geo - logic geotechnical and environmental consulting services
1140 - 5th Avenue, Crockett, CA 94525 (510) 787-6867 - Fax (510) 787-1457

GL-97-110.R7
Paradiso Job No. 1103-03
March 15, 1999

Mr. Norm Albert
Berkeley Farms
25500 Clawiter Road
Hayward, California

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

Dear Mr. Albert:

This report presents the results of the first quarter 1999 monitoring and sampling of the wells at the subject site. During this quarter, the wells were monitored and sampled on March 4, 1999. Well MW-1 was apparently damaged during new construction and then covered with a soil stockpile, and therefore could not be inspected, monitored or sampled. 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.

The third and fourth quarters of monitoring and sampling was documented in Geo-Logic's reports (GL-97-110.R5 and R6), dated August 25 and November 20, 1998, respectively.

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.

RECENT FIELD ACTIVITIES

Wells MW2 and MW3 were monitored and sampled during this quarter on March 4, 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 March 4, 1999, the measured depth to ground water in monitoring wells MW2 and MW3 was 5.5 and 5.23 feet below the tops of the well casings, respectively. Using this data and the data from two wells at 4550 San Pablo Avenue (also monitored on March 4, 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 March 4, 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.

The concentrations of TPH as gasoline, benzene, and TPH as diesel detected in the ground water samples collected on March 4, 1999, 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.
Engineering Geologist

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

REGISTERED GEOLOGIST
JOEL G. GREGER
No. EG 1633
CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

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

Geo-Logic
Paradiso Job No. 1103-03
March 15, 1999

TABLE 1

SUMMARY OF GROUND WATER MONITORING AND PURGING DATA

| Well # | Ground Water Elevation (feet) | Depth to Water (feet)♦ | Total Well Depth (feet)♦ | Product Thickness (feet) | Sheen | Water Purged (gallons) |
|---|---|---|---|---|---|---|
| **(Monitored and Sampled on March 4, 1999)** | | | | | | |
| MW1 | | (Well inaccessible, damaged) | | | | |
| MW2 | 35.28 | 5.5 | 16.56 | 0 | No | 8 |
| MW3 | 35.85 | 5.23 | 16.60 | 0 | No | 8 |
| **(Monitored and Sampled on November 17, 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 |
| **(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 |

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| Well # | Top of Casing Elevation* (feet) |
|---|---|
| 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.

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TABLE 2

SUMMARY OF LABORATORY ANALYSES
WATER

| Date | Sample Number | TPH as Diesel | TPH as Gasoline | Benzene | Toluene | Ethyl-benzene | Xylenes |
|---|---|---|---|---|---|---|---|
| 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 |
| 3/4/99 | 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 |
| 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 |

| Date | Sample Number | TPH as Motor Oil | TEPH | MTBE | TOTAL LEAD |
|---|---|---|---|---|---|
| 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 | -- |
| 3/4/99 | 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 | -- |
| 3/4/99 | 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 |

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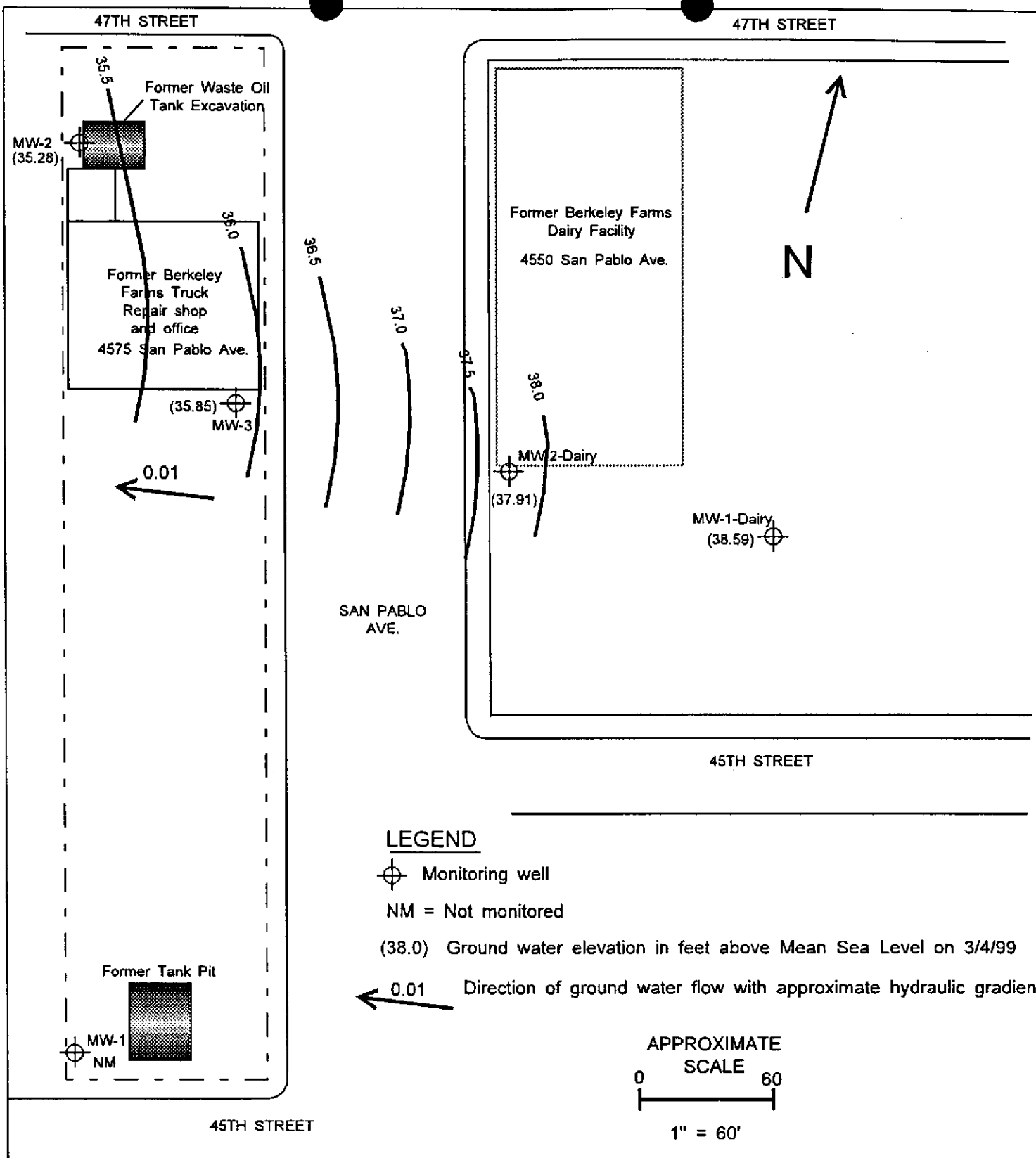
\+ Cadmium, chromium, lead, nickel, and zinc were nondetectable, except for 0.078 mg/l of nickel detected in MW1.

