



ENVIRONMENTAL
PROTECTION
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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. This is the first groundwater sampling since the monitoring wells were installed in October 1998.

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 screw-driver, 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 $\mu\text{g/L}$ or parts per ~~billion~~
ms/kg *million*

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 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 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).

Current Activities

Sampling and measurements were done on February 20, 1999. 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 Evaluation
Foothill Beacon
16210 Foothill Boulevard
Measured February 20, 1999**

Well	Casing Elevation	Depth to Water	Ground Water Elevation
MW-1	138.57	10.49	128.08
MW-2	137.94	9.66	128.28
MW-3	138.88	10.61	128.27

Groundwater gradient direction on February 20, 1999 was S 63.15°E at an apparent slope of 0.003 ft/ft. Figure 2 shows apparent groundwater gradient.

Approximately 20 gallons each were removed from MW-1, MW-2 and MW-3, more than six 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 Measurement 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 February 20, 1999

Sample #	TPH-g	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
MW-1	ND	ND	ND	ND	ND	ND
MW-2	ND	ND	ND	ND	ND	ND
MW-3	ND	340	ND	ND	ND	ND
Det. Limit	50	5.0	0.5	0.5	0.5	0.5

ND means not detected. Results are in $\mu\text{g/L}$ or parts per billion.

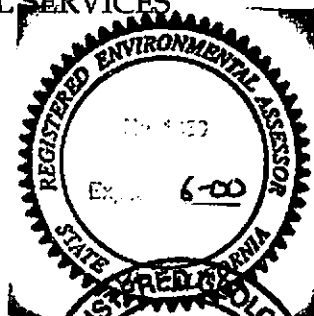
The analysis results are similar to samples taken when the wells were installed.

Future Directions


A minimum of three additional quarterly monitoring events are scheduled. These additional sampling tests will provide seasonal tracking of gradient as well as groundwater in MW-3. 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.

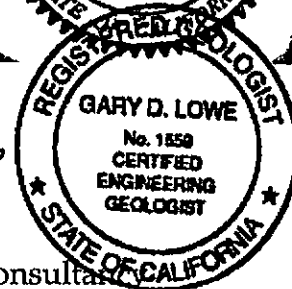
Sincerely:
PARKER ENVIRONMENTAL SERVICES


