geotechnical and environmental consulting services

1140 - 5th Avenue, Crockett, CA 94525

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## LETTER OF TRANSMITTAL

June 25, 2001

To: Ms. Susan Hugo

Alameda County Environmental Health Services

1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor

Alameda, CA 94608

## Enclosed:

2nd Quarter 2001 Quarterly Monitoring Report Former Berkeley Farms Truck Shop and Yard 4575 San Pablo Avenue Emeryville, CA un solut

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GL-97-110.R17 Paradiso Job No. 1120-02 June 25,2001

Mr. Peter Puckett Berkeley Farms 25500 Clawiter Road Hayward, California

RE:

2nd Quarter 2001 Monitoring and Sampling Report for Former Berkeley Farms Truck Repair Shop and Yard 4575 San Pablo Avenue, Emeryville, California

#### Mr. Puckett:

This report presents the results of the second quarter 2001 monitoring and sampling of the wells at the subject site. During this quarter, the three wells were monitored and sampled on June 15, 2001. The work during this quarter was performed in compliance with the guidelines established Regional Water Quality Control Board (RWQCB), and the Alameda County Department of Environmental Health (ACDEH).

#### SITE DESCRIPTION AND BACKGROUND

The subject site is located on the western side of San Pablo Avenue between 45th and 47th Streets in Emeryville, California, and formerly contained a service station facility at the southern portion of the property. Until 1998, the site operated as a truck repair shop and yard for Berkeley Farms. A Site Plan (Figure 1) is attached to this report.

Geo-Logic's previous work at the site includes sampling during overexcavation of a waste oil tank at the northern end of the property. This work is summarized in Geo-Logic's reports (GL-97-110.R1 and GL-97-110.R2), both dated February 10, 1998.

Following this work, installation of three monitoring wells was proposed (workplan/proposal GL-98-110, dated November 15, 1997). The wells were installed in February, 1998. This work, including the results of the first quarter of monitoring and sampling, was documented in Geo-Logic's report (GL-97-110.R3) dated March 7, 1998.

In April and May, 1998, a former service station fuel tank pit at the southern portion of the site was extensively overexcavated. This work, and the results of the second quarter of monitoring and sampling, was documented in Geo-Logic's report (GL-97-110.R4) dated June 9, 1998.

On September 5, 1998, as discussed in a prior meeting with Ms. Susan Hugo of the ACDEH, ORC filter socks were placed in monitoring wells MW2 and MW3. ORC is a insoluble solid peroxygen consisting of magnesium peroxide which has been formulated to release oxygen at a controlled rate when hydrated. The purpose of the ORC in wells MW2 and MW3 was to enhance conditions for the natural biodegradation of petroleum hydrocarbons. Prior to installation of the ORC, baseline measurements of dissolved oxygen in groundwater (DO) were taken. With the concurrence of MS. Susan Hugo of the ACDEH, the ORC was removed from well MW2 on February 5, 1999.

On July 30, 1999, well MW1, damaged during construction, was properly abandoned, and replacement well MW1A was constructed, developed, and initially sampled. This work was documented in Geo-Logic's report (GL-97-110.R9) dated August 12, 1999. The wells have been monitored and sampled quarterly since that time.

## RECENT FIELD ACTIVITIES

Wells MW1A, MW2 and MW3 were monitored and sampled during this quarter on June 15, 2001. Prior to sampling, the wells were checked for depth to water, and the presence of free product and sheen. No free product or sheen was noted in any of the wells. Monitoring data collected this quarter is summarized in Table 1. Water samples were then collected by the use of a clean Teflon bailer. The samples were decanted into clean VOA vials and/or one-liter amber bottles, as appropriate, which were then sealed with Teflon-lined screw caps, labeled, and stored in a cooler, on ice, until delivery to a state-certified laboratory.

#### **HYDROLOGY**

On June 15, 2001, the measured depth to ground water in the three monitoring wells varied between 7.64 and 9.28 feet below the tops of the well casings. Since last quarter, the elevation of ground water in the wells has decreased between 1.17 and 3.14 feet. The calculated ground water flow direction at the site June 15, 2001, was to the west-southwest, as shown on the attached Potentiometric Surface Map, Figure 1. The hydraulic gradient at the site on June 15, 2001, was approximately 0.01.

#### ANALYTICAL RESULTS

Water samples from the three wells were analyzed at McCampbell Analytical, Inc., in Pacheco, California. All samples analyzed were accompanied by properly executed Chain of Custody documentation. The samples were analyzed for TPH as gasoline and TPH as diesel by EPA method 8015, and benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA method 8020. In addition, the sample collected from MW2, located in the downgradient vicinity of a former waste oil tank, was analyzed for TPH as Motor Oil by EPA Method 8015-modified.