* 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 ($\mu$g/L), unless otherwise indicated.




LEGEND

⊕ Monitoring well

NM = Not monitored

(38.0) Ground water elevation in feet above Mean Sea Level on 3/4/99

0.01 Direction of ground water flow with approximate hydraulic gradient

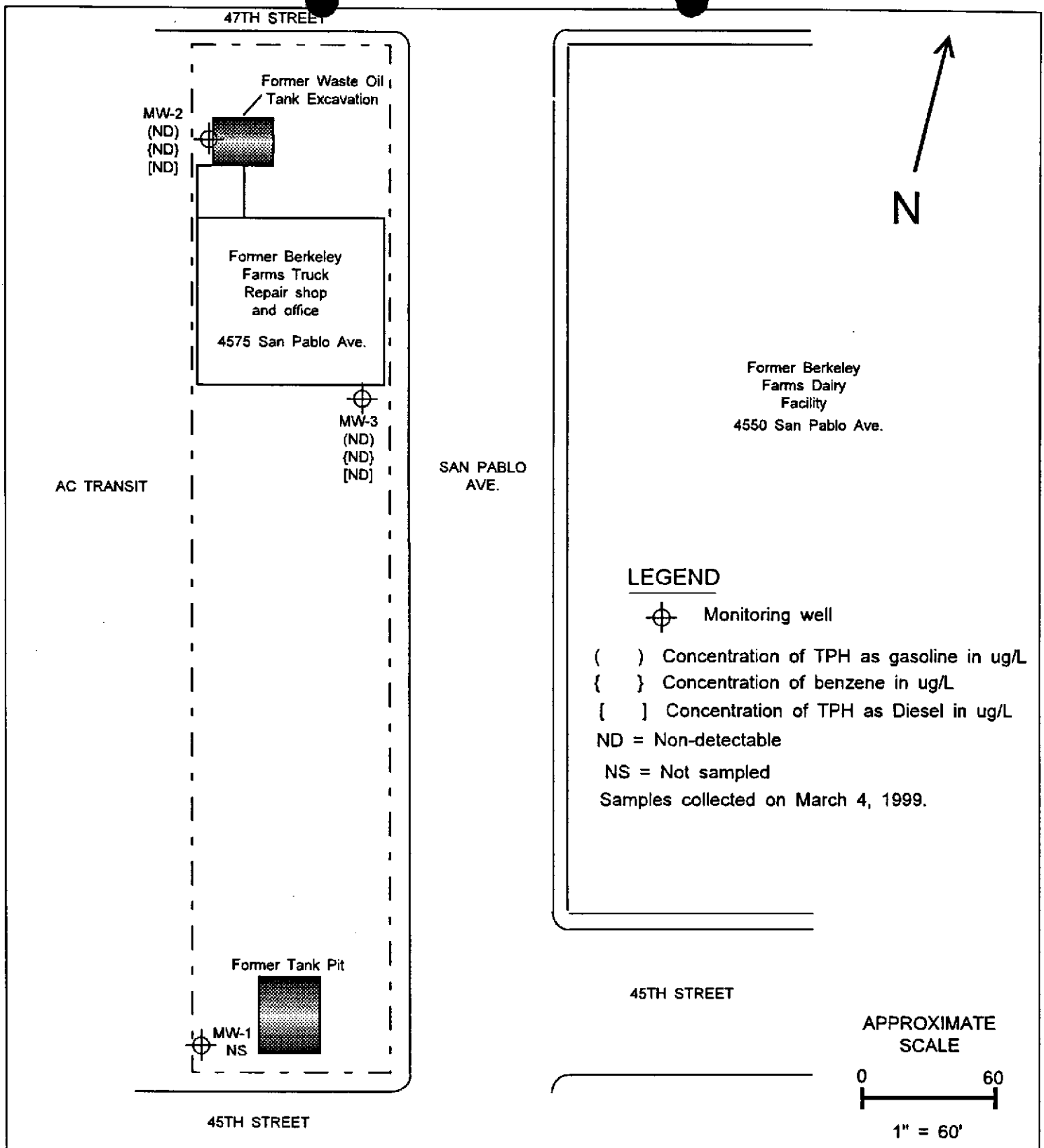
APPROXIMATE SCALE

0 60

1" = 60'

| | | |
|---|---|---|
| Former Berkeley Farms Facility<br>4575 San Pablo Avenue<br>Emeryville, California | Figure No:<br>1 | Date: March 12, 1999<br>Drawn By: JG/Geo-Logic |

# Potentiometric Surface Map




| | | |
|---|---|---|
| Fmr. Berkeley Farms Truck Shop & Yard<br>4575 San Pablo Avenue<br>Emeryville, California | Figure No:<br>2 | Date: March 12, 1999<br>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*

March 10, 1999

Geo - Logic
1140 - 5th Avenue
Crockett, CA 94525

Attn: Mr. Joel Greger

Ref: Lab File No.: 0304-10A/B-99

**1. SAMPLES:**

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

Project: Former Berkeley Farms Truck Yard / KFC, 4575 San Pablo, Emeryville
Project No: 1095
Samples: A. MW2
B. MW3

*Collected: March 4, 1999*
*Received: March 4, 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 8020 (modified); SW-846



TELEPHONE (510) 652-2979
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 = 102%*

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 = 91%*

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 | 104% | 111% | 104% | 96% |

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 = < 5.0 µg/L (none detected)*

Ronald W. Shrewsbury
Analytical Chemist

RWS: swr

ALL SAMPLES SUBMITTED FOR TESTING WILL BE HELD 30 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.

# Calcoast Analytical, Inc.

MTBE

## Chain of Custody

Date 3/4/99 Page 1 of 1

Proj. Mgr.: Joe Gregor - Geo Logic
