# Associated Soils Analysis



December 2, 1993
File No. 420-93

Brian Cobb
E-Z Serve Management Company
2550 N. Loop West, Ste. 600
Houston, TX 77292

**Project:** E-Z Serve Location #100877, 525 West "A" Street, Hayward, CA

Dear Mr. Cobb:

In accordance with your request, quarterly groundwater sampling was conducted at the above subject site on September 30, 1993. This quarterly work package includes a site data summary table, site groundwater gradient map (**FIGURE 1**), laboratory analyses, monitoring well sampling record, and sampling and purging protocol (**ATTACHED**). Our field and laboratory analyses were conducted in accordance with approved ASTM and EPA standards.

With one exception, the site wells contained no measurable free product; free product in MW-6 measured 0.03 feet. No petroleum odors or sheen were detected in the other wells. Chemical analysis of water samples indicates that petroleum constituents were detected in each of the monitoring wells this quarter, with MW-1 and MW-3 results at lower levels than measured last quarter (July 1993), and all other samples yielding higher levels.

Groundwater depths at the site have increased relative to last quarter, indicating that the groundwater table is lower. A site groundwater gradient was determined by calculating the groundwater elevation in each surveyed well containing no free product (**SUMMARY TABLE**) and contouring the elevation data (**FIGURE 1**). The site groundwater gradient is currently flowing toward the west-southwest at a magnitude of 0.0070 to 0.012 foot per foot. This current groundwater gradient is similar in both magnitude and direction as last quarter's gradient.

We recommend surveying of new wells MW-7 through MW-10 to more thoroughly evaluate groundwater conditions at the site.

If you have any questions about these results, please contact our office.

Sincerely,
ASSOCIATED SOILS ANALYSIS, INC.

