

August 30, 2000

Project Number 192-01-03

Mr. Hooshang Hadjian Foothill Beacon 7240 Dublin Boulevard Dublin, CA 94568

Subject:

Report of Groundwater Monitoring at Foothill Beacon, 16210 Foothill

Boulevard, San Leandro, California

This Groundwater Monitoring Report describes the site history, field work and laboratory analysis results for a sampling event at the subject property.

The project site is located at 16210 Foothill Boulevard, San Leandro, California. The site is currently used as a convenience store that retails gasoline under the name Foothill Beacon.

SITE BACKGROUND

Four underground storage tanks were removed from this site by California Petroleum Equipment, Inc., of Fresno on January 28, 1997. There were two 8,000 gallon tanks and two 5,000 gallon tanks, single wall steel, and appeared to be in fair condition, with some pitting evident on the tanks with close inspection.

The Alameda County inspector probed the pitted areas and found two 1/4" to 1/2" holes at the end of one of the 5,000 gallon tanks. The holes were about three feet from the bottom of the tank at the weld by the tank cylinder and tank end. Although the metal was soft enough to disintegrate with the probing of a screwdriver, it appears that the tank did not leak from these spots. The tanks were sitting in about four feet of water, and if the tanks leaked, water would have been three to four feet deep in this tank. Since no water was pumped from the tank during service, the tank was apparently intact until removal. Groundwater was eleven feet below grade surface on the day of the tank removal, as measured by a tape measure.

Soil samples were collected from the tank excavation. Sample analysis results show up to 360 ppm TPH-g, up to 9.4 ppm MTBE, up to 2.3 ppm benzene, up to 2.3 ppm toluene, up to 3.0 ppm ethyl-benzene, and up to 98 ppm xylenes.

Three monitoring wells were installed and soil samples were taken by Parker Environmental Services on October 13, 1998, results found in Table 1.

Table 1 - Soil Sample Analysis Results Foothill Beacon Samples Taken October 13, 1998

Sample	TPH-g	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
MW-1 @ 25.5'	ND/	ND	ND	ND	ND	ND
MW-1 @ 30.5'	ND	ND	ND	ND	ND	ND
MW-2 @ 5.5'	ND	ND	ND	ND	ND	ND
MW-2 @ 10.5'	ND	ND	ND	ND	ND	ND
MW-2 @ 15.5'	ND	ND	ND	ND	ND	ND
MW-3 @ 5.5'	ND	1.8	ND	ND	0.005	0.019
MW-3 @ 10.5'	ND	0.38	ND	ND	ND	ND
MW-3 @ 15.5'	ND	0.34	ND	ND	ND	ND
Detect. Limit	1.0	0.05	0.005	0.005	0.005	0.005

ND means not detected. Results are in µg/L or parts per billion.

From the survey and depth to groundwater measurement data, the site groundwater on October 26, 1998 was approximately ten feet below grade surface (BGS) and the gradient direction was N 79.83 °E, with an apparent gradient of 0.0082 ft./ft. The gradient on November 2, 1998 was found to have an apparent gradient direction of S 69.30 °E, with an average gradient of 0.0036 ft./ft.

Groundwater samples were obtained from the wells on November 2, 1998 and analyzed for TPH as gasoline (EPA method 5030/8015) with BTEX and MTBE (method 602). Sample analysis shows no TPH-g, BTEX or MTBE detected in MW-1 and MW-2. TPH-g and BTEX were not detected in MW-3, but MTBE was detected at 190 parts per billion (ppb).

The first quarter groundwater monitoring of February 1999 showed groundwater about 10 feet BGS, with gradient direction S 63.15° E and apparent slope of 0.003 ft/ft. Sample analysis only showed MTBE in MW-3 at 340 ppb. All other analysis showed non-detect.

Current Activities

Sampling and measurements were done on July 19, 2000. Prior to sampling, the groundwater elevations were measured using an electric water level meter. Initial depths below ground surface were as follows:

Table 2: Groundwater Elevations Foothill Beacon 16210 Foothill Boulevard Measured July 19, 2000

Well	Casing Elevation	Depth to Water	Ground Water Elevation
MW-1	138.57	11.64	126.93
MW-2	137.94	10.63	127.31
MW-3	138.88	11.68	127.08

^{*} elevation above mean sea level, in feet

Groundwater gradient direction on July 19, 2000 was N 80.8° E at an apparent slope of 0.00874 ft/ft. Figure 2 shows apparent groundwater gradient.

