

**geo - logic**

1140 - 5th Avenue, Crockett, CA 94525

*geotechnical and environmental consulting services*

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

ENVIRONMENTAL CONSULTING SERVICES  
JUN 14 PM 3:51

June 11, 1999

Ms. Susan Hugo  
Alameda County Department of Environmental Health  
1131 Harbor Bay Parkway, 2nd Floor  
Alameda, California 94502

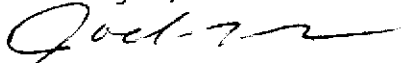
RE: Second Quarter - 1999 Monitoring and Sampling Reports  
Former Berkeley Farms Truck Repair Shop and Yard  
Former Berkeley Farms Dairy  
4575 and 4550 San Pablo Avenue  
Emeryville, California 94608

Dear Ms. Hugo:

Enclosed are the second quarter, 1999 monitoring and sampling reports for the above-referenced sites. Should you have any questions regarding the reports, please feel free to call me at (510) 787-6867.

Sincerely,

Geo-Logic, Inc.



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

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

6578

Attachments: Reports

**geo - logic**

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GL-97-110.R8

Paradiso Job No. 1103-03

June 11, 1999

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

RE: Second Quarter 1999 Monitoring and Sampling Report for  
Former Berkeley Farms Truck Repair Shop and Yard  
4575 San Pablo Avenue  
Emeryville, California 94608

Dear Mr. Roland:

This report presents the results of the second quarter 1999 monitoring and sampling of the wells at the subject site. During this quarter, the wells were monitored and sampled on June 7, 1999. As reported last quarter, Well MW-1 was apparently damaged during construction and then covered with landscaping, and therefore could not be inspected, monitored or sampled. The work during this quarter was performed in compliance with the guidelines established by the Regional Water Quality Control Board (RWQCB), and Alameda County Environmental Health Services (ACEHS).

#### 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 ACEHS, ORC filter socks were placed in monitoring wells MW2 and MW3. ORC is an 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 ACEHS, the ORC was removed from well MW2 on February 5, 1999. The wells are currently monitored and sampled quarterly.

#### RECENT FIELD ACTIVITIES

Wells MW2 and MW3 were monitored and sampled during this quarter on June 7, 1999. 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 either of the wells. The 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 June 7, 1999, the measured depth to ground water in monitoring wells MW2 and MW3 was 8.13 and 7.51 feet below the tops of the well casings, respectively. Since last quarter, the elevation of ground water in wells MW2 and MW3 has shown decreases of 2.63 and 2.28, respectively. Using this data and the data from two wells at 4550 San Pablo Avenue (also monitored on June 7, 1999), the calculated ground water flow direction was to the west, as shown on the attached Potentiometric Surface Map, Figure 1. The hydraulic gradient at the site on June 7, 1999, was approximately 0.01.

## ANALYTICAL RESULTS

Water samples from wells MW2 and MW3 were analyzed at Calcoast 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. 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.

TPH as gasoline, benzene, and TPH as diesel were not detected in the ground water samples collected on June 7, 1999. Ground water analytical results are shown on Figure 2 and are tabulated 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 ACEHS.

## 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.

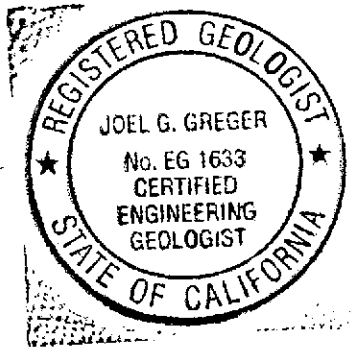
Sincerely,

Geo-Logic



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

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



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

Geo-Logic  
 Paradiso Job No. 1103-03  
 June 11, 1999

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>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
<b>(Monitored and Sampled on <u>August 21, 1998</u>)</b>						
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
<b>(Monitored and Sampled on <u>June 3, 1998</u>)</b>						
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

Geo-Logic  
 Paradiso Job No. 1103-03  
 June 11, 1999

TABLE 1 - (continued)

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>
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(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>
MW1	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.