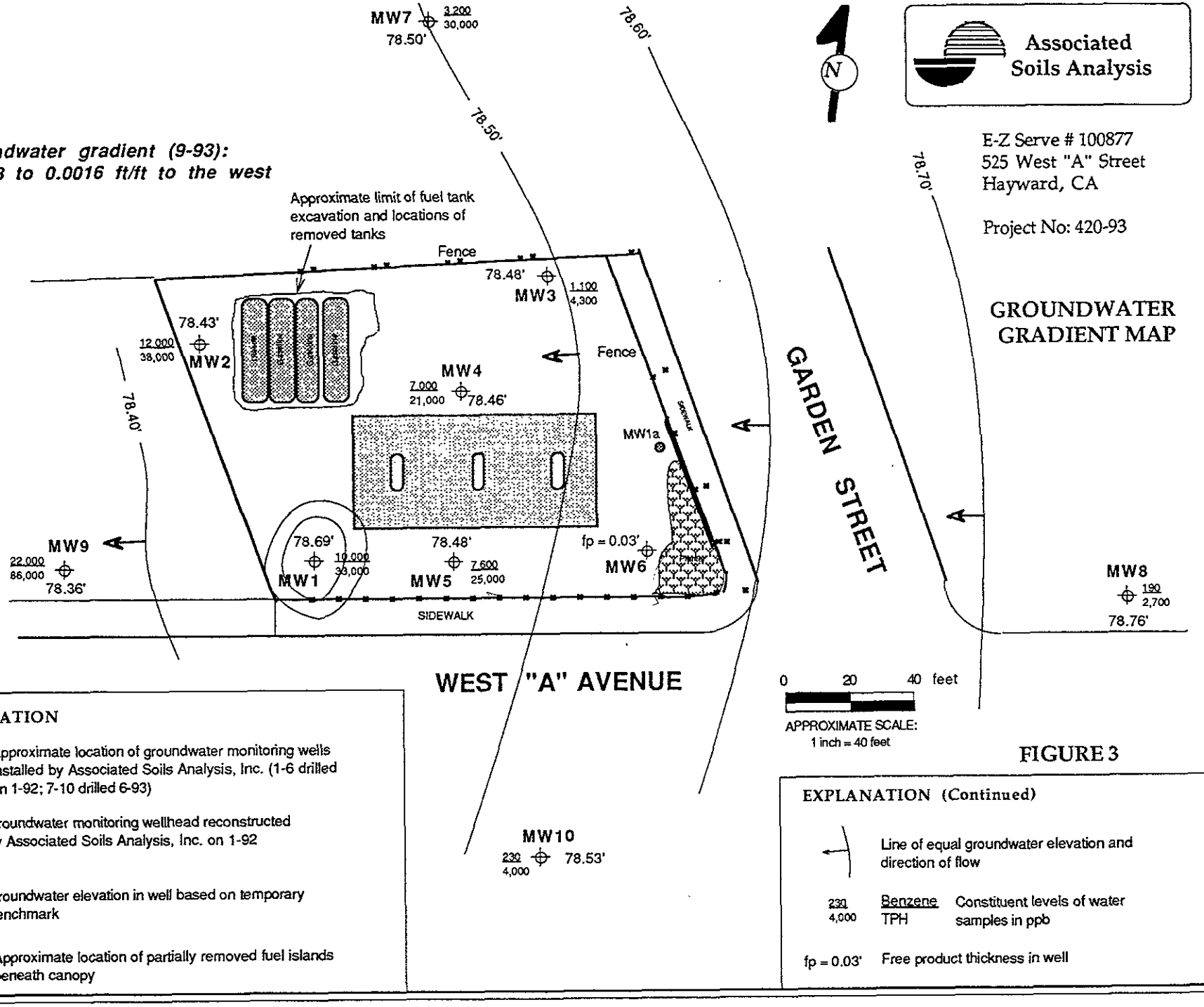
Gary J. Cawthon

Gary J. Cawthon
R.G. 5574, Exp. 9-30-95

REGISTERED PROFESSIONAL GEOLOGIST
GARY JOSEPH CAWTHON
No. 5574
Exp. Date 9/30/95
STATE OF CALIFORNIA

GJC:CFL

1141 Batavia Ct. • Tulare, California 93274 • (209) 688-1011


Associated Soils Analysis
E-Z Serve # 100877
525 West "A" Street
Hayward, CA
Project No: 420-93
GROUNDWATER GRADIENT MAP
Groundwater gradient (9-93):
0.0008 to 0.0016 ft/ft to the west
Approximate limit of fuel tank excavation and locations of removed tanks
Fence
MW7 3,200 30,000 78.50'
78.60'
78.50'
78.70'
78.48' MW3 1,100 4,300
78.43' 12,000 38,000 MW2
MW4 7,000 21,000 78.46'
78.40'
MW1a
GARDEN STREET
MW9 22,000 86,000 78.36'
78.69' MW1 10,000 38,000
78.48' MW5 7,600 25,000
fp = 0.03' MW6
MW8 190 2,700 78.76'
SIDEWALK
WEST "A" AVENUE
MW10 230 4,000 78.53'
0 20 40 feet
APPROXIMATE SCALE: 1 inch = 40 feet
FIGURE 3
EXPLANATION
MW1 Approximate location of groundwater monitoring wells installed by Associated Soils Analysis, Inc. (1-6 drilled on 1-92; 7-10 drilled 6-93)
Groundwater monitoring wellhead reconstructed by Associated Soils Analysis, Inc. on 1-92
78.69' Groundwater elevation in well based on temporary benchmark
Approximate location of partially removed fuel islands beneath canopy
EXPLANATION (Continued)
Line of equal groundwater elevation and direction of flow
230 Benzene 4,000 TPH Constituent levels of water samples in ppb
fp = 0.03' Free product thickness in well

## ATTACHMENTS

MONITORING WELL SAMPLING AND PURGING PROTOCOL

MONITORING WELL DEVELOPMENT RECORD

E-Z SERVE LOCATION SUMMARY TABLE

LABORATORY RESULTS

GROUNDWATER MONITORING WELL SAMPLING AND PURGING PROTOCOL

Prior to sampling the groundwater monitoring wells, the wells are open to the atmosphere for approximately one hour to allow for the groundwater to adjust to the open barometric pressure. The depth to groundwater is then measured in the well, followed by electrical conductivity, pH, and temperature readings of the groundwater. These parameters, along with the volume of the purged water (described below) and time, are recorded on the field sampling and purging form.

The volume of water in the monitoring well is calculated using the following equation:

Feet of water in well x 0.163 for 2 inch diameter well = Volume water in gallons
Feet of water in well x 0.653 for 4 inch diameter well = Volume water in gallons

Where the feet of water in well is calculated by subtracting the depth to groundwater from the total depth of the well.

The volume of water to be removed is estimated by multiplying the volume of water in gallons by three to four well volumes. This value will be recorded on the field form.

The pH, temperature, and electrical conductivity will be monitored and recorded between each well volume removed, and must be within 10% of the previous reading prior to sampling. The groundwater level in the monitoring well is allowed to recover to 80% of the original depth prior to sampling.

A minimum of four well volumes (where four volumes were available) were removed using a truck-mounted bailer prior to collecting the water sample. The removed water was placed in steel storage barrels with bolt-on lids, which where retained on site. After the well had stabilized, water samples were collected using a disposable bailer with a check valve.