Eight gallons were removed from each well, between two and three well volumes. All purge water was placed in a sealed plastic drum and remains on site. Samples were taken from the end of the discharge hose at a flow rate of less than one liter per minute. The water from each well was placed in two 40-milliliter vials filled so that there was no air (head space) remaining in them. Samples were labeled and placed on ice in a cooler for transport to a state certified hazardous materials testing laboratory, McCampbell Analytical of Pacheco, California.

Sampling equipment was cleaned in one bucket with TSP Substitute and rinsed in two separate buckets with tap water, then rinsed with deionized water after use at each well. All purge water and equipment wash water was placed in a plastic drum and remains on-site. A copy of the Water Level Measurements Form is attached to this report.

The samples were analyzed for TPH-gasoline, MTBE and BTEX using EPA Methods 8015 and 8020. A copy of the laboratory report and Chain of Custody form are attached to this report. Results are shown in Table 3 and Figure 3, the Hydrocarbon Concentration Map.

Table 3 - Groundwater Sample Analysis Results Foothill Beacon Samples Collected July 19 2000

Sample #	TPH-g	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
MW-1	ND	1.4	ND	ND	ND	ND
MW-2	ND	1.0	ND	ND	ND	ND
MW-3	ND	1.2	ND	ND	ND	ND
Det. Limit	50	1.0	0.5	0.5	0.5	0.5

ND means not detected. Results are in µg/L or parts per billion.

Future Directions

Copies of this report will be forwarded to the Alameda County Environmental Management Department, and to the California Regional Water Quality Control Board, San Francisco Bay Region.

Sincerely:

PARKER ENVIRONMENTAL SERVICES

lames D. Parker

President

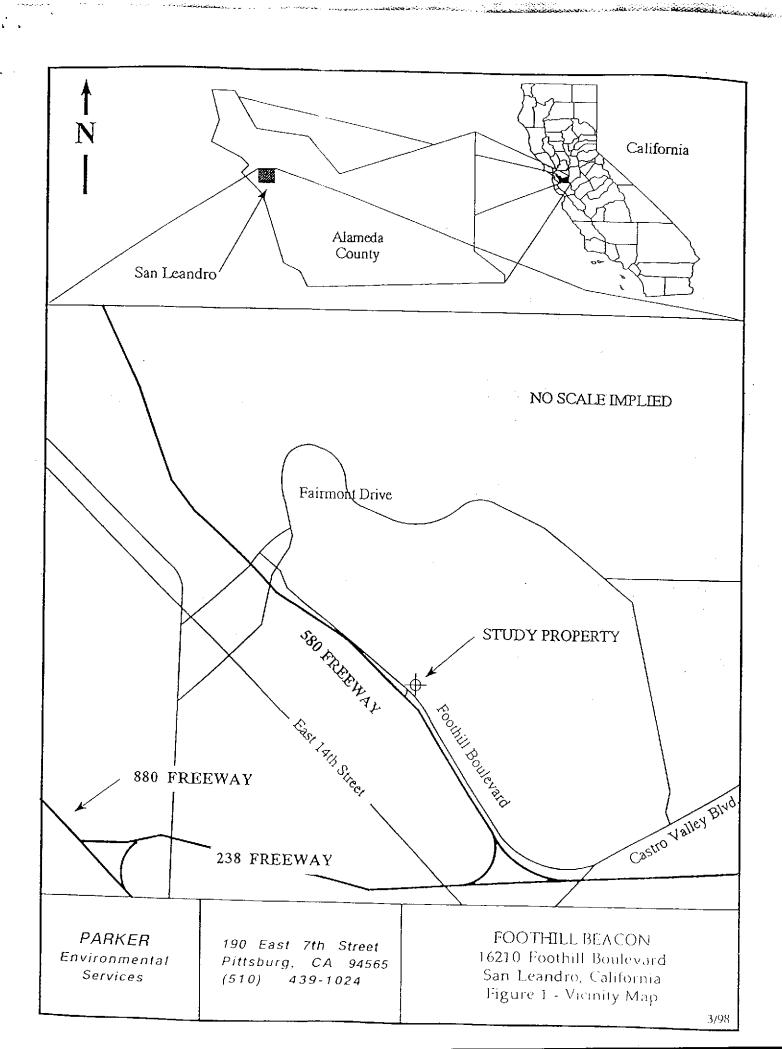
Reviewed By:

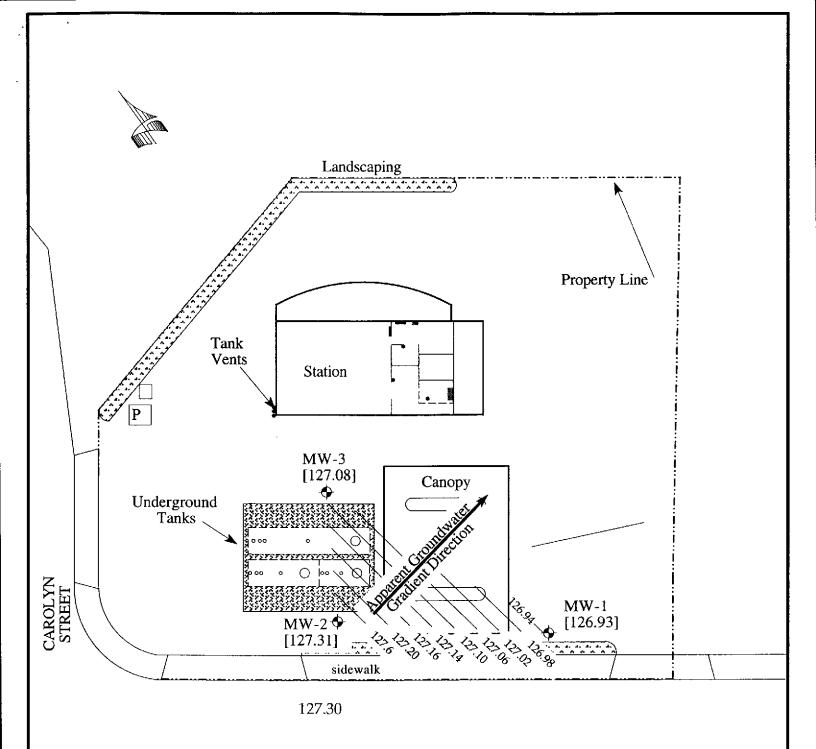
Gary D. Lowé, R.G., C.E.G. Principal, Hydrogeologist H₂OGEOL, A GroundWater Consultancy

Attachments

CC: Mr. Robert Weston, Alameda County Environmental Management Department Mr. Lester Feldman, San Francisco Bay Regional Water Quality Control Board

CERTIFIED ENGINEERING





FOOTHILL BOULEVARD

580 FREEWAY

Samples Taken on July 19, 2000

→ = monitoring well

[X.X] = groundwater elevation

= line of equal elevation

Location of site features are approximate.

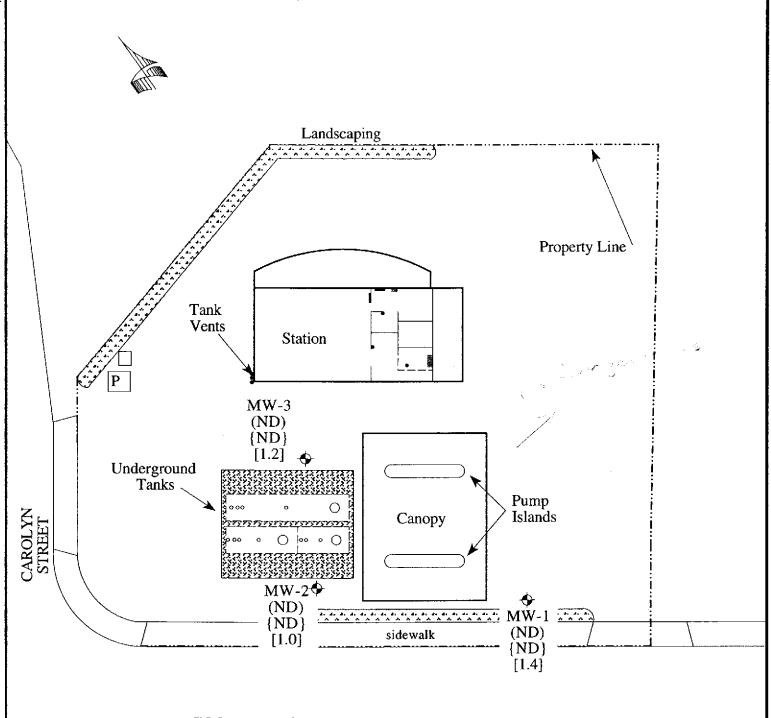
Scale: 1" = 30'

