

**geo - logic**

*geotechnical and environmental consulting services*

1140 - 5th Avenue, Crockett, CA 94525

(510) 787-6867 - Fax (510) 787-1457

LETTER OF TRANSMITTAL

March 16, 2000

To: Ms. Susan Hugo  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor  
Alameda, CA 94608

Enclosed:  
March 2000 Quarterly Monitoring Report  
Former Berkeley Farms Truck Shop and Yard  
4575 San Pablo Avenue  
Emeryville, CA

ENVIRONMENTAL  
PROTECTION  
00 MAR 17 PM 3:31

LOP 6558

geo - logic geotechnical and environmental consulting services

1140 - 5th Avenue, Crockett, CA 94525

(510) 787-6867 - Fax (510) 787-1457

LOP 6578

GL-97-110.R12  
Paradiso Job No. 1103-03  
March 16, 2000

Mr. Pat Roland  
Berkeley Farms  
25500 Clawiter Road  
Hayward, California

RE: First Quarter 2000 Monitoring and Sampling Report for  
Former Berkeley Farms Truck Repair Shop and Yard  
4575 San Pablo Avenue, Emeryville, California 94608

Mr. Roland:

This report presents the results of the first quarter 2000 monitoring and sampling of the wells at the subject site. During this quarter, the three wells were monitored and sampled on March 6, 2000. 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.

#### RECENT FIELD ACTIVITIES

Wells MW1A, MW2 and MW3 were monitored and sampled during this quarter on March 6, 2000. 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.

After recording the monitoring data, the wells were each purged of approximately eight gallons of water. Once a minimum of approximately three to four casing volumes had been removed from each well and the groundwater level was observed to have stabilized, 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 March 6, 2000, the measured depth to ground water in the three monitoring wells varied between 3.59 and 5.55 feet below the tops of the well casings. Since last quarter, the elevation of ground water in the wells has increased between 3.51 and 4.92 feet. The calculated ground water flow direction at the site on March 6, 2000, was to the west, as shown on the attached Potentiometric Surface Map, Figure 1. The hydraulic gradient at the site on March 6, 2000, was approximately 0.02.

## ANALYTICAL RESULTS

Water samples from the three wells were analyzed at McCampbell Analytical, Inc., in Emeryville, 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. The MTBE analysis for MW3 was confirmed by EPA Method 8260. 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 March 6, 2000, 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.

First Quarter 2000 Monitoring and Sampling Report - March 16, 2000  
Former Berkeley Farms Truck Shop & Yard, 4575 San Pablo Ave., Emeryville

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

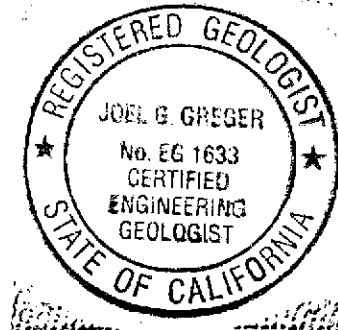
Sincerely,

Geo-Logic



Joel G. Greger, C.E.G.  
Certified Engineering Geologist

License No. EG 1633  
Exp. Date 8/31/2000



Attachments:     Tables 1 and 2  
                     Figures 1 and 2  
                     Laboratory Analyses and  
                     Chain of Custody documentation

TABLE 1

SUMMARY OF GROUND WATER MONITORING AND PURGING DATA

<u>Well #</u>	<u>Ground Water Elevation (feet)</u>	<u>Depth to Water (feet)♦</u>	<u>Total Well Depth (feet)*</u>	<u>Product Thickness (feet)</u>	<u>Sheen</u>	<u>Water Purged (gallons)</u>
<b>(Monitored and Sampled on <u>March 6, 2000</u>)</b>						
MW1A	36.46	5.55	16.93	0	No	8
MW2	35.77	5.01	16.54	0	No	8
MW3	37.49	3.59	16.58	0	No	8
<b>(Monitored and Sampled on <u>December 8, 1999</u>)</b>						
MW1A	32.95	9.06	16.93	0	No	8
MW2	31.87	8.91	16.55	0	No	8
MW3	32.57	8.51	16.58	0	No	8
<b>(Monitored and Sampled on <u>September 6, 1999</u>)</b>						
MW1A	32.92	9.88	16.94	0	No	8
MW2	32.16	8.62	16.55	0	No	8
MW3	32.88	8.20	16.59	0	No	8
<b>(Monitored and Sampled on <u>June 7, 1999</u>)</b>						
MW1			(Well inaccessible, damaged)			
MW2	32.65	8.13	16.55	0	No	8
MW3	33.57	7.51	16.61	0	No	8
<b>(Monitored and Sampled on <u>March 4, 1999</u>)</b>						
MW1			(Well inaccessible, damaged)			
MW2	35.28	5.5	16.56	0	No	8
MW3	35.85	5.23	16.60	0	No	8
<b>(Monitored and Sampled on <u>November 17, 1998</u>)</b>						
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

