

THRIFTY OIL CO.

March 3, 1993

Mr. Scott O. Seary
Alameda County
Department of Environmental Health
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, California 94621

RE: **Thrifty Oil Co. Station #054**
2504 Castro Valley Boulevard
Castro Valley, California
4th. QUARTER REPORT, 1992

Dear Mr. Seary,

This letter report presents the results of soil/groundwater treatment and site monitoring during the 4th. quarter of 1992 at the subject site. A vicinity map is presented as **Figure 1**. The approximate location of the on- and off-site monitoring wells are shown on **Figure 2**. During the reporting period, the unit has not been operational. All monitoring is conducted by Earth Management Co. (EMC).

Site Monitoring and Sample Collection

The site was visited on December 23, 1992, by an EMC technician in order to gauge the wells and collect groundwater samples. Water levels were measured in each well from the rim of well cover using a Marine Moisture Tape (nearest 0.01 feet) capable of also measuring the presence of free floating hydrocarbons. *Depth to water* ranged from about 2.45 to 9.96 feet below grade which is consistent with previous data collected. As of December 23, 1992, six of the twelve wells exhibited noticeable floating product that was measurable only as a sheen or film. The depth to water data was used in conjunction with the recent survey data to determine groundwater elevations across the site. The interpretation of groundwater flow across the site is depicted on **Figure 2**. In general, the *groundwater flow* was to the *east* at a gradient of about 4 feet per 100 feet. No pumping depressions were noted as the unit was not operational.

Prior to collecting groundwater samples from the wells that did not exhibit free floating hydrocarbons, about 4 well volumes of groundwater was removed using a PVC bailer. During the purging process, the pH, conductivity and temperature were checked and recorded to insure formation water was entering the well to be sampled. About 8 to 32 gallons of water were removed from each well and stored in 55 gallon D.O.T approved drums pending disposal or discharge through the treatment unit. Groundwater samples were collected with a Teflon bailer. Samples were maintained and transported in 40 milliliter vials placed on ice pending delivery to American Analytics, a state certified analytical laboratory headquartered in Chatsworth, California. Field monitoring sheets prepared by EMC personnel are included in **Appendix A**.



Analytical Results

Groundwater samples were analyzed for total hydrocarbons (TPH) and volatile aromatic compounds (BETX) using EPA methods 8015 and 8020, respectively. Copies of the laboratory analysis reports are attached in **Appendix B**. A summary of the results are presented in **Table 1**. The two down-gradient wells, RS-8 and RS-10 indicate no detectable hydrocarbons. Iso-concentration maps of TPH and benzene based on the September sampling event are presented as **Figures 3 and 4**.

Treatment Unit Operation Status

Based on the data obtained by EMC, the RSI-SAVE unit has operated a total of 5209 hours. The unit did not operate this quarter. A total of about 2672 gallons of water has been processed by the unit and discharged to the local sanitary sewer to date. However, no discharge of water occurred this period.

Over the last year of operation it is apparent that the RSI-SAVE unit has had some operational problems. In January, 1993, EMC conducted a detailed inspection of the equipment and determined that the internal combustion engine needed to be replaced for adequate system operation. This work is currently being conducted and the treatment unit should be operational by the end of March, 1993.

Since the unit has been inoperable for some time, all down hole pumps and appurtenant piping will be inspected and repaired/replaced as needed. In addition, weekly site visits will be made to provide system adjustments. After twelve months of continuous operation, the progress of treatment will be evaluated by estimating hydrocarbon removal rates, monitoring well water quality data and vapor/groundwater capture. If progress is being made on plume containment and clean-up, the unit will be operated as installed for another twelve month evaluation period. If the evaluation of the data suggests that modifications are needed to enhance the clean-up efforts at the site, proposals for pilot studies involving air sparging or enhancing the indigenous microbial population will be prepared and included in the quarterly status reports.