The concentrations of TPH as gasoline, benzene, and TPH as diesel detected in the ground water samples collected on June 15, 2001, are shown on the attached Figure 2. The results of the water analyses are summarized in Table 2. Copies of the laboratory analyses and the Chain of Custody documentation are attached to this report.

## DISTRIBUTION

A copy of this report should be sent to Ms. Susan Hugo of the ACDEH.

### **LIMITATIONS**

Environmental changes, either naturally occurring or artificially induced, may cause changes in ground water levels and flow paths, thereby changing the extent and concentration of any contaminants. Our studies assume that the field and laboratory data are reasonably representative of the site as a whole, and assume that subsurface conditions are reasonably conducive to interpolation and extrapolation.

The results of this work are based on the data obtained from the field and laboratory analyses obtained from a state-certified laboratory. We have analyzed these data using what we believe to be currently applicable engineering techniques and principles in the Northern California region. We make no warranty, either expressed or implied, regarding the above, including laboratory analyses, except that our services have been performed in accordance with generally accepted professional principles and practices existing for such work.

If you have any questions regarding this report, please do not hesitate to call me at (510) 787-6867.

Sincerely,

Geo-Logic

Joel G. Greger, C.E.G.

Certified Engineering Geologist

License No. EG 1633 Exp. Date 8/31/2002

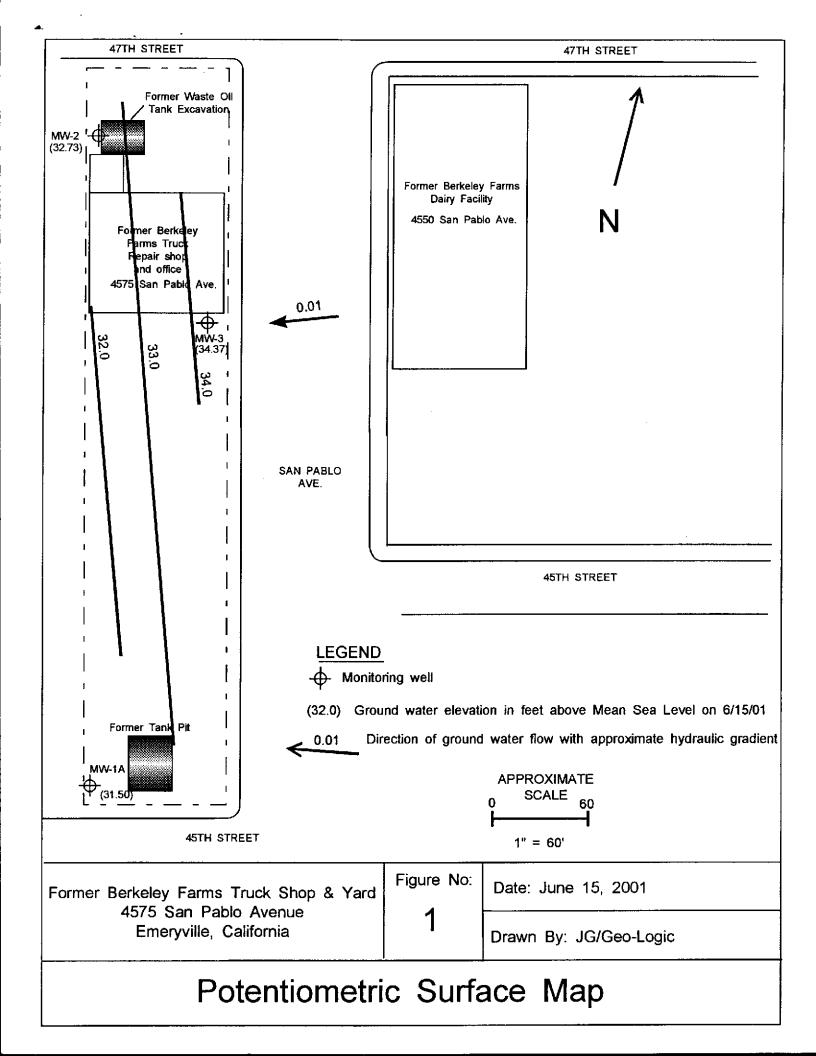
Attachments:

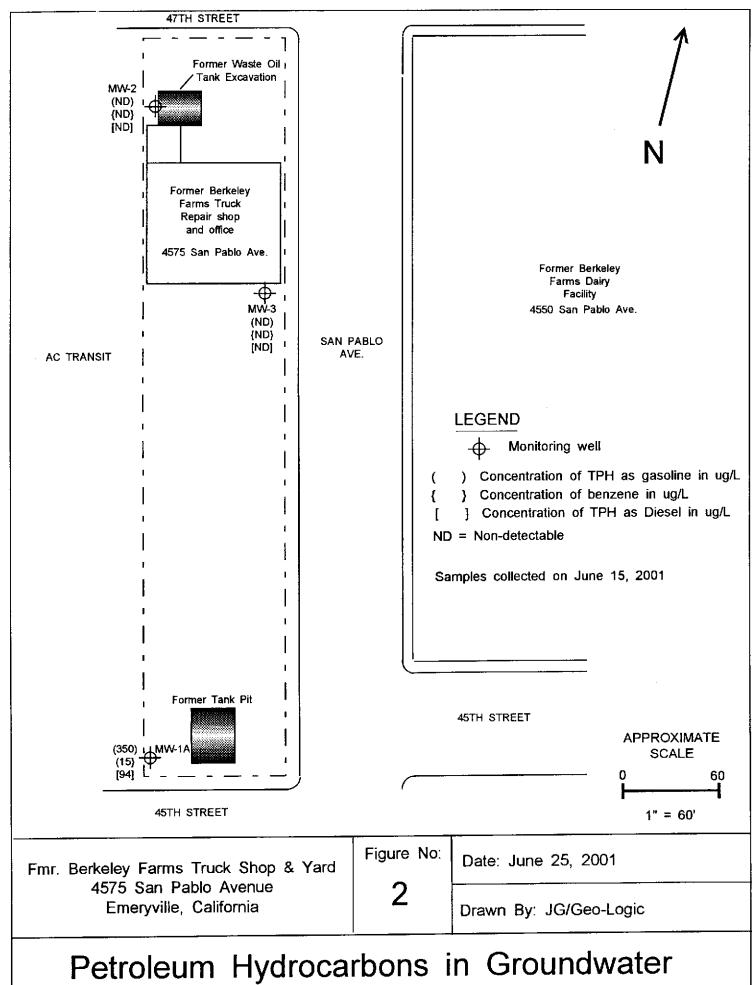
Tables 1 and 2

Figures 1 and 2

Laboratory Analyses and

Chain of Custody documentation





# TABLE 1 - (Continued)

# SUMMARY OF GROUND WATER MONITORING AND PURGING DATA

	(Monito:	red and Sar	mpled on Ma	rch 4, 1	.999)	
MW1			ll inaccess			
MW2	35.28	5.5	16.56	0	No	8
MW3	35.85	5.23	16.60	0	No	8
	(Monitor	red and Sar	mpled on No	vember 1	7, 1998)	
MW1	32.95	9.06	16.59	0	No	7
MW2	31.73	9.05	16.55	0	No	7
MW3	33.09	7.99	16.61	0	No	7
	(Monitor	red and Sar	mpled on Aug	gust 21,	1998)	
MW1	35.51	7.84	16.60	0	No	7
MW2	34.17	8.61	16.56	0	No	7
MW3	35.42	6.27	16.61	0	No	
	(Monitor	ced and Sar	mpled on Ju	ne 3, 19	98)	
MW1	35.51	6.50	16.60	0	No	8
·				_	3.T -	8
MW2	34.17	6.61	16.57	0	No	
MW2 MW3	34.17 35.42	6.61 5.66	16.57 16.62	0	No No	8
	35.42	5.66	16.62	Ŏ	No	
	35.42	5.66		Ŏ	No	
MW3	35.42 (Monitor	5.66 ced and San	16.62 mpled on <u>Fe</u> l	Ŏ	No <b>7, 1998)</b>	8
MW3 MW1	35.42 (Monitor 37.51	5.66 ced and San 4.50	16.62 mpled on <u>Fel</u> 16.61	Ŏ	No <b>7, 1998)</b> No	8
MW1 MW2	35.42 (Monitor 37.51 35.61 37.28	5.66 red and Sam 4.50 5.17 3.80	16.62 mpled on <u>Feb</u> 16.61 16.58	0 <b>oruary 2</b> 0 0 0 0	No <b>7, 1998)</b> No No No	8 8 8
MW1 MW2	35.42 (Monitor 37.51 35.61 37.28	5.66 red and Sam 4.50 5.17 3.80	16.62 mpled on <u>Feb</u> 16.61 16.58 16.63	0 <b>oruary 2</b> 0 0 0 0	No <b>7, 1998)</b> No No No	8 8 8
MW3 MW1 MW2 MW3	35.42 (Monitor 37.51 35.61 37.28 (Monito	5.66 red and San 4.50 5.17 3.80 red and De	16.62  mpled on <u>Feb</u> 16.61 16.58 16.63  Eveloped on	0 <b>oruary 2</b> 0 0 0 0	No 7, 1998) No No No 7 24, 1998)	8 8 8

