,100	ND1	2		
	5/31/91	503E	SAL		<5,000								
	9/20/91	8015/8020/8010	SAL	31,000		3,000	2,800	610	3,100	$ND^1$	0.6		
	12/19/91	8015/8020/8010	SPA	20,000		5,200	1,700	560	2,000	$ND^1$	3.3		
	3/19/92	8015/8020/8010	SPA	30,000		8,500	3,600	590	2,400	$ND^1$	2.7		
	6/19/92	8015/8020	SPA	25,000		1,100	2,000	520	1,800				
	9/22/92	8015/8020	SPA	21,000		8,000	3,500	670	2,900				
	12/18/92	8015/8020	SPA	79,000		12,000	12,000	1,600	8,500				
	3/10/936												
MW-2	4/3-4/90	8015/602/504	*	<50		<0.3	<0.3	<0.3	<0.6	·		< 0.02	
	5/31/91	8015/8020/8010	SAL	100		3.1	4.2	0.7	2.0	$ND^1$	<0.5		
	5/31/91	503E	SAL		<5,000								
	9/20/91	8015/8020	SAL	68		1.3	1.6	0.8	3.0				
	12/19/91	8015/8020	SPA	<50		0.6	1.2	0.8	2.5				
	3/19/92	8015/8020	SPA	<50		2.5	2.0	1.1	2.4	·			
	6/19/92	8015/8020	SPA	<50		<0.5	0.6	0.7	1.2	<u></u>			
	9/22/92	8015/8020	SPA	200		16	42	6.1	32				
	12/18/92	8015/8020	SPA	<50	. =	<0.5	< 0.5	<0.5	<0.5				
	3/22/93	8015/8020	GTEL	<50		<0.5	< 0.5	<0.5	<0.5				
	7/25/93	8015/8020	GTEL	<50		<0.5	<0.5	<0.5	<0.5				
MW-3	4/3-4/90	8015/602/504	*	2,200		36	5	6	17			< 0.02	
	5/31/91	8015/8020/8010	SAL	2,200		130	11	31	78	$ND^1$	19		
	5/31/91	503E	SAL		<5,000								·
	9/20/91	8015/8020	SAL	2,200		190	6.0	24	32				
	12/19/91	8015/8020	SPA	640		73	27	17	56				
	3/19/92	8015/8020	SPA	4,500		1,000	15	91	240				
	6/19/92	8015/8020	SPA	1,100		89	3.3	9.1	13				
	9/22/92	8015/8020	SPA	1,400		81	51	15	49				
	12/18/92	8015/8020	SPA	1,100		2.0	1.1	53	38				
	3/22/93	8015/8020	GTEL	1,600		96	9	14	91				
	7/25/93	8015/8020	GTEL	1,200		19	6	2	5			***	
MW-4	4/3-4/90	8015/413.1/602/504	*	43,000	18,000	4,000	5,000	790	5,500			<0.02	
	4/3-4/90	624**	*			6,000	8,200	1,500					
	5/31/91	8015/8020/8010	SAL	34,000		2,900	2,900	680	3,300	$ND^1$	<0.5		
	5/31/91	503E	SAL		<5,000								



Table 2. Analytic Results for Ground Water - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California (continued)