The water samples were transferred into two sterilized, glass, 40 ml VOA sample containers and a 500 ml amber glass bottle. The samples were immediately sealed in the field with Teflon-lined threaded caps ensuring an airtight seal. The samples were labeled appropriately in the field. Labels included: sample location, depth, date, time, job number, and field identification number.

Samples were placed immediately in an insulated storage container cooled with chemical ice. The temperature inside the storage container was maintained at or below 4° Celsius (39.2° Fahrenheit) and monitored with a thermometer to ensure that the temperature remained constant. The storage container also included a laboratory-prepared travel blank for quality control purposes and as an indicator of cross contamination. The travel blank was placed with the sample containers and analyzed if the field samples indicated detectable levels of fuel constituents. A chain of custody record accompanied the samples. Chain of custody records included: sample location, depth, date, time, job number, field identification number, temperature of sample container, analysis required and personnel collecting samples.

Water samples were delivered to a State certified hazardous waste laboratory within approximately 24 hours of collection. The temperature was maintained at 4° Celsius (39.2° Fahrenheit) in the insulated storage container prior to delivery to the laboratory. Once the samples were delivered to the laboratory, the chain of custody was signed by the laboratory indicating that the possession of the samples had changed. The water samples were analyzed within the required 7-day period following collection.

Well purging equipment was pre-cleaned by steam prior to each purging interval. Decontamination of sampling bailers is achieved by using a different dedicated, disposable bailer for each sample.

**Associated Soils Analysis**
1141 Batavia Court • Tulare, California 93274
(209) 688-1011 • FAX (209) 688-1195

FILE NO: 420-93
DATE: 9/30/93

# MONITORING WELL PURGING FOR SAMPLING RECORD

**PROJECT LOCATION:** E-Z Serve #100877, 525 West "A" Street, Hayward

**SAMPLER NAME (Print):** Jack Kash

| | | | | | | |
|---|---|---|---|---|---|---|
| PRIOR TO PURGING | SAMPLE LOCATION | MW1 | MW2 | MW3 | MW4 | MW5 |
| | SCREEN INTERVAL (Top/Bottom) | | | | | |
| | CASING DIAMETER (In) | 4" | 4" | 4" | 4" | 4" |
| | ELEVATION OF TOP OF WELL CASING | | | | | |
| | DEPTH TO BOTTOM OF WELL CASING | 29.97 | 30.17 | 30.07 | 30.12 | 30.49 |
| | TIME | 8:45 | 11:00 | 12:20 | 11:52 | 11:25 |
| | DEPTH TO WATER (From top of casing) | 18.04 | 19.63 | 19.18 | 18.64 | 18.25 |
| | WELL SOUNDING DEPTH | | | | | |
| | VOLUME OF WATER IN WELL (gallons) | | | | | |
| | TEMPERATURE (°F) | 66.8 | 70.3 | 70.1 | 69.1 | 69.2 |
| | pH READING | 6.46 | 6.69 | 6.65 | 6.45 | 6.25 |
| | ELECTRICAL CONDUCTIVITY | 1923 | 1332 | 1610 | 1294 | 1230 |
| | THICKNESS OF STANDING PRODUCT | 0 | 0 | 0 | 0 | 0 |
| | PETROLEUM SHEEN | NO | NO | NO | NO | NO |
| | PETROLEUM ODOR | NO | NO | NO | NO | NO |
| DURING PURGING | SAMPLE LOCATION | MW1 | MW2 | MW3 | MW4 | MW5 |
| | TIME | 8:55 | 11:12 | 12:30 | 12:07 | 11:35 |
| | DEPTH TO WATER (From top of casing) | 20.12 | 21.02 | 21.19 | 20.37 | 20.16 |
| | VOLUME OF WATER REMOVED (gallons) | 15 | 15 | 15 | 15 | 15 |
| | TEMPERATURE (F) | 67.0 | 68.2 | 70.0 | 68.1 | 69.4 |
| | pH READING | 6.36 | 6.66 | 6.62 | 6.55 | 6.35 |
| | ELECTRICAL CONDUCTIVITY | 1201 | 1316 | 1520 | 1256 | 1224 |
| END OF PURGING | SAMPLE LOCATION | MW1 | MW2 | MW3 | MW4 | MW5 |
| | TIME | 9:05 | 11:20 | 12:40 | 12:15 | 11:45 |
| | DEPTH TO WATER (From top of casing) | 21.21 | 21.96 | 22.10 | 21.13 | 21.14 |
| | VOLUME OF WATER REMOVED (gallons) | 15 | 15 | 15 | 15 | 15 |
| | TEMPERATURE (F) | 67.1 | 68.0 | 69.3 | 68.0 | 69.1 |
| | pH READING | 6.46 | 6.69 | 6.62 | 6.56 | 6.35 |
| | ELECTRICAL CONDUCTIVITY | 1199 | 1320 | 1370 | 1257 | 1225 |
| SAMPLE | SAMPLE LOCATION | MW1 | MW2 | MW3 | MW4 | MW5 |
| | TIME | 9:20 | 11:35 | 1:00 | 12:30 | 12:20 |
| | DEPTH TO WATER (From top of casing) | 18.17 | 20.00 | 19.31 | 19.00 | 18.77 |
| | TOTAL WATER REMOVED (gallons) | 30 | 30 | 30 | 30 | 30 |
| | TEMPERATURE (F) | 68.4 | 68.0 | 69.1 | 67.8 | 69.6 |
| | pH READING | 6.54 | 6.69 | 6.62 | 6.57 | 6.35 |
| | ELECTRICAL CONDUCTIVITY | 1200 | 1320 | 1279 | 1257 | 1223 |