James D. Parker
President



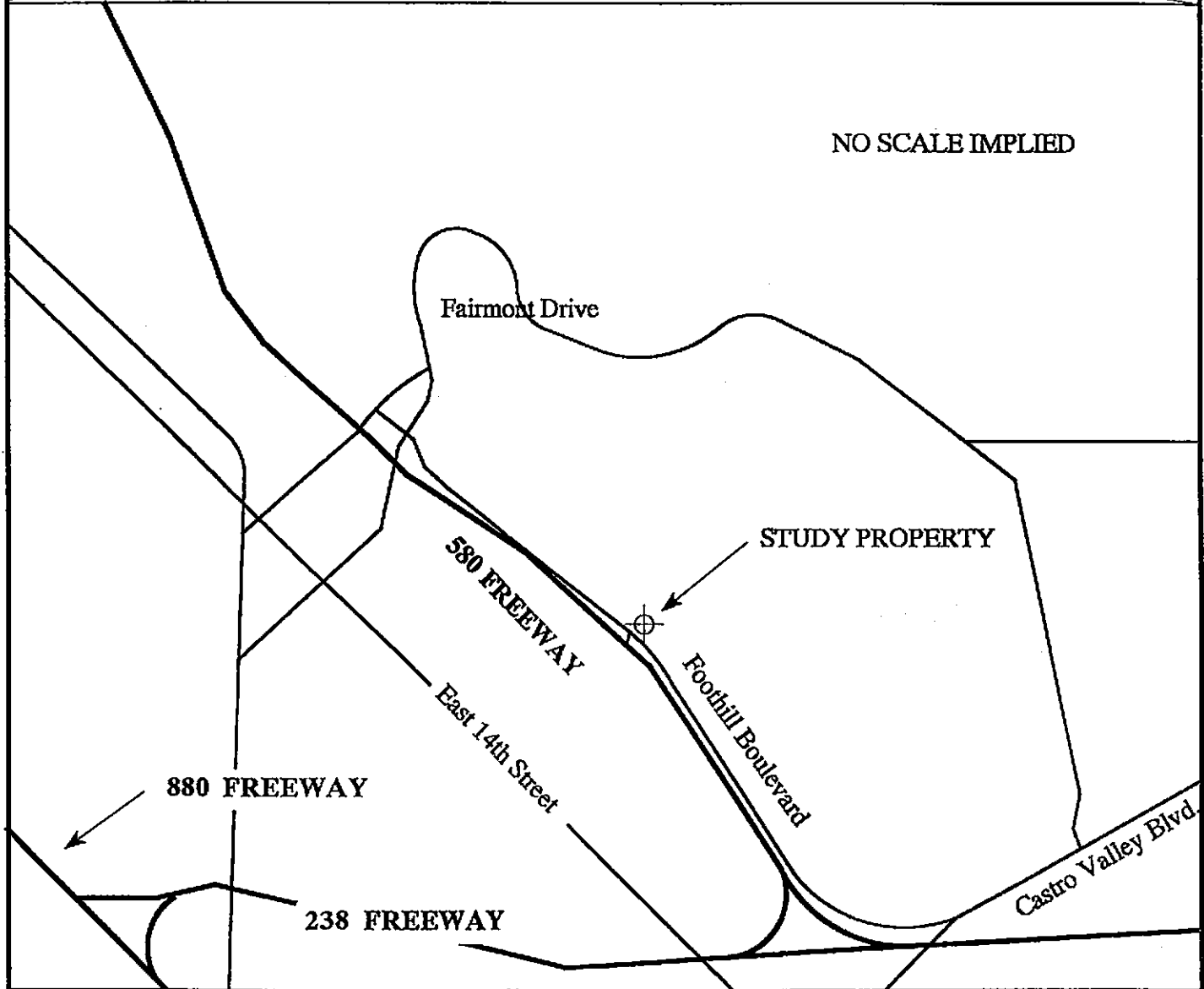
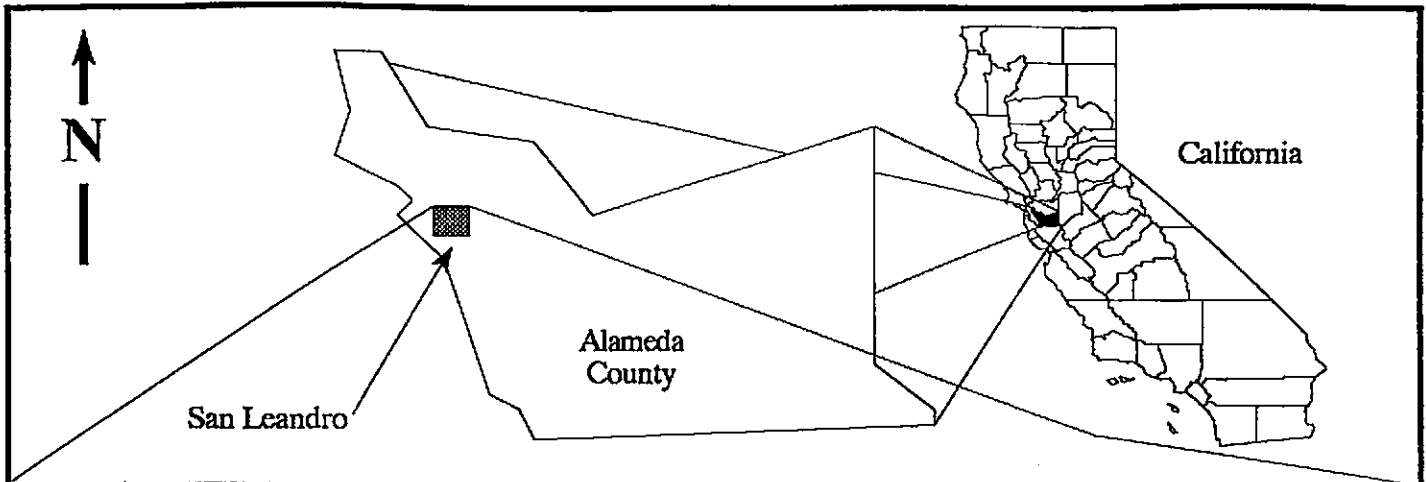
Reviewed By:


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



Attachments

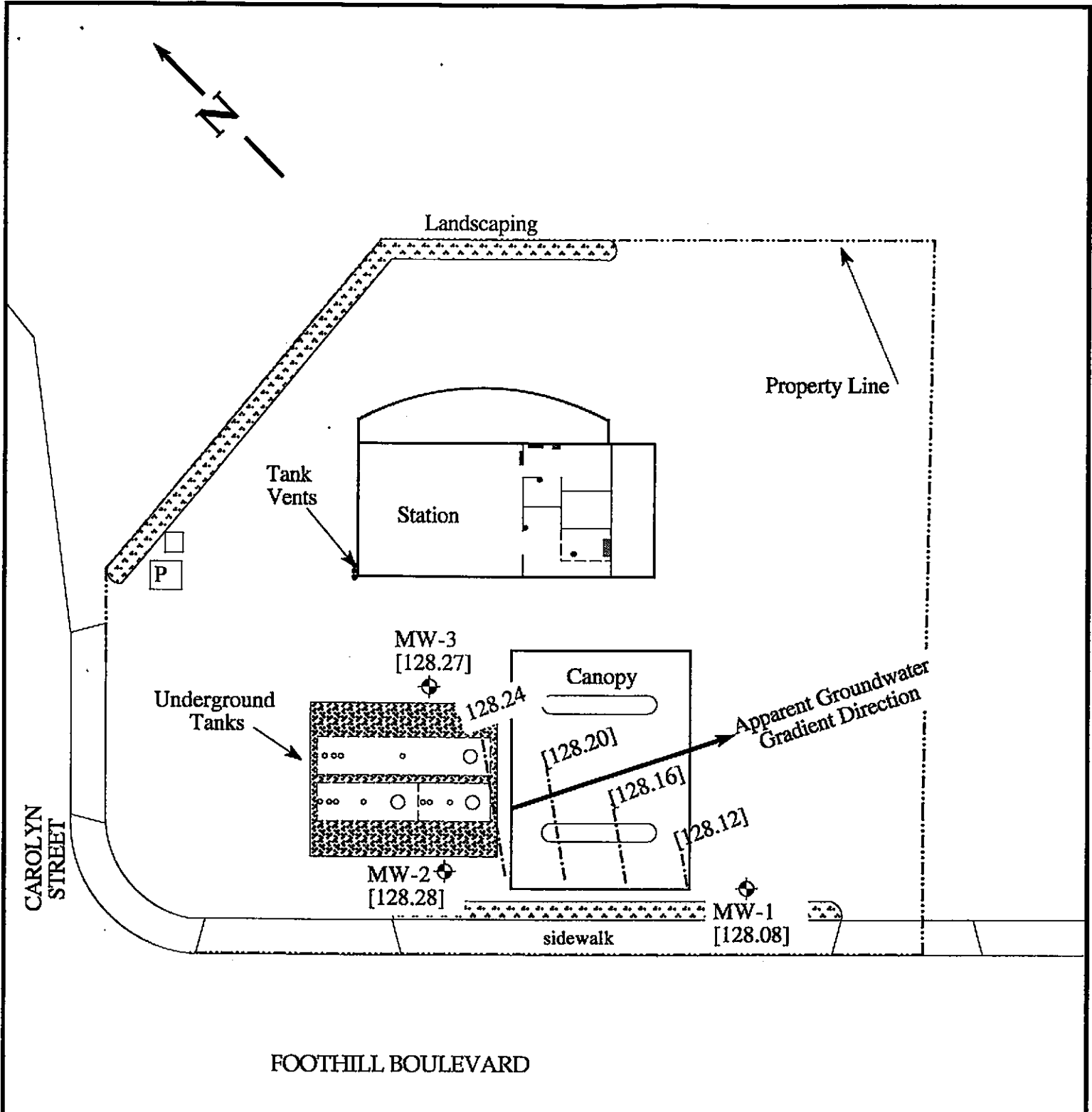
cc: Mr. Robert Weston, Alameda County Environmental Management Department
Mr. Lester Feldman, San Francisco Bay Regional Water Quality Control Board



PARKER
*Environmental
 Services*

190 East 7th Street
 Pittsburg, CA 94565
 (510) 439-1024

FOOTHILL BEACON
 16210 Foothill Boulevard
 San Leandro, California
 Figure 1 - Vicinity Map



FOOTHILL BOULEVARD

580 FREEWAY

Scale: 1" = 30'