Sample ID	Date	Analytic Method	Analytic Lab	TPPH(G)	O&G	В	т	E	x	Other HVOCs	1,2-DCA	EDB	OL
		· · ·						ppb					)
MW-4	9/20/91	8015/8020/8010	SAL	37,000		4.000	3,200	580	3.000	arro l			
(cont)	12/19/91	8015/8020/8010	SPA	41,000	=	5,500	4,900	1,000	4,400	ND <sup>1</sup>	9.2		
	3/19/92	8015/8020/8010	SPA	21,000		3,800	2,900	500	-	ND <sup>1</sup>	17		
	6/19/92	8015/5520/8020	SPA	27.000	<5,000	1,800	1,600	570	3,200	$ND^2$	15		
	9/22/92	8015/5520/8020	SPA	20,000	<5,000	4,100	2,700		1,900				
	12/18/92	8015/5520/8020	SPA	15,000	<5,000	2,200	2,700	670	3,200				
	3/22/93	8015/5520/8020	GTEL	41,000	5,000	3,900		370	1,600				
	7/25/93	8015/5520/8020	GTEL	94,000	< <b>5,000</b>	18,000	5,100 <b>30,000</b>	840 <b>2,400</b>	4,500 <b>14,000</b>				
MW-5	0.01.40-						,	2,700	14,000		***		
MW-5	6/21/91	8015/8020	SAL	<50		< 0.5	<0.5	<0.5	<0.5				
	6/21/91	8010/LUFT	SAL								-0.5		
•	9/20/91	8015/8020	SAL	$170^{3}$		0.8	0.9	<0.5	1.5		<0.5		<4,000
	12/19/91	8015/8020	SPA	<50		0.7	0.7	<0.5					
	3/19/92	8015/8020	SPA	<50		<0.5	<0.5	<0.5	1.4				
	6/19/92	8015/8020	SPA	<50		<0.5	<0.5	<0.5	<0.5				
	9/22/92	8015/8020	SPA	150		13	34		<0.5				
	12/18/92	8015/8020	SPA	<50		<0.5	<0.5	5.0	26 .				
	3/10/93	8015/8020	GTEL	<50		<0.5		<0.5	<0.5				
	7/25/93	8015/8020	GTEL	<50		<0.5	<0.5	<0.5	<0.5				
		·		100		ζυ.5	<0.5	<0.5	<0.5			***	
MW-6	6/21/91	8015/8020	SAL	3,700		50	2.6	150	340				
	6/21/91	8010/LUFT	SAL							 1			
	9/20/91	8015/8020	SAL	3,200		28	<0.5	140	100	$ND^1$	<0.5		<4,000
	12/19/91	8015/8020	SPA	380		2.7	4.0		· 100				
	3/19/92	8015/8020	SPA	3,400		57		15	10				
	6/19/92	8015/8020	SPA	980		11	4.5 4.2	330	360				
	9/22/92	8015/8020	SPA	1,100		22		57	38				
	12/18/92	8015/8020	SPA	1,900		3.2	41	77	58				
	3/10/93	8015/8020	GTEL	1,400			1.3	58	47				
	7/25/93	8015/8020	GTEL	83 <sup>8</sup>		30	9	8	22		**-		
	,	<b>-,</b>	4122	33		<0.5	<0.5	<0.5	<0.5		***		
MW-7	6/21/91	8015/8020	SAL	<50		<0.5	<0.5	<0.5	-0.5				
	6/21/91	8010/LUFT	SAL						<0.5	1			
	9/20/91	8015/8020	SAL	69		4.4				$ND^1$	<0.5		<4,000
	12/19/91	8015/8020	SPA	<50		0.9	3.3	1.2	3.9				
	3/19/92	8015/8020	SPA	<50			2.8	1.7	5.9				'
	6/19/924					1.1	0.6	0.9	2.5				
	9/22/924												
	$12/18/92^4$									,			
	3/22/937								"				
	7/25/93 <sup>7</sup>												
	- , 25, 00	<del></del>											



### Table 2. Analytic Results for Ground Water - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California (continued)

#### EXPLANATION:

TPPH(G) = Total Purgeable Petroleum Hydrocarbons as Gasoline

O&G = Oil and Grease

B ≃ Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

HVOCs = Halogenated Volatile Organic Compounds

1,2-DCA = 1,2-Dichloroethane

EDB = Ethylene dibromide

OL = Organic lead

ppb = Parts per billion

D = Duplicate sample

--- = Not analyzed/not applicable

ND = Not detected (see notes)

#### ANALYTIC METHODS:

8015 = EPA Method 8015/5030 for TPPH(G)

602 = EPA Method 602 for BTEX

504 = EPA Method 504 for EDB

8020 = EPA Method 8020 for BTEX

8010 = EPA Method 8010 for HVOCs

503E = Standards Methods Method 503E for O&G

#### ANALYTIC METHODS: (continued)

413.1 = EPA Method 413.1 for total O&G

624 = EPA Method 624 for BTEX and VOCs

5520 = Standard Methods Method 5520 for O&G

LUFT = DHS LUFT Manual Method for OL

#### ANALYTIC LABORATORIES:

SAL = Superior Analytic Laboratory, Inc. of San Francisco and Martinez, California

SPA = Superior Precision Analytical, Inc. of San Francisco and Martinez, California

GTEL = Groundwater Technology Environmental Laboratory, Inc., of Concord, California

#### NOTES:

Analytic data was compiled from a draft report prepared by Chempro, undated.