PARKER Environmental Services

190 East 7th Street Pittsburg, CA 94565 (925) 439-1024

Figure 2 - Groundwater Gradient Foothill Beacon 16210 Foothill Boulevard San Leandro, CA

7/00



FOOTHILL BOULEVARD

Key:

= monitoring well

(X.X) = TPH-g

 ${X.X} = Benzene$

[X.X] = MTBE

580 FREEWAY

Samples collected July 19, 2000. Results are in parts per billion (ppb).

Location of site features are approximate.

Scale: 1'' = 30'

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Figure 3, Groundwater Sample Results Foothill Beacon 16210 Foothill Boulevard San Leandro, CA

7/00

Cumulative Table of Well Data and Analytical Results

Vertical Me	easurements a	re in feet.			Δ	nalytical value	es are in parts	ber billion (pp	b)		
DATE	Well Head Elevation	Ground Water Elevation	Depth To Water	Notes	TPH- Gasoline	Benzene	Toluene	Ethyl- Benzene	Xylenes	MTBE	tert-Butanol
MW-1											
2/20/99 6/24/99 8/24/99 1/7/00 7/19/00	138.57 138.57 138.57 138.57 138.57	128.08 127.45 127.14 126.77 126.93	10.49 11.12 11.43 11.80 11.64		ND ND ND ND	ND ND ND ND	ND ND ND ND ND	ND ND ND 0.52 ND	ND ND ND 2.3 ND	ND ND ND ND 1.4	
MW-2											
2/20/99 6/24/99 8/24/99 1/7/00 7/19/00	137.94 137.94 137.94 137.94 137.94	128.28 127.62 127.29 127.09 127.31	9.66 10.32 10.65 10.85 10.63		ND ND ND ND ND	ND ND ND ND ND	ND ND ND ND ND	ND ND ND ND	ND ND ND ND ND	ND ND ND ND 1.0	
MW-3											
2/20/99 6/24/99 8/24/99 1/7/00 7/19/00	138.88 138.88 138.88 138.88 138.88	128.27 127.60 127.30 126.98 127.08	10.61 10.61 11.58 11.90 11.68		ND ND ND ND ND	ND ND ND ND ND	ND ND ND ND ND	ND ND ND ND ND	ND ND ND ND	340 86 81 67 1.2	

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
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Parker Environmental Services 190 East 7 th Street	Client Project ID: #192-01-03; The Customer Company Foothill Beacon	Date Sampled: 07/19/2000 Date Received: 07/21/2000		
Pittsburg, CA 94565	Client Contact: Jim Parker	Date Extracted: 07/21-07/25/2000		
	Client P.O:	Date Analyzed: 07/21-07/25/2000		

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWOCR (SE Bay Region) method GCEID (5030)

Lab ID	Client ID	Matrix	TPH(g)⁺	МТВЕ	Benzene	Toluene	Ethylben- zene	Xylenes	% Recovery Surrogate
43392	MW-I	W	ND		ND	ND	ND	ND	98
43393	MW-2	w	ND		ND	ND	ND.	ND	94
43394	MW-3	W	ND		ND	ND	ND	ND	100
	·								
									
		_							
	···								
						//			
									
Reporting otherwise	Limit unless stated; ND	W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
means not o	detected above orting limit	S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

^{*} water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

^{*}The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.