Closing

Thrifty will continue to conduct quarterly groundwater monitoring at the site. In addition, the RSI-SAVE system will be restarted and appropriate monitoring will be accomplished. If you have any questions please contact me at (310) 923-9876.

Very truly yours,

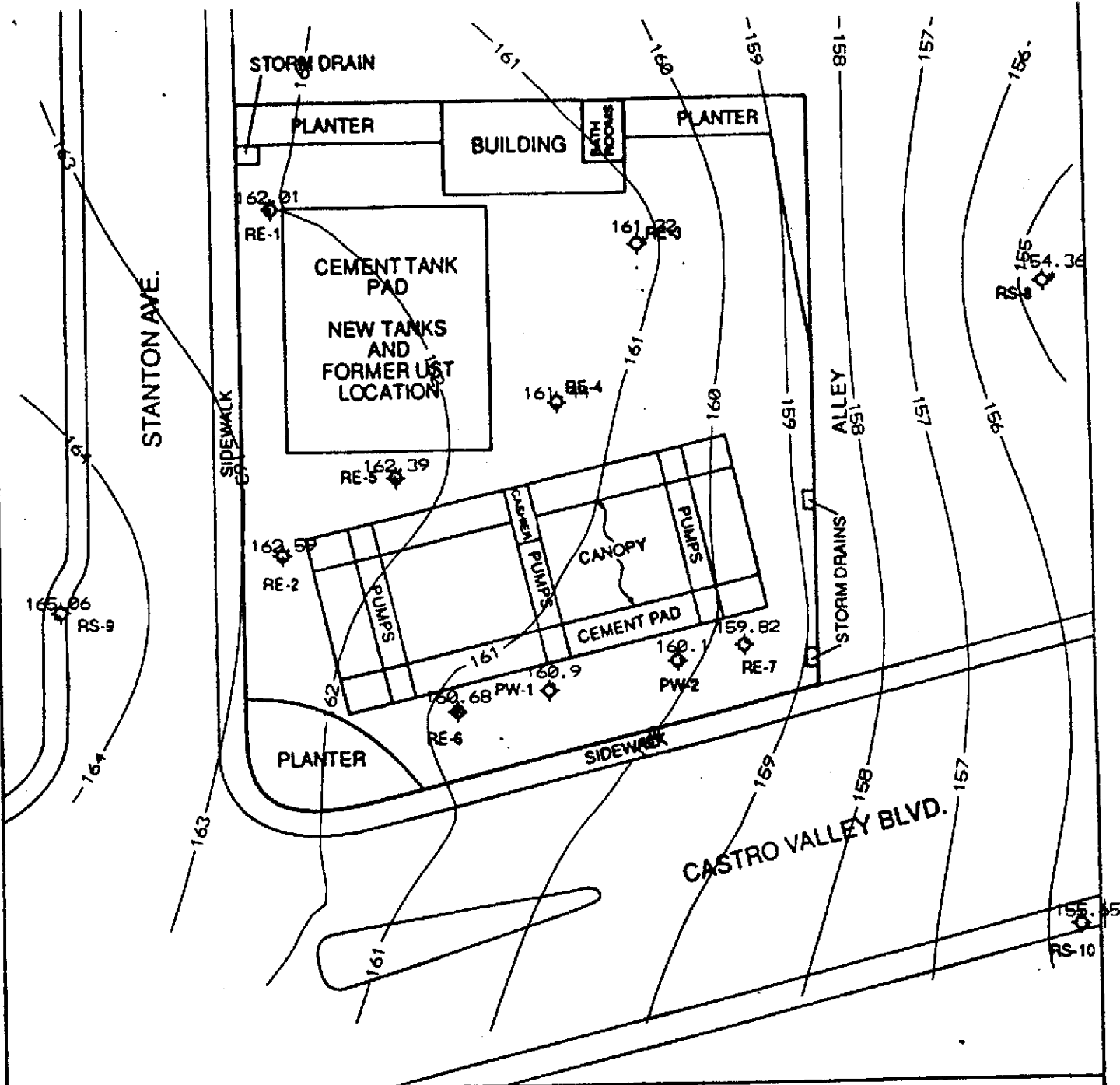


Peter D'Amico
Manager
Environmental Affairs





| | | |
|---------------|---|---------------------|
| 21161-002-044 | THRIFTY OIL STORE #054 | VICINITY MAP |
| DAMES & MOORE | 2504 CASTRO VALLEY BLVD. CASTRO VALLEY, CA | |