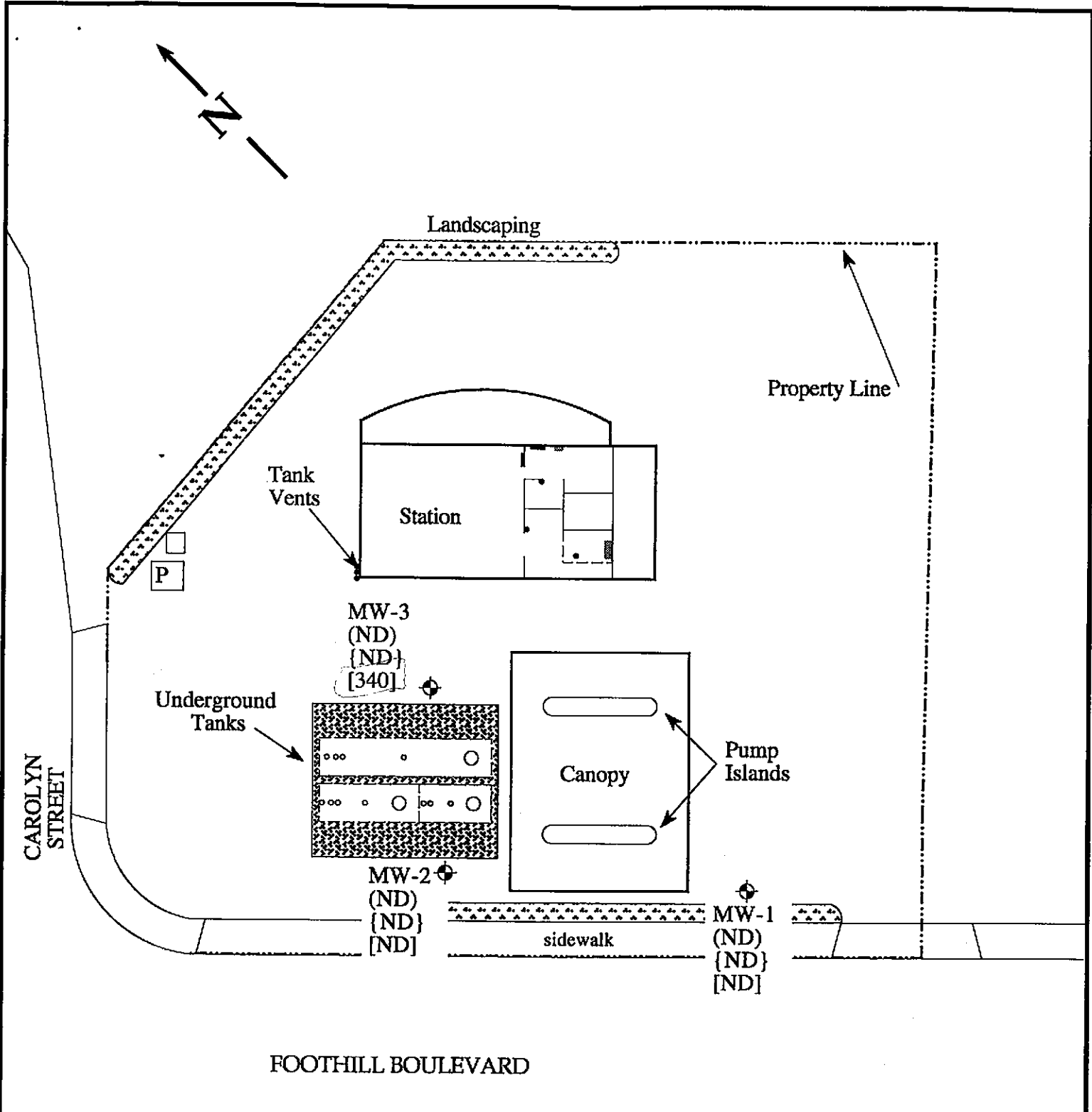
Samples Taken on February 20, 1999

- ⊕ = monitoring well
- [X.X] = groundwater elevation
- - - = line of equal elevation

Location of site features are approximate.

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



Key:
 ⊕ = monitoring well
 (X.X) = TPH-g
 {X.X} = Benzene
 [X.X] = MTBE

580 FREEWAY
 Samples collected February 20, 1999.
 Results are in parts per billion (ppb).

Scale: 1" = 30'

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

Location of site features are approximate.



McCAMPBELL ANALYTICAL INC.

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Parker Environmental Services 190 East 7 th Street Pittsburg, CA 94565	Client Project ID: Foothill Beacon	Date Sampled: 02/20/99
		Date Received: 02/22/99
	Client Contact: Jim Parker	Date Extracted: 02/22/99
	Client P.O:	Date Analyzed: 02/22/99

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*
 EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g) ⁺	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Recovery Surrogate
03752	91/FB/MW1	W	ND	ND	ND	ND	ND	ND	103
03753	91/FB/MW2	W	ND	ND	ND	ND	ND	ND	95
03754	91/FB/MW3	W	ND	340	ND	ND	ND	ND	95
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W	50 ug/L	5.0	0.5	0.5	0.5	0.5	0.5	
	S	1.0 mg/kg	0.05	0.005	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.

* cluttered chromatogram; sample peak coelutes with surrogate peak

*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.

QC REPORT FOR HYDROCARBON ANALYSES

Date: 02/22/99

Matrix: WATER

Analyte	Concentration (ug/L)			Amount Spiked	% Recovery		
	Sample (#03571)	MS	MSD		MS	MSD	RPD
TPH (gas)	0.0	97.3	95.9	100.0	97.3	95.9	1.5
Benzene	0.0	10.1	9.5	10.0	101.0	95.0	6.1
Toluene	0.0	10.2	9.7	10.0	102.0	97.0	5.0
Ethyl Benzene	0.0	10.5	10.1	10.0	105.0	101.0	3.9
Xylenes	0.0	31.4	30.3	30.0	104.7	101.0	3.6
TPH(diesel)	0.0	7102	7040	7500	95	94	0.9
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

* Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