Analytic laboratory was not shown.

\*\* 624 compounds other than BTE were not reported

Other HVOCs were not detected at detection limits ranging from 0.5 to 1 ppb.

Chloroform and bromodichloromethane were detected at 1.3 and 0.9 ppb, respectively. Other HVOCs were not detected at detection limits ranging from 0.5 to 1 ppb.

<sup>3</sup> A non-standard gasoline pattern was observed in the chromatogram.

<sup>4</sup> This well could not be located; therefore it was not sampled.

Gasoline range concentration reported. The chromatogram shows only a single peak in the gasoline range.

Monitoring well deleted from sampling program per Chevron Project Engineer.

Monitoring well not located since March 1992 sampling event.

Uncategorized compound not included in gasoline total.

21400T.GW



# SES STANDARD OPERATING PROCEDURE GROUND WATER SAMPLING

The following describes sampling procedures used by SES field personnel to collect and handle ground water samples. Before samples are collected, careful consideration is given to the type of analysis to be performed so that precautions are taken to prevent loss of volatile components or contamination of the sample, and to preserve the sample for subsequent analysis. Wells will be sampled no less than 24 hours after well development. Collection methods specific to ground water sampling are presented below.

Prior to sampling, each well is checked for the presence of free-phase hydrocarbons using an MMC flexi-dip interface probe. Product thickness (measured to the nearest 0.01 foot) is noted on the sampling form. Water level measurements are also made using either a water level meter or the interface probe. The water level measurements are also noted on the sampling form.

Prior to sampling, each well is purged of a minimum of three well casing volumes of water using a steam-cleaned PVC bailer, or a pre-cleaned pump. Temperature, pH and electrical conductivity are measured at least three times during purging. Purging is continued until these parameters have stabilized (i.e., changes in temperature, pH or conductivity do not exceed ±0.5°F, 0.1 or 5%, respectively).

The purge water is taken to Chevron's Richmond Refinery for disposal.

Ground water samples are collected from the wells with steam-cleaned Teflon bailers. The water samples are decanted into the appropriate container for the analysis to be performed. Prepreserved sample containers may be used or the analytic laboratory may add preservative to the sample upon arrival. Duplicate samples are collected from each well as a back-up sample and/or to provide quality control. The samples are labeled to include the project number, sample ID, date, preservative, and the field person's initials. The samples are placed in polyethylene bags and in an ice chest (maintained at 4°C) for transport under chain of custody to the laboratory.

The chain of custody form includes the project number, analysis requested, sample ID, date analysis and the SES field person's name. The form is signed and dated (with the transfer time) by each person who yields or receives the samples beginning with the field personnel and ending with the laboratory personnel.

A trip blank and bailer blank accompanies each sampling set, or 5% trip blanks and 5% bailer blanks are included for sets of greater than 20 samples. The bailer blank is prepared by pouring previously boiled water into a steam-cleaned Teflon bailer prior to sampling a well. The trip and bailer blanks are analyzed for some or all of the same compounds as the ground water samples.



4080 Pike Lane Concord, CA 94520 (510) 685-7852 (800) 544-3422 Inside CA (800) 423-7143 Outside CA (510) 825-0720 FAX Client Number: SIE01CHV08 Consultant Project Number: 1-214-04

Project Number: 1-214-04 Facility Number: 9-5542

Project ID: 7007 San Ramon Valley RD.