Geo-Logic  
 Paradiso Job No. 1103-03  
 June 11, 1999

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>
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
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
3/4/99	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
Detection Limit		<5.0	<5.0	<0.5	<0.5	<0.5	<0.5

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



Geo-Logic  
 Paradiso Job No. 1103-03  
 June 11, 1999

TABLE 2 -(Continued)

SUMMARY OF LABORATORY ANALYSES - WATER

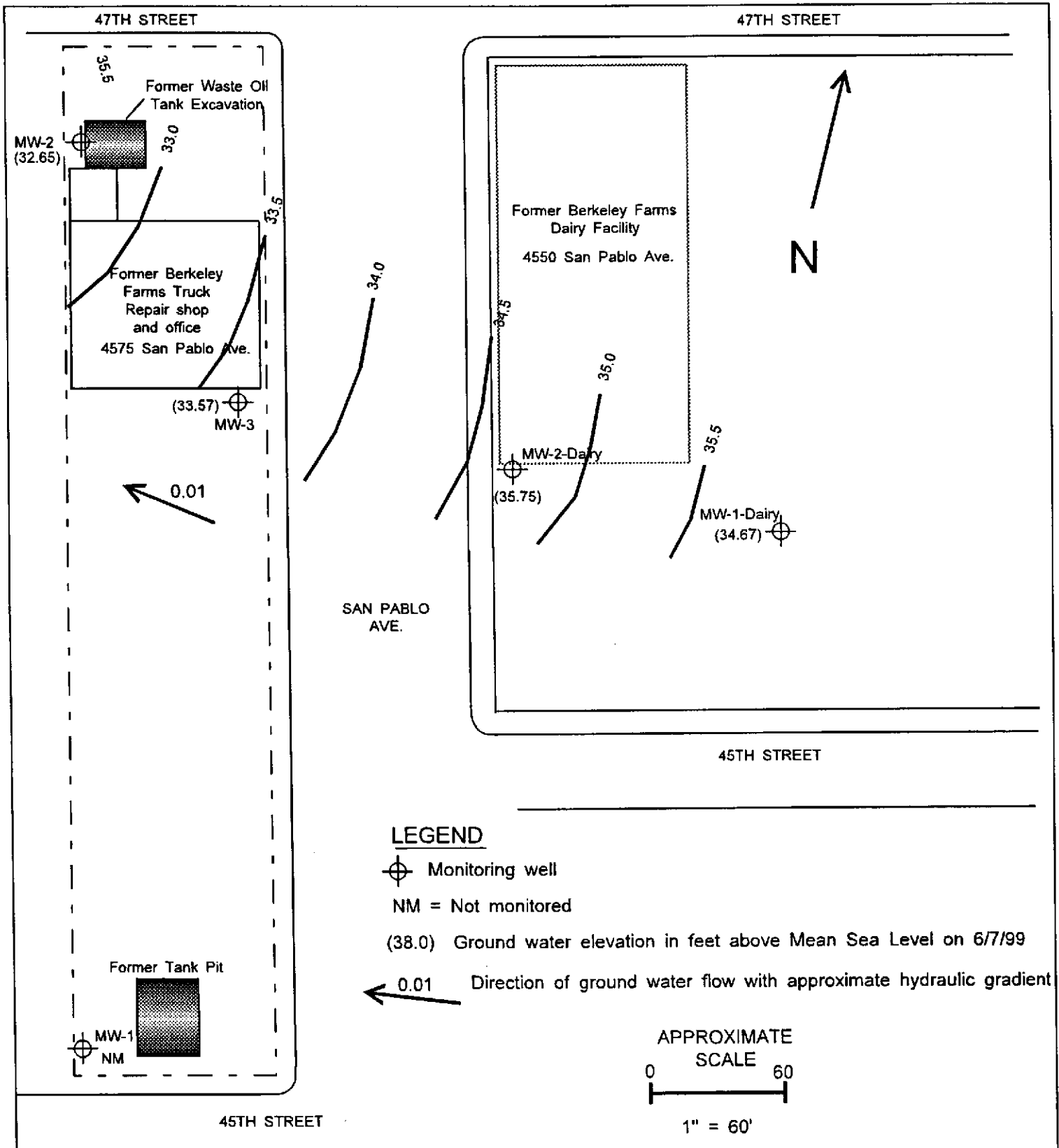
<u>Date</u>	<u>Sample Number</u>	<u>TPH as Motor Oil</u>	<u>TEPH</u>	<u>MTBE</u>	<u>TOTAL LEAD</u>
6/7/99	MW1	(Well inaccessible, damaged)			
3/4/99	MW1	(Well inaccessible, damaged)			
11/17/98	MW1	--	--	<0.5	--
6/2/98	MW1*	--	80,000	<0.5	<5.0
2/27/98	MW1	--	--	<0.5	--
6/7/99	MW2	<0.5	--	<0.5	--
3/4/99	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	--
6/7/99	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	--	--	--	--
Detection Limit		<0.5	<5.0	<0.5	<5.0

\* 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.