	Elevation* (feet)
MW1A	42.01
MW2	40.78
MW3	41.08

- ♦ Depth to water and total well depth measurements are taken from the top of the well casings.
- \* The elevation of the tops of the well casings have been surveyed relative to City of Oakland Benchmark No. 241.

TABLE 2
SUMMARY OF LABORATORY ANALYSES
WATER

	ample umber	TPH as <u>Diesel</u>	TPH as Gasoline	Benzene	Toluene	Ethyl benzene	Xylenes
6/15/01 3/13/01 12/13/00 9/19/00 6/6/00 3/6/00 12/8/99 9/6/99 8/6/99 6/7/99 3/4/99	MW1A MW1A MW1A MW1A MW1A MW1A MW1A MW1A	94 1,600 250 <50 630 2,100 310 <5.0 <5.0		15 980 96 <0.5 270 560 93 <0.5 <0.5 inaccessib			<0.5 2,100 10 <0.5 27 1,200 53 <0.5 <0.5
11/17/98 8/21/98 6/2/98 2/27/98		88,000 96,000 105,000 81,000	29,000 38,000 34,000 27,000	2,300 1,700 1,900 2,200	3,000 1,000 1,600 910	3,600 2,400 2,400 1,700	3,100 3,300 3,500 2,700
6/15/01 3/13/01 12/13/00 9/19/00 6/6/00 3/6/00 12/8/99 9/6/99 6/7/99 3/4/99 11/17/98 8/21/98 6/2/98 2/27/98	MW2 MW2 MW2 MW2 MW2 MW2 MW2	<50 <50 <50 330 <50 <50 <5.0 <5.0 <5.0 4,300 1,900 7,600 14,000	<50 <50 <50 2,000 <50 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 8.7 <0.5 <0.5 <0.5 <0.5 <0.5 <1.5 <0.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5
6/15/01 3/13/01 12/13/00 9/19/00 6/6/00 3/6/00 12/8/99 9/6/99 6/7/99 3/4/99 11/17/98 8/21/98 6/2/98 2/27/98	MW3 MW3 MW3 MW3 MW3 MW3 MW3	<50 <50 <50 <50 <50 <5.0 <5.0 <5.0 <5.0	<50 <50 <50 <50 <5.0 <5.0 <5.0 <5.0 <5.0	<pre>&lt; 0.5 &lt; 0.5 </pre>	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5

2nd Qtr. 2001 Monitoring and Sampling Report, 4575 San Pablo Avenue, Emeryville

TABLE 2-	(Continued)	SUMMARY	OF	LABORATORY	ANALYSES-WATER

7.			HILL OF T	MDOIMIONI MIN	итопо	AAT
	Sample	TPH as				
Date	Number	Motor Oil	MTBE	TOTAL LEAD		
<del></del>						
6/15/01	MW1A		84			
3/13/01	MW1A	<del></del>	320			
12/13/00			170			
	MW1A					
9/19/00	MW1A		13			
6/6/00	MW1A		210			
3/6/00	MW1A	320	<400			
12/8/99	MW1A		140	<b></b>		
9/6/99	MW1A		<0.5			
8/6/99	MW1A		<0.5			
6/7/99	MW1	(Well ina	accessib	le, damaged)		
3/4/99	MW1	(Well in				
11/17/98	MW1		<0.5			
6/2/98	MW1*	80,000	<0.5	<5.0		
		00,000		<b>\J.</b> 0		
2/27/98	MW1		<0.5			
6/15/01	MW2	<250	<5.0			
3/13/01	MW2	<250	<5.0			
12/13/00	MW2	<250	<5.0			
9/19/00	MW2	<250	180			
6/6/00	MW2	<250	<5.0			
3/6/00	MW2	<250	<5.0			
12/8/99	MW2	<250	<5.0			
9/6/99	MW2	47	<0.5			
6/7/99	MW2	<0.5	<0.5			
3/4/99	MW2	<0.5	<0.5			
11/17/98	MW2	<0.5	<0.5			
6/2/98	MW2*	3,800	<0.5	<5.0		
2/27/98	MW2	20,000**	<0.5			
6/15/01	MW3	<del>-</del>	6.7			
3/13/01	MW3		11			
12/13/00	MW3		9.3			
9/19/00	MW3		<5.0			
6/6/00	WM3	<del>-</del> -	21			
		<250	24/21++			
3/6/00	MW3	<230				
12/8/99	MW3		18		•	
9/6/99	MW3		<0.5	<del></del>		
6/7/99	MM3		<0.5			
3/4/99	MW3		<0.5			
11/17/98	MW3		<0.5			
6/2/98	MW3*	<5.0	<0.5	<5.0		
2/27/98	MW3					
2/2//00	11117					