NOTES: 6.5 full drums of water - 1.5 empties - 5 drums of soil cuttings on site. Also pile of cuttings on Visquine.

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1141 Batavia Court • Tulare, California 93274
(209) 688-1011 • FAX (209) 688-1195

FILE NO: 420-93
DATE: 9/30/93

# MONITORING WELL PURGING FOR SAMPLING RECORD

**PROJECT LOCATION:** E-Z Serve #100877, 525 West "A" Street, Hayward

**SAMPLER NAME (Print):** Jack Kash

| | | | | | | |
|---|---|---|---|---|---|---|
| PRIOR TO PURGING | SAMPLE LOCATION | MW6 | MW7 | MW8 | MW9 | MW10 |
| | SCREEN INTERVAL (Top/Bottom) | | | | | |
| | CASING DIAMETER (in) | 2" | 2" | 2" | 2" | 2" |
| | ELEVATION OF TOP OF WELL CASING | | | | | |
| | DEPTH TO BOTTOM OF WELL CASING | | 28.35 | 30.0 | 29.45 | 29.55 |
| | TIME | 12:45 | 12:55 | 1:30 | 2:00 | 2:25 |
| | DEPTH TO WATER (From top of casing) | 19.05 | 18.94 | 18.85 | 17.05 | 18.58 |
| | WELL SOUNDING DEPTH | | | | | |
| | VOLUME OF WATER IN WELL (gallons) | | | | | 1.9 |
| | TEMPERATURE (°F) | | 71.2 | 72.4 | 71.6 | 71.0 |
| | pH READING | | 6.75 | 6.63 | 6.66 | 6.72 |
| | ELECTRICAL CONDUCTIVITY | | 1305 | 1406 | 1320 | 1164 |
| | THICKNESS OF STANDING PRODUCT in' | 0.03' | 0 | 0 | 0 | 0 |
| | PETROLEUM SHEEN | | NO | NO | NO | NO |
| | PETROLEUM ODOR | | NO | NO | NO | NO |
| DURING PURGING | SAMPLE LOCATION | | MW7 | MW8 | MW9 | MW10 |
| | TIME | | 1:05 | 1:35 | 2:10 | 2:35 |
| | DEPTH TO WATER (From top of casing) | | 20.24 | 19.92 | 18.13 | 23.24 |
| | VOLUME OF WATER REMOVED (gallons) | | 5 | 5 | 5 | 5 |
| | TEMPERATURE (F) | | 70.8 | 72.4 | 71.0 | 70.3 |
| | pH READING | | 6.71 | 6.65 | 6.70 | 6.64 |
| | ELECTRICAL CONDUCTIVITY | | 1266 | 1412 | 1240 | 1170 |
| END OF PURGING | SAMPLE LOCATION | | MW7 | MW8 | MW9 | MW10 |
| | TIME | | 1:10 | 1:40 | 2:20 | 2:45 |
| | DEPTH TO WATER (From top of casing) | | 22.31 | 21.31 | 21.31 | 25.66 |
| | VOLUME OF WATER REMOVED (gallons) | | 5 | 5 | 5 | 5 |
| | TEMPERATURE (F) | | 69.7 | 72.3 | 70.0 | 69.9 |
| | pH READING | | 6.72 | 6.71 | 6.72 | 6.70 |
| | ELECTRICAL CONDUCTIVITY | | 1274 | 1440 | 1240 | 1212 |
| SAMPLE | SAMPLE LOCATION | MW6 | MW7 | MW8 | MW9 | MW10 |
| | TIME | | 1:20 | 1:55 | 2:45 | 3:05 |
| | DEPTH TO WATER (From top of casing) | | 19.01 | 18.94 | 17.31 | 18.76 |
| | TOTAL WATER REMOVED (gallons) | 5 | 10 | 10 | 10 | 10 |
| | TEMPERATURE (F) | | 70.3 | 73.1 | 69.4 | 70.1 |
| | pH READING | | 6.48 | 6.79 | 6.76 | 6.67 |
| | ELECTRICAL CONDUCTIVITY | | 1540 | 1452 | 1244 | 1310 |