(Monitored and Sampled on August 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	7

(Monitored and Sampled on June 3, 1998)

MW1	35.51	6.50	16.60	0	No	8
MW2	34.17	6.61	16.57	0	No	8
MW3	35.42	5.66	16.62	0	No	8

(Monitored and Sampled on February 27, 1998)

MW1	37.51	4.50	16.61	0	No	8
MW2	35.61	5.17	16.58	0	No	8
MW3	37.28	3.80	16.63	0	No	8

(Monitored and Developed on February 24, 1998)

MW1	37.57	4.44	16.59	0	No	24
MW2	35.69	5.09	16.58	0	No	21
MW3	37.38	3.70	16.62	0	No	25

<u>Well #</u>	<u>Top of Casing Elevation* (feet)</u>
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

<u>Date</u>	<u>Sample Number</u>	<u>TPH as Diesel</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl benzene</u>	<u>Xylenes</u>
3/6/00	MW1A	2,100	13,000	560	<20	640	1,200
12/8/99	MW1A	310	1,200	93	1.8	48	53
9/6/99	MW1A	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
8/6/99	MW1A	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
6/7/99	MW1		(Well inaccessible, damaged)				
3/4/99	MW1		(Well inaccessible, damaged)				
11/17/98	MW1	88,000	29,000	2,300	3,000	3,600	3,100
8/21/98	MW1+	96,000	38,000	1,700	1,000	2,400	3,300
6/2/98	MW1	105,000	34,000	1,900	1,600	2,400	3,500
2/27/98	MW1	81,000	27,000	2,200	910	1,700	2,700
3/6/00	MW2	<50	<5.0	<0.5	<0.5	<0.5	<0.5
12/8/99	MW2	<50	<0.5	<0.5	<0.5	<0.5	<0.5
9/6/99	MW2	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
6/7/99	MW2	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
3/4/99	MW2	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
11/17/98	MW2	4,300	260	190	420	470	600
8/21/98	MW2+	1,900	<5.0	<0.5	<0.5	220	400
6/2/98	MW2	7,600	60	220	510	800	1,100
2/27/98	MW2	14,000	<5.0	<0.5	120	460	730
3/6/00	MW3	<50	<5.0	<0.5	<0.5	<0.5	<0.5
12/8/99	MW3	<50	<5.0	<0.5	<0.5	<0.5	<0.5
9/6/99	MW3	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
6/7/99	MW3	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
3/4/99	MW3	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
11/17/98	MW3	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
8/21/98	MW3+	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
6/2/98	MW3	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
2/27/98	MW3	--	<5.0	<0.5	<0.5	<0.5	<0.5



TABLE 2

SUMMARY OF LABORATORY ANALYSES  
 WATER - (Continued)

<u>Date</u>	<u>Sample Number</u>	<u>TPH as Motor Oil</u>	<u>TEPH</u>	<u>MTBE</u>	<u>TOTAL LEAD</u>
3/6/00	MW1A	320	--	<400	--
12/8/99	MW1A	--	--	140	--
9/6/99	MW1A	--	--	<0.5	--
8/6/99	MW1A	--	--	<0.5	--
6/7/99	MW1	(Well inaccessible, damaged)			
3/4/99	MW1	(Well inaccessible, damaged)			
11/17/98	MW1	--	--	<0.5	--
6/2/98	MW1*	--	80,000	<0.5	<5.0
2/27/98	MW1	--	--	<0.5	--
3/6/00	MW2	<0.5	--	<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	--
3/6/00	MW3	--	--	24/21++	--
12/8/99	MW3	--	--	18	--
9/6/99	MW3	--	--	<0.5	--
6/7/99	MW3	--	--	<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	--	--	--	--

+ Cadmium, chromium, lead, nickel, and zinc were nondetectable, except for 0.078 mg/l of nickel detected in MW1.