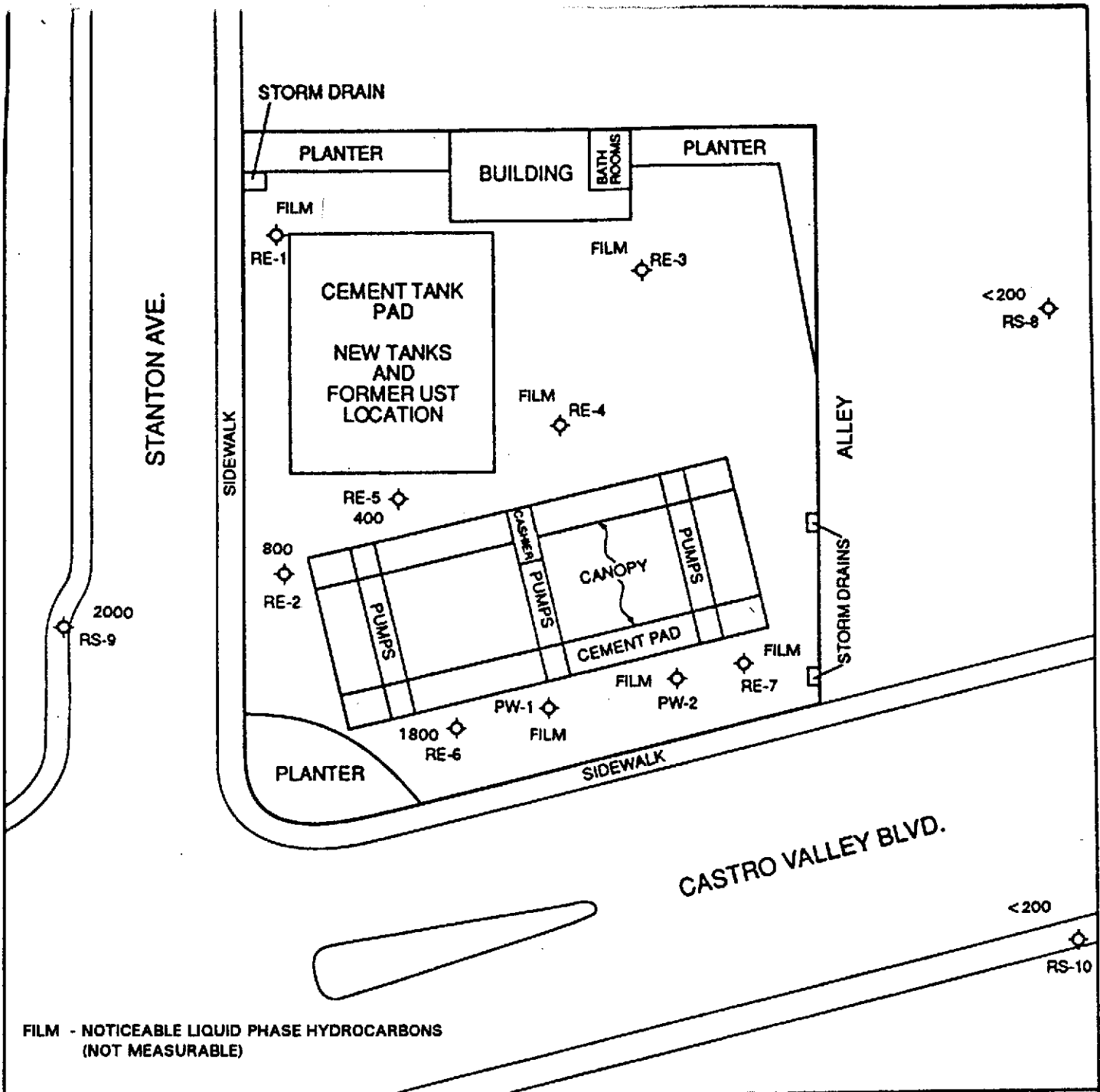
SITE PLAN II
THRIFTY OIL CO. #054
CASTRO VALLEY, CALIFORNIA
 Prepared for
THRIFTY OIL CO.
DOWNEY, CALIFORNIA