NOTES:

E-Z Serve Location # 100877
525 West "A" Street
Hayward, CA

| MW# | Date | Well Elev (feet) | Depth to F.P. (feet) | Depth to G.W. (feet) | F.P. Thickness (feet) | G.W. Elevation (feet) | DHS Method TPH (ppb) | (EPA 8020) B (ppb) | T (ppb) | E (ppb) | X (ppb) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW# 1 | | | | | | | | | | | |
| | 5-Feb-92 | 99.91 | | 20.82 | 0.00 | 79.09 | 46,000 | 76,000 | 23,000 | 2,400 | 6,500 |
| | 11-Sep-92 | | | 20.08 | 0.00 | 79.83 | 48,000 | 9,000 | 1,200 | 1,800 | 4,600 |
| | 22-Dec-92 | | | 19.79 | 0.00 | 80.12 | 84,000 | 22,000 | 1,600 | 4,800 | 17,000 |
| | 3-Mar-93 | | | 16.23 | 0.00 | 83.68 | 54,000 | 16,000 | 1,600 | 1,900 | 4,300 |
| | 23-Jun-93 | 96.73 | | 16.86 | 0.00 | 79.87 | 30,000 | 18,000 | 1,100 | 1,400 | 3,700 |
| | 30-Sep-93 | | | 18.04 | 0.00 | 78.69 | 33,000 | 10,000 | 440 | 940 | 1,700 |
| MW#2 | | | | | | | | | | | |
| | 5-Feb-92 | 101.45 | | 22.35 | 0.00 | 79.10 | 67,000 | 13,000 | 4,700 | 820 | 1,300 |
| | 11-Sep-92 | | | 21.67 | 0.00 | 79.78 | 57,000 | 9,000 | 1,400 | 1,200 | 8,400 |
| | 22-Dec-92 | | | 21.39 | 0.00 | 80.06 | 31,000 | 9,900 | 350 | 2,000 | 4,100 |
| | 3-Mar-93 | | | 17.75 | 0.00 | 83.70 | 17,000 | 5,100 | 1,300 | 720 | 1,900 |
| | 23-Jun-93 | 98.06 | | 18.42 | 0.00 | 79.64 | 60,000 | 23,000 | 1,500 | 4,500 | 17,000 |
| | 30-Sep-93 | | | 19.63 | 0.00 | 78.43 | 38,000 | 12,000 | 780 | 1,500 | 6,500 |
| MW#3 | | | | | | | | | | | |
| | 5-Feb-92 | 101.50 | | 21.85 | 0.00 | 79.65 | 5,900 | 1,100 | ND | ND | ND |
| | 11-Sep-92 | | | 21.13 | 0.00 | 80.37 | 9,400 | 1,200 | 180 | 550 | 1,100 |
| | 22-Dec-92 | | | 20.88 | 0.00 | 80.62 | 12,000 | 2,800 | 190 | 850 | 1,600 |
| | 3-Mar-93 | | | 17.29 | 0.00 | 84.21 | 11,000 | 2,200 | 360 | 570 | 900 |
| | 23-Jun-93 | 97.66 | | 17.88 | 0.00 | 79.78 | 33,000 | 12,000 | 2,700 | 1,300 | 3,500 |
| | 30-Sep-93 | | | 19.18 | 0.00 | 78.48 | 4,300 | 1,100 | 160 | 690 | 670 |
| MW#4 | | | | | | | | | | | |
| | 5-Feb-92 | 100.50 | | 21.31 | 0.00 | 79.19 | 16,000 | 2,700 | 410 | ND | 3,400 |
| | 11-Sep-92 | | | 20.62 | 0.00 | 79.88 | 43,000 | 7,600 | 1,600 | 1,400 | 4,100 |
| | 22-Dec-92 | | | 20.37 | 0.00 | 80.13 | 29,000 | 8,800 | 1,200 | 1,500 | 3,700 |
| | 3-Mar-93 | | | 16.78 | 0.00 | 83.72 | 17,000 | 5,000 | 1,500 | 680 | 1,700 |
| | 23-Jun-93 | 97.10 | | 17.45 | 0.00 | 79.65 | 5,700 | 3,000 | 120 | 560 | 790 |
| | 30-Sep-93 | | | 18.64 | 0.00 | 78.46 | 21,000 | 7,000 | 2,100 | 970 | 2,600 |
| MW#5 | | | | | | | | | | | |
| | 5-Feb-92 | 100.48 | | 20.93 | 0.00 | 79.55 | 78,000 | 7,900 | 5,000 | 2,900 | 1,800 |
| | 11-Sep-92 | | | 20.27 | 0.00 | 80.21 | 49,000 | 4,700 | 400 | 1,400 | 4,100 |
| | 22-Dec-92 | | | 19.99 | 0.00 | 80.49 | 34,000 | 8,600 | 340 | 2,200 | 4,800 |