^{*} cluttered chromatogram; sample peak coelutes with surrogate peak

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		Date Sampled	Date Sampled: 07/19/2000			
Customer Company	Foothill Beacon	Date Received	: 07/21/200	00		
Client Contact: Jim I	Parker	Date Extracted: 07/21/2000				
Client P.O;		Date Analyzed: 07/21/2000				
Oxygenated Volatile	Organics By GC/	MS				
43392	43394					
MW-I	MW-2	MW-3	Reporting Limit			
w	W	W	S	w		
	Concentration*		ug/kg	ug/I		
ND	ND	ND	5.0	1.0		
ND	ND ND		5.0	1.0		
1.4	1.0	1.2	5.0	1.0		
ND	ND	ND	5.0	1.0		
ND	ND	ND	25	5.0		
Surrogate R	ecoveries (%)					
95	100	100		, .		
		7 P. M				
	Client Contact: Jim I Client P.O: Oxygenated Volatile 43392 MW-1 W ND ND 1.4 ND ND Surrogate R	Oxygenated Volatile Organics By GC/ 43392 43393 MW-1 MW-2 W W Concentration* ND ND Surrogate Recoveries (%)	Customer Company Foothill Beacon Client Contact: Jim Parker Client P.O: Date Extracted Client P.O: Date Analyzed Oxygenated Volatile Organics By GC/MS 43392 43393 MW-1 MW-2 MW-3 W W Concentration* ND ND ND ND ND ND ND ND ND N	Date Received: 07/21/200		

(h) lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to

DHS Certification No. 1644

high organic content



_Edward Hamilton, Lab Director

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QC REPORT

Date:

07/21/00-07/22/00

Matrix:

Water

Extraction:

N/A

Communid		Concent	ration:	ug/L	%Rec	overy	
Compound	Sample	MS	MSD	Amount Spiked	MS	MSD	RPD
SampleID; 72100				tnstru	ment: G	C-3	<u> </u>
Surrogate1	0.000	0.88	93.0	100.00	88	93	5.5
Xylenes	0.000	245.0	249.0	300.00	82	83	1.6
Ethyl Benzene	0.000	83.0	84.0	100.00	83	84	1.2
Toluene	0.000	85.0	88.0	100.00	85	88	3.5
Benzene	0.000	85.0	88.0	100.00	85	88	3.5
MTBE	0.000	96.0	94.0	100.00	96	94	2.1
GAS	0.000	822.9	780.4	1000.00	82	78	5.3
SampleID: 72000				Instru	ment: G	C-2 A	
Surrogate1	0.000	101.0	102.0	100.00	101	102	1.0
TPH (diesel)	0.000	286.0	293.0	300.00	95	98	2.4

 SampleID:
 72100
 Instrument:
 IR-1

 TRPH
 0.000
 28.1
 27.5
 23.70
 119
 116
 2.2

% Re covery = $\frac{(MS - Sample)}{AmountSpiked} = 100$ $RPD = \frac{(MS - MSD)}{(MS + MSD)} = 2100$

RPD means Relative Percent Deviation

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QC REPORT

VOCs (EPA 8240/8260)

Date:

07/21/00-07/22/00

Matrix:

Water

Extraction:

A/L

		Concen	tration:	ug/L	%Red			
Compound	Sample	мѕ	MSD	Amount Spiked	MS	MSD	RPD	
SampleID: 72600				Instr	ument G	iC-10	<u> </u>	
Surrogate	0.000	112.0	110.0	100.00	112	110	1.8	
tert-Amyl Methyl Ether	0.000	102.0	103.0	100.00	102	103	1.0	
Methyl tert-Butyl Ether	0.000	113.0	115.0	100.00	113	115	1.8	
Ethyl tert-Butyl Ether	0.000	104.0	106.0	100.00	104	106	1.9	
Di-isopropyl Ether	0.000	96.0	96.0	100.00	96	96	0.0	

 $\% \text{ Re covery} = \frac{\left(MS - Sample \right)}{AmountSpiked} \cdot 100$

 $RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2.100$

RPD means Relative Percent Deviation

PARKER 21154 WE 98 Joc ironmental Services CHAIN OF CUSTODY FORM

Environmental Services

Plt	(925)	CA 9	4565 1024	Site N	Client: / ame F on: –	oothil	1 Bear	, The	Custom.	or Cov	mpany urleandro CA	Date 7-	19-00
Sample Number	Soil	Type Water	r Time			,	Analysis	Requesto i MTBE	· ad	-		Remarks	
MW-1 MW-2		X	11:50	X		X		8360					43392 43393
MW-3		X	1:15	X		X							43394
			·										
													