Dublin, CA

Work Order Number: C3-07-0411

August 6, 1993

Argy Mena Sierra Environmental Services P.O. Box 2546 Martinez, CA 94553

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 07/27/93.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria, unless otherwise stated in the footnotes.

GTEL is certified by the California State Department of Health Services, Laboratory certificate numbers 194 and 1075, to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

If you have any questions concerning this analysis or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,

GTEL Environmental Laboratories, Inc.

Lab Duester for

Eileen F. Bullen

**Laboratory Director** 

Client Number: SIE01CHV08 Consultant Project Number: 1-214-04

Facility Number: 9-5542

Project ID: 7007 San Ramon Valley RD. Dublin, CA Work Order Number: C3-07-0411

### Table 1

## **ANALYTICAL RESULTS**

# Aromatic Volatile Organics and Total Petroleum Hydrocarbons as Gasoline in Water

EPA Methods 5030, 8020, and Modified 8015a

GTEL Sample Number		01	02	03	04				
Client Identification	<del></del>	TB-LB	MW-5						
Date Sampled		07/25/93	07/25/93 07/25/93 07/25/93						
Date Analyzed		08/03/93	08/03/93	08/03/93	08/03/93				
Analyte	Detection Limit, ug/L	Concentration, ug/L							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5				
Toluene	0.5	< 0.5	< 0.5	<0.5					
Ethylbenzene	0.5	< 0.5	<0.5	<0.5	<0.5				
Xylene, total	0.5	<0.5	< 0.5	<0.5	<0.5				
BTEX, total					·				
TPH as Gasoline	50	<50	<50	<50	<50				
Detection Limit Multiplier		1	1	1	1				
BFB surrogate, % recovery		88.2	84.7	87.3	86.5				

Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision. Bromofluorobenzene surrogate recovery acceptability limits are 70 - 130%.



Client Number: SIE01CHV08
Consultant Project Number: 1-214-04
Facility Number: 9-5542
Project ID: 7007 San Ramon Valley RD.

Dublin, CA Work Order Number: C3-07-0411

## Table 1 (Continued)

#### **ANALYTICAL RESULTS**

# Aromatic Volatile Organics and Total Petroleum Hydrocarbons as Gasoline in Water

## EPA Methods 5030, 8020, and Modified 8015a

GTEL Sample Number		05	06	07	08				
Client Identification		MW-2	MW-4						
Date Sampled		07/25/93	07/25/93						
Date Analyzed		08/04/93	08/04/93	08/04/93	08/04/93				
Analyte	Detection Limit, ug/L	Concentration, ug/L							
Benzene	0.5	< 0.5	19	< 0.5	18000				
Toluene	0.5	< 0.5	6	< 0.5	30000				
Ethylbenzene	0.5	< 0.5	2	< 0.5	2400				
Xylene, total	0.5	< 0.5	14000						
BTEX, total			32		64000				
TPH as Gasoline	50	<50	1200	83*	94000				
Detection Limit Multiplier		1	1	1	100				
BFB surrogate, % recovery		86.7	113	84.8	93.3				

Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision. Bromofluorobenzene surrogate recovery acceptability limits are 70 - 130%. Uncategorized compounds are not included in gasoline hydrocarbon total.



Client Number: SIE01CHV08
Consultant Project Number: 1-214-04
Facility Number: 9-5542
Project ID: 7007 San Ramon Valley RD. Dublin, CA

Work Order Number: C3-07-0411

# Table 1 (Continued)

#### ANALYTICAL RESULTS

# Aromatic Volatile Organics and Total Petroleum Hydrocarbons as Gasoline in Water

EPA Methods 5030, 8020, and Modified 8015a

GTEL Sample Number		Q979383-1						
Client Identification		METHOD BLANK						
Date Sampled					<u>.</u>			
Date Analyzed	_	08/03/93						
Analyte	Detection Limit, ug/L	Concentration, ug/L						
Benzene	0.5	< 0.5	-					
Toluene	0.5	< 0.5						
Ethylbenzene	0.5	<0.5						
Xylene, total	0.5	<0.5						
BTEX, total	·							
TPH as Gasoline	50	<50						
Detection Limit Multiplier		1						
BFB surrogate, % recovery		99.4						

Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision. Bromofluorobenzene surrogate recovery acceptability limits are 70 - 130%.