* = Not Analyzed ND = Not Detected

E-Z Serve Location # 100877
525 West "A" Street
Hayward, CA

| MW# | Date | Well Elev (feet) | Depth to F.P. (feet) | Depth to G.W. (feet) | F.P. Thickness (feet) | G.W. Elevation (feet) | DHS Method TPH (ppb) | (EPA 8020) B (ppb) | T (ppb) | E (ppb) | X (ppb) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3-Mar-93 | | | 16.49 | 0.00 | 83.99 | 22,000 | 7,500 | 640 | 1,300 | 3,400 |
| | 23-Jun-93 | 96.73 | | 17.02 | 0.00 | 79.71 | 15,000 | 5,800 | 120 | 1,100 | 2,100 |
| | 30-Sep-93 | | | 18.25 | 0.00 | 78.48 | 25,000 | 7,600 | 410 | 1,000 | 4,400 |

* = Not Analyzed ND = Not Detected

E-Z Serve Location # 100877
525 West "A" Street
Hayward, CA

| MW# | Date | Well Elev (feet) | Depth to F.P. (feet) | Depth to G.W. (feet) | F.P. Thickness (feet) | G.W. Elevation (feet) | DHS Method TPH (ppb) | (EPA 8020) B (ppb) | T (ppb) | E (ppb) | X (ppb) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW#6 | | | | | | | | | | | |
| | 5-Feb-92 | 100.97 | | 21.29 | 0.00 | 79.68 | 51,000 | 5,400 | 3,500 | 3,600 | 10,000 |
| | 11-Sep-92 | | | 20.56 | 0.00 | 80.41 | 24,000 | 2,500 | 830 | 1,400 | 2,300 |
| | 22-Dec-92 | | | 20.31 | 0.00 | 80.66 | 23,000 | 5,100 | 630 | 2,000 | 3,100 |
| | 3-Mar-93 | | | 16.83 | 0.00 | 84.14 | 18,000 | 4,400 | 820 | 1,400 | 2,400 |
| | 23-Jun-93 | 97.09 | | 17.30 | 0.00 | 79.79 | 18,000 | 4,600 | 850 | 2,700 | 3,400 |
| | 30-Sep-93 | | 19.02 | 19.05 | 0.03 | 78.06 | * | * | * | * | * |
| MW#7 | | | | | | | | | | | |
| | 23-Jun-93 | 97.44 | | 17.87 | 0.00 | 79.57 | 29,000 | 4,200 | 71 | 4,400 | 5,600 |
| | 30-Sep-93 | | | 18.94 | 0.00 | 78.50 | 30,000 | 3,200 | 71 | 2,800 | 3,400 |
| MW#8 | | | | | | | | | | | |
| | 23-Jun-93 | 97.61 | | 17.64 | 0.00 | 79.97 | 350 | 43 | 9.3 | 35 | 67 |
| | 30-Sep-93 | | | 18.85 | 0.00 | 78.76 | 2,700 | 190 | 340 | 170 | 720 |
| MW#9 | | | | | | | | | | | |
| | 23-Jun-93 | 95.41 | | 15.94 | 0.00 | 79.47 | 45,000 | 14,000 | 1,200 | 2,800 | 12,000 |
| | 30-Sep-93 | | | 17.05 | 0.00 | 78.36 | 86,000 | 22,000 | 1,100 | 3,300 | 15,000 |
| MW#10 | | | | | | | | | | | |
| | 23-Jun-93 | 97.11 | | 17.39 | 0.00 | 79.72 | 35,000 | 980 | 640 | 3,500 | 12,000 |
| | 30-Sep-93 | | | 18.58 | 0.00 | 78.53 | 4,000 | 230 | 12 | 100 | 680 |
| MW#1A | | | | | | | | | | | |
| | 23-Jun-93 | 97.59 | | 17.80 | 0.21 | 79.96 | * | * | * | * | * |
| | 30-Sep-93 | | | * * | * * | * * | * | * | * | * | * |