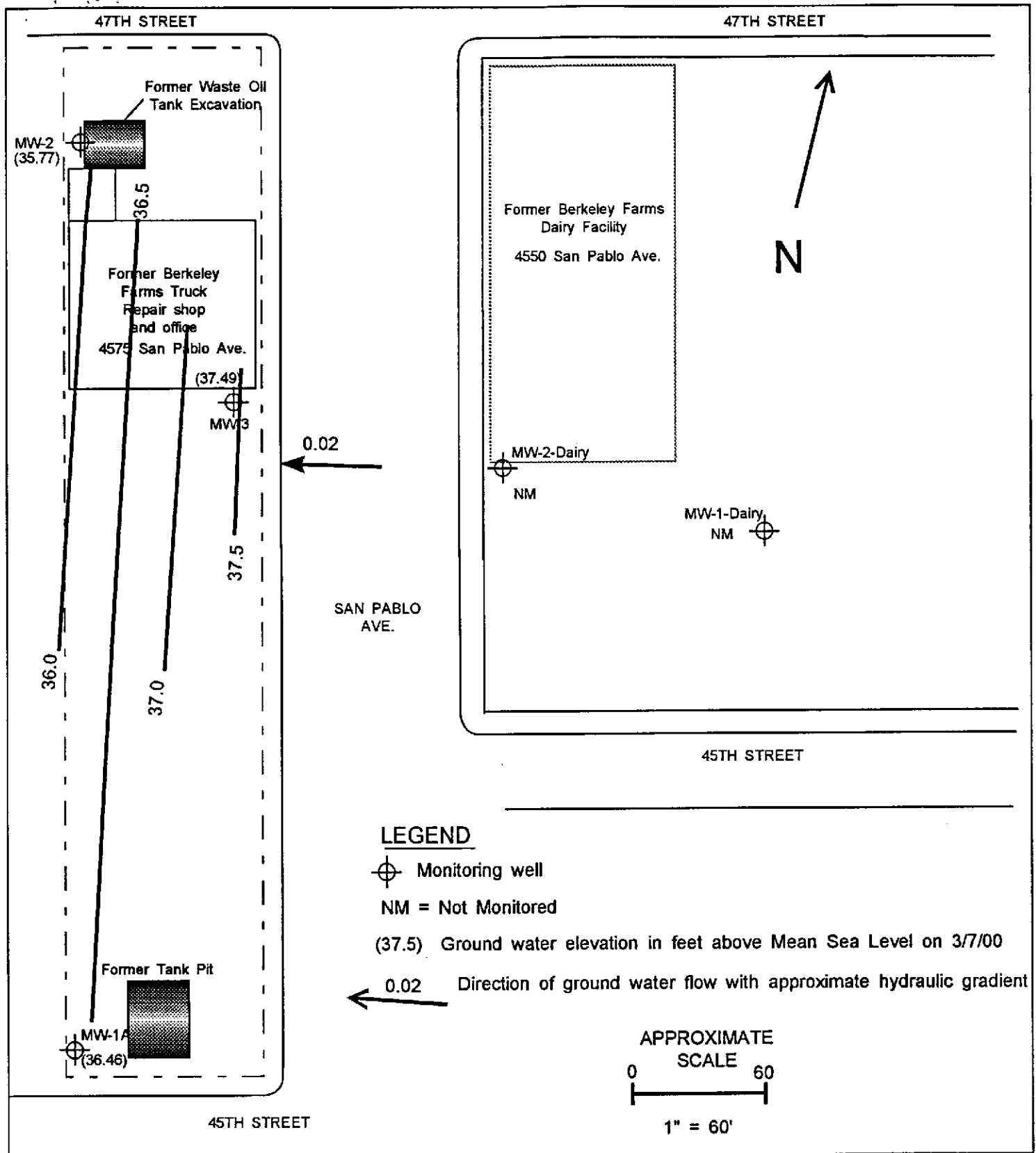
++ 21 ppb by EPA Method 8260.

\* All EPA Method 8010 constituents were nondetectable.