			-				, .				· · · · · · · · · · · · · · · · · · ·		
	-												
Sampler i									ampler Sign	ature R	shert Lo	rello	
Relinquished Relinquished Relinquished	d By: D	ate and -)-2; ate and ate and	Time -60 6:40 Time	Rec Mun Rec		: Date	and Tim	6	mpling Site Sk /O < m SCOOD COND FEAD SPACE		PRESERVATION APPROPRIATE CONTAINERS.	VOAS BEGILIETA	

WATER SAMPLING DATA FORM

PARKER ENVIRONMENTAL SERVICES

Project Name Foothill Beaco	n	Project No. /92-01-03	Well Name MW-1	7-19-00	11:00	Robert Low	Ur Page 1 of 3
Well Depth (ft.) 3 9-29 Depth to Water (ft.) 11-64 Well Diameter (in.)	Date/Time 11:05 7-19-00 LHC Present? O Yes O No	Sampling Equipment Monitoring We Sampling Poin Other (describe)	: [[Time 1 11: 38 2 11:40 3 11:41	pH Probe No. 7:13 7:15 7:16	Temp. Probe No. 62.3 628 62.9	Cond. Probe No. 791 815 299
Initial Height of Water in Casing (ft) 27-65 Volume (gall) 4-50	Well Volume Conversions 2" casing = 0.163 gal/ft 3" casing = 0.367 gal/ft 4" casing = 0.653 gal/ft 4.5" casing = 0.826 gal/ft	System D Ball PVC Bailer D 1/2 Teflon " D 1 1/2	Inch 4 inch	5 6 Point of Collection	11-6	mples Taken	Date 7-19-00
Volume to be Evacuated (1) 0 1 4	6" casing = 1.470 gal/ft 8" casing = 2.610 gal/ft 10" casing = 4.080 gal/ft	Sampling Port No.		Sample Color Clear Sediment/Foreign 15%	Or Barrer	Water (ft) 11.64	Refrigerated? Sk Yes
Stop Time 12:00 12:30 Start Time 30 Ami Evacuated 12 12 Total Evacuated 30 Total Minutes 30	Evacuated gal min	Evacuated Ev		Sampling Sequence Sample ID Number MW-1 NW-1 2	11:50	reservative Analysis ACI 1,3 4CI 1,3	Lab
Pumped Dry* O Yes Depth to Water During Pumping (ft) Depth to Water	Time	2	o Water	Container Codes P = Plast V = VOA Notes: 1 = TPH-g, BTEX & MTBE 2 = TPH-d		wn Glass mi = millili ar Glass Other: desc	
Sampled After: 80% Rec. D 2 hrs	Rate (gpm) % Recovery at Time of Sampling	3 4 5		3 = 8260 Oxygenates			

WATER SAMPLING DATA FORM

PARKER ENVIRONMENTAL SERVICES

Project Name Foothill Be		J-01-03 Well Name	Date 7-19-00 11:00 Robert Loully Page 2 of 3
Well Depth (ff.) 24.55 Depth to Water (ff.) 10.63 Well Diameter (in.)	Sounded Depth (ft.) Date/Time 1:10	Sampling Equipment Monitoring Well Sampling Point Other (describe) LHC Thickness	Time pH Probe No. Temp. Probe No. Cond. Probe No. 1 12:20 7.09 63.1 941 2 12:22 7.11 63.5 802 3 12:23 7.13 62-9 929
Initial Height of Water in Casing (ft) 13.9.2 Volume (gal) 2.2C Volume to be Evacuated 2.3.4 x 4	Well Volume Conversions 2" casing = 0.163 gal/ft 3" casing = 0.367 gal/ft 4" casing = 0.653 gal/ft 4.5" casing = 0.826 gal/ft 6" casing = 1.470 gal/ft 8" casing = 2.610 gal/ft 10" casing = 4.080 gal/ft	Sampling Equipment Dedicated State Bladder Pump System Bailer PVC Bailer 1/2 inch Terlon 1/4 inch 3 inch Sampling Port No. Volume Rate (gpm)	Point of Collection
Evacuation Evacuated	<u>.5-</u>	Evacuated Evacuated	Sediment/Foreign 1 296 Sampling Sequence Sample ID Number Volume Time Preservative Analysis Lab MW-2 2v 12:32 Hel Hel L3 MW-2 2v 12:32 Hel L7
Pumped Dry Tyes Depth to Water During Pumping (ft) Depth to Water for 80% Recovery Sampled After: 80% Rec 2 hrs	Recovery Rate (gpm) % Recovery at	Recovery Depth to Water	Container Codes P = Plastic Bottle B = Brown Glass ml = milliliter L = liter V = VOA C = Clear Glass Other; describe Notes: 1 = TPH-g, BTEX & MTBE 2 = TPH-d 3 = 8260 Oxygenates