* = Not Analyzed ND = Not Detected

**Trace Analysis Laboratory, Inc.**
3423 Investment Boulevard, #8 • Hayward, California 94545
Telephone (510) 783-6960
Facsimile (510) 783-1512

TAL

LOG NUMBER: 3689
DATE SAMPLED: 09/30/93
DATE RECEIVED: 09/30/93
DATE ANALYZED: 10/12/93
DATE REPORTED: 10/12/93

CUSTOMER: E-Z Serve Petroleum Marketing Company

REQUESTER: Bart Racca of Associated Soils Analysis

PROJECT: No. 420-93, 525 West A Street, Hayward

Sample Type: Water

| Method and Constituent: | Units | MW-1 Concentration | MW-1 Reporting Limit | MW-2 Concentration | MW-2 Reporting Limit | MW-3 Concentration | MW-3 Reporting Limit |
|---|---|---|---|---|---|---|---|
| DHS Method: | | | | | | | |
| Total Petroleum Hydrocarbons as Gasoline | ug/l | 33,000 | 1,300 | 38,000 | 2,600 | 4,300 | 64 |
| Modified EPA Method 8020 for: | | | | | | | |
| Benzene | ug/l | 10,000 | 100 | 12,000 | 210 | 1,100 | 5.2 |
| Toluene | ug/l | 440 | 100 | 780 | 210 | 160 | 5.2 |
| Ethylbenzene | ug/l | 940 | 120 | 1,500 | 240 | 690 | 5.9 |
| Xylenes | ug/l | 1,700 | 310 | 6,500 | 610 | 670 | 15 |

| Method and Constituent: | Units | MW-4 Concentration | MW-4 Reporting Limit | MW-5 Concentration | MW-5 Reporting Limit | MW-7 Concentration | MW-7 Reporting Limit |
|---|---|---|---|---|---|---|---|
| DHS Method: | | | | | | | |
| Total Petroleum Hydrocarbons as Gasoline | ug/l | 21,000 | 260 | 25,000 | 260 | 30,000 | 260 |
| Modified EPA Method 8020 for: | | | | | | | |
| Benzene | ug/l | 7,000 | 21 | 7,600 | 21 | 3,200 | 21 |
| Toluene | ug/l | 2,100 | 21 | 410 | 21 | 71 | 21 |
| Ethylbenzene | ug/l | 970 | 24 | 1,000 | 24 | 2,800 | 24 |
| Xylenes | ug/l | 2,600 | 61 | 4,400 | 61 | 3,400 | 61 |

Concentrations reported as ND were not detected at or above the reporting limit.

LOG NUMBER: 3689
DATE SAMPLED: 09/30/93
DATE RECEIVED: 09/30/93
DATE ANALYZED: 10/12/93
DATE REPORTED: 10/12/93
PAGE: Two

Sample Type: Water

| Method and Constituent: | Units | MW-8 Concentration | MW-8 Reporting Limit | MW-9 Concentration | MW-9 Reporting Limit | MW-10 Concentration | MW-10 Reporting Limit |
|---|---|---|---|---|---|---|---|
| DHS Method: | | | | | | | |
| Total Petroleum Hydrocarbons as Gasoline | ug/l | 2,700 | 50 | 86,000 | 2,600 | 4,000 | 50 |
| Modified EPA Method 8020 for: | | | | | | | |
| Benzene | ug/l | 190 | 2.1 | 22,000 | 100 | 230 | 2.1 |
| Toluene | ug/l | 340 | 2.1 | 1,100 | 100 | 12 | 2.1 |
| Ethylbenzene | ug/l | 170 | 2.4 | 3,300 | 120 | 100 | 2.4 |
| Xylenes | ug/l | 720 | 6.1 | 15,000 | 310 | 680 | 6.1 |

| Method and Constituent: | Units | Method Blank Concentration | Method Blank Reporting Limit |
|---|---|---|---|
| DHS Method: | | | |
| Total Petroleum Hydrocarbons as Gasoline | ug/l | ND | 50 |
| Modified EPA Method 8020 for: | | | |
| Benzene | ug/l | ND | 0.50 |
| Toluene | ug/l | ND | 0.50 |
| Ethylbenzene | ug/l | ND | 0.50 |
| Xylenes | ug/l | ND | 1.5 |

QC Summary:

% Recovery: 100
% RPD: 1.0

Concentrations reported as ND were not detected at or above the reporting limit.