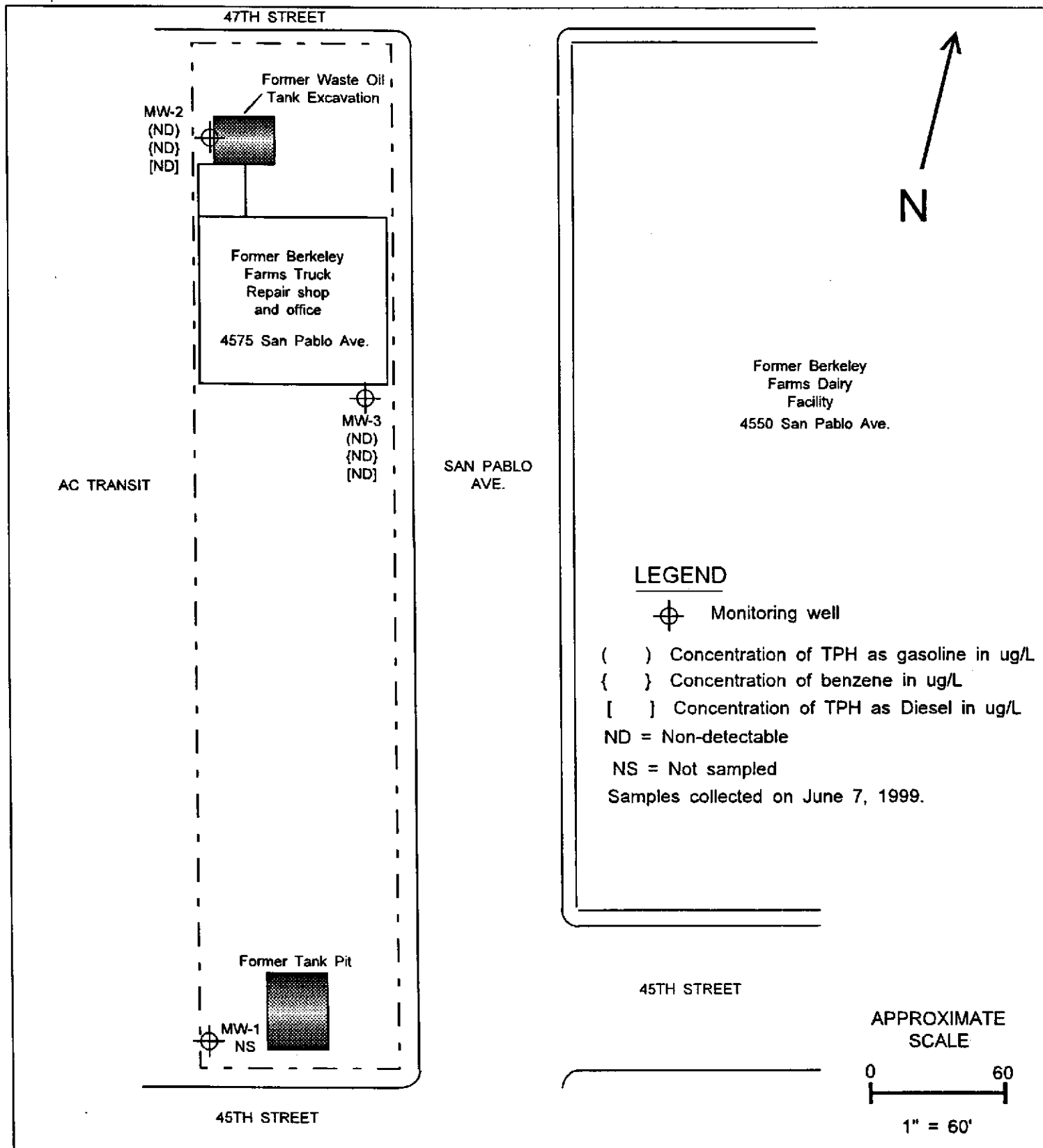
Former Berkeley Farms Facility  
 4575 San Pablo Avenue  
 Emeryville, California

Figure No:  
 1

Date: June 9, 1999

Drawn By: JG/Geo-Logic

# Potentiometric Surface Map



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

Figure No:  
**2**

Date: June 9, 1999  
 Drawn By: JG/Geo-Logic

# Petroleum Hydrocarbons in Groundwater

# CALCOAST ANALYTICAL

## Materials Chemistry

Certified by  
California Department of Health Services  
City of Los Angeles, Dept. of Building & Safety