Company: for Paradiso Mechanical
Address: POB 1836
2600 Williams St
San Leandro CA
Samples (signature): Joe Gregor (Phone No.) 510 7876867
(Fax No.) 510 7871457

| Sample ID | Type | Date | Time | Matrix | Preserve | TPH Gasoline (EPA 5030, 8015) | TPH - Gasoline (5030, 8015) w/ BTEX (EPA 602, 8020) | TPH - Diesel, TEPH (EPA 3510/3550, 8015) | PURGEABLE AROMATICS BTEX (EPA 602, 8020) | PURGEABLE HALOCARBONS (EPA 601, 8010) | VOLATILE ORGANICS (EPA 624, 8240, 524.2) | BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525) | TOTAL OIL & GREASE (EPA 5520, B+F, E+F) | PCB (EPA 608, 8080) | PESTICIDES (EPA 608, 8080) | TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1) | TPH as Motor Oil - 8020 | LUFT METALS: Cd, Cr, Pb, Zn, Ni | CAM METALS (17) | PRIORITY POLLUTANT METALS (13) | TOTAL LEAD | EXTRACTION (TCLP, STLC) | NUMBER OF CONTAINERS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW2 | | 3/4/99 | 3:30pm | Water | | | X | X | | | | | | | | | X | | | | | | 3 VOAs 1 L amber |
| MW3 | | ↓ | ↓ | | | | X | X | | | | | | | | | | | | | | | |

**Project Information**

Project Name: KFC
4575 San Pablo Ave
Project No: Emeryville
PO: 1095
T: Standard / 5-Day

**Sample Receipt**

| | |
|---|---|
| Total No. of Containers | |
| Head Space | |
| Rec'd Good Condition/Cold | |
| Conforms To Record | |

| 24 | 48 | 72 | Other |
|---|---|---|---|
| | | | |

Special Instructions / Comments:
Refer to Job Address + Job # on lab sheets + invoice.

Former Berkeley Farms Truck Yard/KFC
4575 San Pablo Ave
Emeryville, CA

| | 1. | 2. | 3. |
|---|---|---|---|
| Relinquished By: (Signature) | Joe Gregor | | |
| (Printed Name) | Joe G. Gregor | | |
| (Date) (Time) | 3/4/99 435pm | | |
| Received By: (Signature) | Glenn Burr | | |
| (Printed Name) | Robin Burr | | |
| (Date) (Time) | 3/4/99 4:30pm | | |

Paradiso Job No 1095