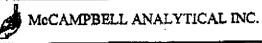
<sup>--</sup> Analyses not performed.

Cadmium, chromium, lead, nickel, and zinc were nondetectable, except for 0.078 mg/l of nickel detected in MWl.

<sup>++ 21</sup> ppb by EPA Method 8260.

\* All EPA Method 8010 constituents were nondetectable.

\*\* 20,000 ppb of Total Recoverable Petroleum Hydrocarbons by EPA Method 418.1. Results are in micrograms per liter ( $\mu g/L$ ), unless otherwise indicated.



110 2nd Avenue South, #D7, Pacheco, CA 94553-5560 Telephone: 925-798-1620 Fax: 925-798-1622 http://www.mccamobell.com E-mail: main@mccampbell.com

Geo-Log	ic		Client Proj	ect ID: #1	120-02; Fra	Date Sampled: 06/15/01									
1140 5 <sup>th</sup> .			Berkley Fa			Date Received: 06/15/01									
Crockett	CA 94525		Client Con	tact: Joei (	Greger	Date Extracted: 06/15-06/18/01									
				Date Analyzed: 06/15-06/18/01											
Gasotin	e Range (C6-	C12) Vol	atile Hydrox	arbons as	Gasoline*	, with Me	thyl tert-Bu	ityl Ether	* & BTEX*						
EPA metho Lab ID	ds 5030, modifie Client ID	Mutrix	TPH(g) <sup>+</sup>	MTBE	Banzene	Toluene	Ethyl- benzene	Xylenes	% Recovery Surrogate						
69935	MW1-A	w	350,a	84	15	3.5	ND	ND	117						
69936	MW-2	w	מא	ND	ND	ND	ND	ND	106						
69937	MW-3	w	ND	6.7	ND	ND	ND	מא	106						
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	ng Limit uniess	w	50 ug/L	5.0	0.5	0.5	0.5	0.5							
means no	ise stated; ND st detected above porting limit	5	1.0 mg/kg	0.05	0.003	0.005	0.005	0.005							

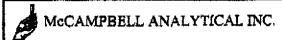
<sup>\*</sup> water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPIP extrants in ug/L

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; and gasoline range compounds having broad chromatographic peaks are significant; hiologically altered gasoline?; c) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesal range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid earuple that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

<sup>\*</sup> cluttered chromatogram; sample peak coclutes with surrogate peak



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Geo-Logic		Client Pro Berkley F	oject ID: #1120-02; Fm	r	Date Sampled: 06/15/01  Date Received: 06/15/01									
1140 5 <sup>th</sup> Ave	nue	Derkiey r	STILL	Date Received										
Crockett, CA	94525	Client Co	ntact: Joel Greger	Date Extracte	d: 06/15/01									
		Client P.C	Client P.O: Date Analyzed: 06/15/01											
Diesel Ra	inge (C10-C23) a	nd Oil-Rang	e (C18+) Extractable l mis RWQCH (SF Bsy Regio	Hydrocarbons as Diesel m) method GCFID(3550) or GC	FID(3510)									
Lab ID	Client ID	Matrix	TPH(d)*	TPH(mo)⁺	% Recovery Surrogate									
69935	MW1-A W 94,d MW-2 W ND		ww.	87										
69936	MW-2	w	ND	ND	87									
69937	MW-3	w	ND	464	97									
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Reporting Lin	nit uniess otherwise ns not detected above	W	50 ug/L	250 ug/L	_									
	porting limit	S	1.0 mg/kg	5.0 mg/kg										

<sup>\*</sup>water samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP / STLC / SPLP extracts in

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 diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? Is significant; d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (7); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible shown is present; i) liquid sample that contains greater than ~5 vol. % sediment.

DHS Certification No. 1644

Bdward Hamilton, Lab Director

<sup>&</sup>quot;clustered chromatogram resulting in cooluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

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