- GROUNDWATER CONTOUR, 12-23-92
- EXISTING MONITORING WELL



FIGURE 2



FILM - NOTICEABLE LIQUID PHASE HYDROCARBONS
(NOT MEASURABLE)

SITE PLAN II
THRIFTY OIL CO. #054
CASTRO VALLEY, CALIFORNIA
 Prepared for
THRIFTY OIL CO.
DOWNEY, CALIFORNIA



<200 - TPH CONCENTRATION, ppb

◊ EXISTING MONITORING WELL

FIGURE 3

Table 1 - Summary of Analytical Results

| I.D | Date | D-Wat | TPH | Benzene | Toluene | E-Benzene | Xylenes |
|----------|----------|------------|--------|---------|---------|-----------|---------|
| PW-1 | 4/11/88 | - | NSC | | | | |
| (166.46) | 4/09/90 | 5.10 | 230000 | 600 | 2700 | 1000 | 16000 |
| | 10/30/90 | 6.17 | 35000 | 240 | 970 | 240 | 3580 |
| | 1/18/91 | 6.28 | 37000 | 43 | 140 | 42 | 1600 |
| | 2/12/91 | 5.88 | 45000 | 99 | 130 | 25 | 700 |
| | 3/20/91 | 4.75 | 1900 | 0.43 | ND | ND | 2.8 |
| | 5/22/91 | 5.10 | 41000 | 600 | 730 | 250 | 3800 |
| | 6/19/91 | 5.61 | NSC | | | | |
| | 7/17/91 | 5.53(Film) | NSC | | | | |
| | 8/07/91 | 5.67(Film) | NSC | | | | |
| | 9/24/91 | 5.57(Film) | NSC | | | | |
| | 10/23/91 | 6.53(Film) | NSC | | | | |
| | 11/06/91 | 5.85(Film) | NSC | | | | |
| | 12/04/91 | 5.91(Film) | NSC | | | | |
| | 1/29/92 | 5.43(Film) | NSC | | | | |
| | 2/26/92 | 5.54(Film) | NSC | | | | |
| | 3/19/92 | 5.47 | ND | ND | ND | ND | ND |
| | 4/22/92 | 5.62(Film) | NSC | | | | |
| | 5/21/92 | 6.21 | 1300 | 19 | 2.9 | 0.7 | 58 |
| | 6/25/92 | 6.94 | NSC | | | | |
| | 7/30/92 | 5.90(Film) | NSC | | | | |
| | 8/20/92 | 7.12(Film) | NSC | | | | |
| | 9/30/92 | 6.42 | 3400 | 57 | ND | 26 | 240 |
| | 12/23/92 | 5.56(Film) | NSC | | | | |
| PW-2 | 4/11/88 | - | NSC | | | | |
| (166.18) | 4/09/90 | 5.81 | 600000 | 1300 | 11000 | 4600 | 43000 |
| | 10/30/90 | 6.95 | 48000 | 310 | 51 | 10 | 480 |
| | 1/18/91 | 6.92 | 86000 | 230 | 1400 | 350 | 8300 |
| | 2/12/91 | 6.78 | 160000 | 680 | 1300 | 250 | 7000 |
| | 3/20/91 | 5.54 | 17000 | 34 | 50 | ND | 1100 |
| | 5/22/91 | 6.07 | 14000 | 57 | 2100 | 500 | 8200 |
| | 6/19/91 | 6.37(Film) | NSC | | | | |
| | 7/17/91 | 6.38(Film) | NSC | | | | |
| | 8/07/91 | 6.63(Film) | NSC | | | | |
| | 9/24/91 | 6.42(Film) | NSC | | | | |
| | 10/23/91 | 7.25(Film) | NSC | | | | |
| | 11/06/91 | 6.44(Film) | NSC | | | | |
| | 12/04/91 | 6.65(Film) | NSC | | | | |
| | 1/29/92 | 6.17(Film) | NSC | | | | |
| | 2/26/92 | 5.90(Film) | NSC | | | | |
| | 3/19/92 | 5.80(Film) | NSC | | | | |
| | 4/22/92 | 5.88(Film) | NSC | | | | |
| | 5/21/92 | 6.03(Film) | NSC | | | | |
| | 6/25/92 | 6.57(Film) | NSC | | | | |
| | 7/30/92 | 6.20(Film) | NSC | | | | |
| | 8/20/92 | 6.64(Film) | NSC | | | | |
| | 9/30/92 | 6.88(Film) | NSC | | | | |
| | 12/23/92 | 6.08(Film) | NSC | | | | |