\*\* 20,000 ppb of Total Recoverable Petroleum Hydrocarbons by EPA Method 418.1.

-- analyses not performed

Results are in micrograms per liter ( $\mu\text{g/L}$ ), unless otherwise indicated.



**LEGEND**

⊕ Monitoring well

NM = Not Monitored

(37.5) Ground water elevation in feet above Mean Sea Level on 3/7/00

← 0.02 Direction of ground water flow with approximate hydraulic gradient

APPROXIMATE  
SCALE  
0 60  
1" = 60'

Former Berkeley Farms Truck Shop & Yard  
4575 San Pablo Avenue  
Emeryville, California

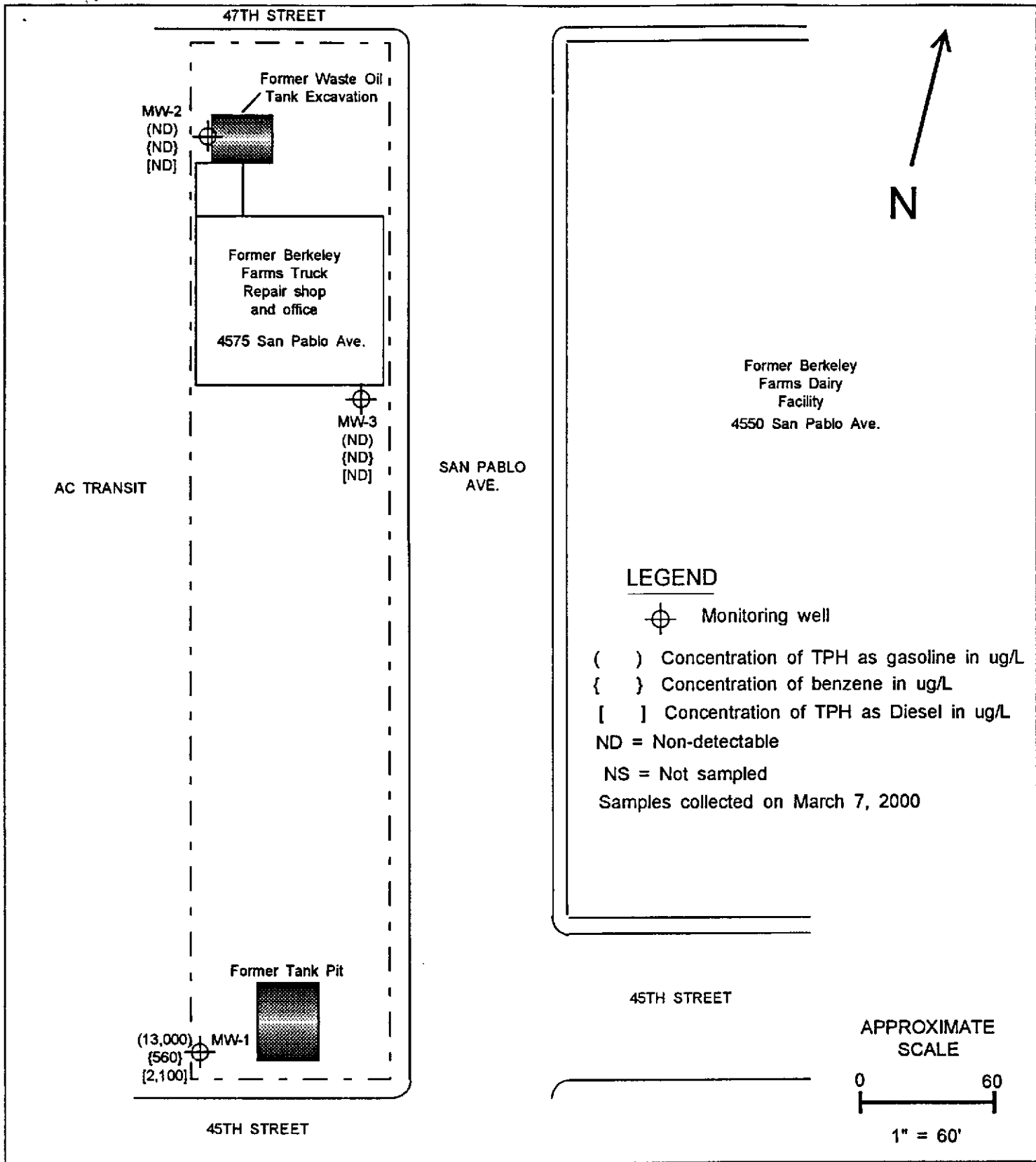
Figure No:

1

Date: March 12, 2000

Drawn By: JG/Geo-Logic

**Potentiometric Surface Map**



Fmr. Berkeley Farms Truck Shop & Yard 4575 San Pablo Avenue Emeryville, California	Figure No: <b>2</b>	Date: March 12, 2000
		Drawn By: JG/Geo-Logic

# Petroleum Hydrocarbons in Groundwater







McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
Telephone : 925-798-1620 Fax : 925-798-1622  
<http://www.mccampbell.com> E-mail: [main@mccampbell.com](mailto:main@mccampbell.com)

Calcoast Analytical 4072 Watts Street Emeryville, CA 94608	Client Project ID: #1103-03; Former Berkeley Farms Truck Shop & Yard	Date Sampled: 03/06/00
	Client Contact: Kevin Yan	Date Received: 03/06/00
	Client P.O:	Date Extracted: 03/10/00
		Date Analyzed: 03/10/00

**Methyl tert-Butyl Ether \***

EPA method 8260 modified

Lab ID	Client ID	Matrix	MTBE*	% Recovery Surrogate
32380	MW3	W	21	108
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W	1.0 ug/L		
	S	5.0 ug/kg		

\* water samples are reported in ug/L, soil and sludge samples in ug/kg, wipe samples in ug/wipe and all TCLP / STLC / SPLP extracts in ug/L  
h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) sample diluted due to high organic content.

# Calcoast Analytical, Inc.

Chain of Custody  
Date 3/6/00 Page 1 of 1

19184 ZCA/CO 93

## CALCOAST ANALYTICAL

KEVIN S. YAN, Ph.D.  
Research Scientist

10000 Judd Street  
Emeryville, CA 94608  
(510) 652-2979  
Fax (510) 652-3005

Sample ID	Type	Date	Time	Preserve	TPH - Gasche (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/ BTEX (EPA 602, 8020)	TPH - Diesel, TEPH (EPA 3510/2850, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 824, 8240, 8242)	BASE NEUTRALS, ACIDS (EPA 825/827, 8270, 825)	TOTAL OIL & GREASE (EPA 8070, 8075, 8077)	PCB (EPA 808, 8080)	PESTICIDES (EPA 803, 8090)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)	LUFT METALS Cd, Cr, Pb, Zn, Ni	ICAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)	MTBE confirmation by EPA 8260M add-in 8160 per JG	NUMBER OF CONTAINERS	
19184	Water	3/6/00	1:20 pm			X	X																3
MWC	↓	↓	↓			X																	3
MUS	↓	↓	↓			X																X	3

ICE  PRESERVATION APPROPRIATE  
 GOOD CONDITION  HEADSPACE ABSENT  CONTAINERS

VOAS O&G METALS OTHER

32378  
32379  
32380

Project Information		Sample Receipt			
Project Name <i>Farm Berkeley Farms Truck Shop &amp; Yard</i>	Total No. of Containers				
Project No. <i>1103-03</i>	Head Space				
PO #	Rec'd Good Condition/Cold				
TAT	Conforms To Record	24	48	72	Other
		Standard			
		5-Day			

Relinquished By: *Jed*  
(Signature)  
*Jed G. Greger*  
(Printed Name)  
3/1/2000 1:15 pm  
(Date) (Time)

Relinquished By: *Kevin Yu*  
(Signature)  
(Printed Name)  
3/6/00 5:02  
(Date) (Time)

Special Instructions / Comments:  
Refer to Job Name, Address and No. on lab sheets + invoice as follows:  
Farm Berkeley Farms Truck Shop + Yard  
4575 Sun Pablo Ave.  
Emeryville  
Paradise Job No. 1103-03

Received By: *Ann Domingo*  
(Signature)  
*Ann Domingo*  
(Printed Name)  
3/6/00 1:20 pm  
(Date) (Time)

Received By: *Lina Abetter*  
(Signature)  
*Lina Abetter*  
(Printed Name)  
3/6/00 5pm  
(Date) (Time)