June 9, 1999

Geo - Logic  
1140 - 5<sup>th</sup> Avenue  
Crockett, CA 94525

Attn: Mr. Joel Greger

Ref: Lab File No.: 0607-4A/B-99

### 1. SAMPLES:

Two (2) water samples, each contained in one (1) liter bottle and two (2) VOAs;

Project: Former Berkeley Farms Truck Shop, 4575 San Pablo, Emeryville  
Project No: 3 - 03  
Samples: A. MW2  
          B. MW3

*Collected: June 7, 1999*

*Received: June 7, 1999*

### 2. ANALYSIS REQUIRED:

- A. Total Petroleum Hydrocarbons - gasoline (TPH-g) by Gas Chromatography (GC).
- B. Total Petroleum Hydrocarbons - diesel (TPH-d) by GC.
- C. Benzene, Toluene, Ethylbenzene and Xylene (BTEX) by GC.
- D. Methyl-tert-butyl ether (MTBE) by GC.
- E. Total Petroleum Hydrocarbons - motor oil, on Sample A only, by GC.

### 3. METHODS OF ANALYSIS:

- A. EPA Method 8015; SW-846
- B. EPA Method 8015; SW-846
- C. EPA Method 8020; SW-846
- D. EPA Method 8020; SW-846
- E. EPA Method 8015 (modified); SW-846

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FAX (510) 652-3085

P.O. BOX 8702 • EMERYVILLE, CA 94662

4072 WATTS STREET • EMERYVILLE, CA 94608

4. RESULTS:

A. TPH - gasoline

SAMPLE	TPH - gasoline (µg/L)
A. MW2	< 5.0 (ND)
B. MW3	< 5.0 (ND)

Method Blank / Detection Limit = < 5.0 µg/L (none detected)  
 Mean Spike Recovery = 106%

B. TPH - diesel

SAMPLE	TPH - diesel (µg/L)
A. MW2	< 5.0 (ND)
B. MW3	< 5.0 (ND)

Method Blank / Detection Limit = < 5.0 µg/L (none detected)  
 Mean Spike Recovery = 107%

C. BTEX

Sample	Concentration (µg/L)			
	Benzene	Toluene	Ethylbenzene	Xylene
A. MW2	< 0.5 (ND)	< 0.5 (ND)	< 0.5 (ND)	< 0.5 (ND)
B. MW3	< 0.5 (ND)	< 0.5 (ND)	< 0.5 (ND)	< 0.5 (ND)
Method Blank	< 0.5 (ND)	< 0.5 (ND)	< 0.5 (ND)	< 0.5 (ND)
Mean Spike Recovery	90%	104%	105%	109%

D. MTBE

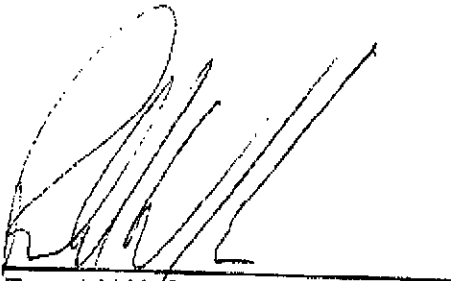
SAMPLE	MTBE (µg/L)
A. MW2	< 0.5 (ND)
B. MW3	< 0.5 (ND)

Method Blank / Detection Limit = < 0.5 µg/L (none detected)

E. TPH - motor oil

SAMPLE	TPH - motor oil (µg/L)
A. MW2	< 5.0 (ND)

Method Blank / Detection Limit = < 0.5 µg/L (none detected)



Ronald W. Shrewsbury  
Analytical Chemist

RWS: swr

ALL SAMPLES SUBMITTED FOR TESTING WILL BE HELD 90 DAYS FROM REPORT DATE AT WHICH TIME THEY WILL BE RETURNED TO CLIENT OR DESTROYED. CLIENT WILL BE RESPONSIBLE FOR ALL SHIPPING, HANDLING, AND DISPOSAL CHARGES. SAMPLES WILL BE STORED UPON WRITTEN INSTRUCTIONS AND FEE ARRANGEMENTS.

This report was made at the request of and for the use only of the purchaser of said report. Any use of or dissemination of information contained herein or reference to Calcoast Labs, Inc. without prior written consent of Calcoast Labs, Inc. is strictly prohibited.