Client Number: SIE01CHV08
Consultant Project Number: 1-214-04
Facility Number: 9-5542
Project ID: 7007 San Ramon Valley Rd.
Dublin, CA
Work Order Number: C3-07-0411

#### Table 1

## **ANALYTICAL RESULTS**

### Total Oil and Grease in Water by Infrared Spectrometry

# EPA Method 413.2<sup>1</sup> (SM 5520 C<sup>2</sup>)

Methods for Chemical Analysis of Water and Wastes, EPA 600/4-79-202, Revised March 1983, U.S. Environmental Protection Agency.

Standard Methods for the Examination of Water and Wastewater, 17th ed., 1989, American Public Health Associ-

ation.

GTEL Sample Number		08	072893 TPH		
Client Identification		MW-4	METHOD BLANK		
Date Sampled		07/25/93			
Date Prepared		07/28/93	07/28/93		
Date Analyzed		07/28/93	07/28/93		
Analyte	Detection Limit, ug/L		Concentra	tion, ug/L	
Total Oil and Grease	5000	<5000	<5000		
Detection Limit Multiplier		1	1		



Client Number: SIE01CHV08
Consultant Project Number: 1-214-04
Facility Number: 9-5542
Project ID: 7007 San Ramon Valley RD.
Dublin, CA
Work Order Number: C3-07-0411

# QC Matrix Spike and Duplicate Spike Results

Matrix: Water

Analyte	Sample ID	Spike Amount	Units	Recovery, %	Duplicate Recovery, %	RPD, %	Control Limits
Modified EPA 8020:							
Benzeņe	C3070399-02	20.0	ug/L	88.0	89.5	1.7	55 - 129
Toluene	C3070399-02	20.0	ug/L	98.5	101	2.0	72 - 149
Ethylbenzene	C3070399-02	20.0	ug/L	91.0	92.0	1.1	75 - 138
Xylene, total	C3070399-02	60.0	ug/L	93.7	95.2	1.6	74 - 147



Fax co	py of	Lab	Rep	ort	and	COC to	Che	vron	- Co	ntac	t: 🗀	l No	)			C	<u>hair</u>	<u>1-0</u>	f-(	Cust	ody-	Record
Chevron U.S.A. Inc. P.O. BOX 5004 San Ramon, CA 94583 FAX (415)842-9591  Facility Address 7007 San Roman Valley Rd. Wolfin Va.  Consultant Project Number 1-214-04  Consultant Name Sierra Environmental Survices  Address P.O. Box 2546 Marchine 2 Ca.  Project Contact (Name) Arcy Mena  (Phone Sio) 370-7280 (Fax Number 570) 370-7959								-   I	Chevron Contact (Name) Clint Rose 15  (Phone) (513)842-9525  Laboratory Name 6-7EC  Laboratory Release Number 5464460  Samples Collected by (Name) Gary Gross  Collection Date 7-25-95  Signature Amy Am													
Sample Number	Lab Sample Number	Number of Containers  Mothits S = Soil A = Air W = Water C = Charcool W = Water C = Composite D = Clearers Ifms  Idms  Icad (Yes or No)						BTEX + TPH GAS (8020 + 8015)	TPH Dissel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeoble Aromotics (8020)	Organica		CACAPLZAMI CACAPLZAMI (ICAP or AA)						TB-L1 S&AF ON 10 フ/よフ/	ot Bill 3 Samples 1かでから こま みちまむ
MW- 2	01 003 07 005 07 08	3 + 4 - 4 - 1	W	G	6-25-9	HCL	Y														Analy	hawn
Relinquished By Relinquished By	(Signoture)		Or	ganization ganization ganization		Date/Time  7-27-97  Date/Time	Re-	pelved E	By (Sign	ature)	ax (signi		Organiza		Dat	•/Time	30	57	O Turn A	44 5 10	S. T- me (Circle Hrs. Hrs. Daye Daye ontracted	1/2 Box choloe)