Louis W. DuPuis
Quality Assurance/Quality Control Manager

3689

SEND RESULTS AND INVOICE TO:

**Associated Soils Analysis**
1141 Batavia Court • Tulare, California 93274
(209) 688-1011 • FAX (209) 688-1195

# CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Bart Rocca
Sampler Name (Print): Jack Rash
Project Address: 525 West A Street - Hayward
Project Number: 420-93
Project Name: 22 Service Center
Sampler Signature:

I attest that the proper field sampling proceedures were used during the collection of these samples

| Boring Number and Sample ID Number | Depth | Transport Chest Temp | # Containers | Matrix: SOIL | WATER | AIR | SLUDGE | OTHER | Method Preserved: ICE | $HNO_3$ | HCl | OTHER | Sampling: DATE | TIME |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | | 38° | 2 | | ✓ | | | | ✓ | | ✓ | | 9-30-93 | 0920 |
| MW-2 | | 38° | 2 | | ✓ | | | | ✓ | | ✓ | | | 1135 |
| MW-3 | | 38° | 2 | | ✓ | | | | ✓ | | ✓ | | | 1300 |
| MW-4 | | 38° | 2 | | ✓ | | | | ✓ | | ✓ | | | 1230 |
| MW-5 | | 38° | 2 | | ✓ | | | | ✓ | | ✓ | | | 1220 |
| MW-7 | | 38° | 2 | | ✓ | | | | ✓ | | ✓ | | | 1320 |
| MW-8 | | 38° | 2 | | ✓ | | | | ✓ | | ✓ | | | 1355 |
| MW-9 | | 38° | 2 | | ✓ | | | | ✓ | | ✓ | | | 1495 |
| MW-10 | | 38° | 2 | | ✓ | | | | ✓ | | ✓ | | | 1505 |
| Travel Blank | | 38° | 1 | | ✓ | | | | ✓ | | ✓ | | | |

ANALYSIS REQUEST

| BTX&E (EPA 5030/8020) | TPH GASOLINE (DHS GC-FID) | TPH DIESEL (DHS GC-FID) | ☐ EPA 601 ☐ EPA 602 plus Xylenes | TPH GASOLINE | TPH GASOLINE (MODIFIED EPA 8015 GC/FID) | TPH Diesel 3510 GC/FID | TPH Diesel 3550 GC/FID | TPH as Aviation Fuel | TCLP: ☐ Metals ☐ VOA ☐ Semi VOA | TOTAL OIL AND GREASE ☐ 418.1 ☐ 413.2 ☐ 503A | ☐ Organic Lead (State Draft) ☐ Total Lead | CAM Metals: ☐ STLC ☐ TTLC | EPTOX: ☐ Metals ☐ Pesticides ☐ Herbicides | EPA Priority Pollutant: ☐ Metals ☐ HSL | DBCP (EPA 504) | EDB (EPA 504) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | ✓ | | | ✓ | | | | | | | | | | | | |
| ✓ | ✓ | | | ✓ | | | | | | | | | | | | |
| ✓ | ✓ | | | ✓ | | | | | | | | | | | | |
| ✓ | ✓ | | | ✓ | | | | | | | | | | | | |
| ✓ | ✓ | | | ✓ | | | | | | | | | | | | |
| ✓ | ✓ | | | ✓ | | | | | | | | | | | | |
| ✓ | ✓ | | | ✓ | | | | | | | | | | | | |
| ✓ | ✓ | | | ✓ | | | | | | | | | | | | |
| ✓ | ✓ | | | ✓ | | | | | | | | | | | | |
| ✓ | | | | ✓ | | | | | | | | | | | | |

## CUSTODY RECORD

| Relinquished by Sampler: | Received by: | Received by: | Received by Laboratory: |
|---|---|---|---|
| | | | Bob T. Brown |
| Date: 9-30-93 | Date: | Date: | Date: 9/30/93 |
| Time: 3:10 | Time: | Time: | Time: 3:10 |

Transport Chest Temp.

SPECIAL HANDLING

- ☐ 24 HOURS
- ☐ EXPEDITED 48 HOURS
- ☐ SEVEN DAY
- ☐ FAX
- ☐ OTHER ____ (#) of BUSINESS DAYS
- ☐ QA/QC
- ☐ CLP Level
- ☐ Blue Level

SPECIAL DETECTION LIMITS (Specify)

REMARKS:

Lab Use Only
Storage Location
Lot No.:
Work Order No.:

P/u, water, 19 VOAs, HCl, Green, 5-Day