WATER SAMPLING DATA FORM

PARKER ENVIRONMENTAL SERVICES

		oject No.	Well Name	Date	Time	Name		, Page of
Foothill Beacon 19		12-01-03	MW-3	2-14	-00 11:00	3 Kala	est Louds	3 3
) () () () () () () () () () ()	-D.F1	· -			10 11 1	- 1- 4		···
Well Depth (ft.)	Sounded Depth (ft.)	Sampling Equipmen	1	¬———				
1	Seemes Depth (711)	☐ Monitoring Well					p. Probe No.	Cond. Probe No.
24.37		☐ Sampling Point		1 1:09	5 9.0	99 6	3-4	197
Depth to Water (ft.) Date/Time		Other (describe)		-			3.8	838
11-69 11:15 7-19-00				2 1:0				
Well Diameter (in.)	LHC Present?	LHC Thickness		3 1:09	8 7.1	4 6	3.5	814
2	0 165 0 180							
				<u>_</u>				
Initial Height of Water in Casing (ft)	Well Volume Conversions	Sampling Equipment		5				
12.69		Dedicated Bladder Pump System Bailer						
Volume (gal)	2" casing = 0.163 gal/fi	System 🗅 Ba	tiler					
voidine (gai)	3" casing = 0.367 gal/ft	PVC Bailer 🗆 1	/2 inch					
2.06	4" casing = 0.653 gal/ft		1/4 inch	Point of Collection		Time Samples Ta	ken	Date
Volume to be Evacuated	4.5' casing = 0.826 gal/ft 6" casing = 1.470 gal/ft	0 3	inch	✓ PE Hose	End of Bailer	1:15		7-14-00
O x 3 # x 4	8" casing = 2.610 gal/ft 10" casing = 4.080 gal/ft	Sampling Port No.		D Other:		Depth to Water (ft) W-68		Refrigerated?
							11-63	X Yes D No
		Volume R	Rate (gpm)	Sample Color			Odor No	
				Sample Color Cle			140	
Evacuation				Sediment/Foreign]	~%			
				Matter	<u>, </u>			
Evacuated	Evacuated	Evacuated E	Evacuated	Sampling				
Stop Time 1:20	า			Sequence				
				Sample ID Number	Volume Ti	me Preservative	e Analysis	Lab
Start Time 12:5	<u> </u>			MW-I	20 1	45 HC1	تحربا	
Minutes 30				Inw-1		17 Hel	4.3	
13				1		1 1721		
								
Total Evacuated 1)	gal		*					
Total Minutes 30	min						• • • • •	
75007700000				[_
Evacuation Rate	gpm							
Pumped Dry?	After (gal)	Recovery		Container Codes	P = Plastic Bottle V = YOA	B = Brown Glass C = Clear Glass	ml = milliliter Other: describ	
D Yes KN	o							
		Time Depth	to Water	Notes:				
Depth to Water During Pumping (ft)	Time	1		II				
				1 = TPH-g, BTEX & M	TBE			
D W	I B	2	 	2 = TPH-d				
Depth to Water Recovery for 80% Recovery Rate (gpm)		3		3 = 8260 Oxygenaics				
		l.						
Sampled After:	% Recovery at	4. ———				•		ļ
Sampled Alter: D 80% Rec. D 2 hrs	Time of Sampling	5						[
1 22 1 1110 - 2 1 1110				11				•