Results reported in micrograms per liter (ug/L)

- NA - Not Analyzed.
- TPH - Total Petroleum Hydrocarbons as gasoline.
- D-Wat - Depth to Water.
- NSC - No sample collected due to film or sheen of liquid phase hydrocarbons.

Table 1(CONT.) - Summary of Analytical Results

| I.D | Date | D-Wat | TPH | Benzene | Toluene | E-Benzene | Xylenes |
|------------------|------------|------------|--------|---------|---------|-----------|---------|
| RE-1 (166.82) | 4/11/88 | -- | 37000 | 1900 | 8400 | 1200 | 15000 |
| | 4/09/90 | 4.99 | 45000 | 6100 | 7000 | 2000 | 8800 |
| | 10/30/90 | 5.95 | 72000 | 7700 | 5300 | 1800 | 8900 |
| | 1/18/91 | 5.17 | 150000 | 11000 | 14000 | 1800 | 4300 |
| | 2/12/91 | 4.16 | 140000 | 11000 | 12000 | 1600 | 13000 |
| | 3/20/91 | 4.75 | 53000 | 3100 | 4200 | 400 | 5500 |
| | 5/22/91 | 4.42 | 85000 | 8700 | 10000 | 1800 | 12000 |
| | 6/19/91 | 4.93 | 110000 | 8500 | 9600 | 2600 | 16000 |
| | 7/17/91 | 5.19 | 5500 | 950 | ND | 26 | ND |
| | 8/07/91 | 5.12 | NA | 6700 | 5000 | ND | 7100 |
| | 9/24/91 | 5.87 | 60000 | 6800 | 4300 | 640 | 6900 |
| | 10/23/91 | 5.81 | 79000 | 7900 | 8300 | 450 | 7100 |
| | 11/06/91 | 5.56 | 130000 | 14000 | 15000 | 1100 | 8800 |
| | 12/04/91 | 5.35 | 50000 | 8000 | 4700 | 520 | 4100 |
| | 1/29/92 | 4.50 | 21000 | 10300 | 11000 | 780 | 6000 |
| | 2/26/92 | 5.27 | 38000 | 8400 | 10500 | 720 | 7100 |
| | 3/19/92 | 4.47 | 48000 | 6200 | 9700 | 780 | 7200 |
| | 4/22/92 | 4.62 | NSC | | | | |
| | 5/21/92 | 4.98 | 20000 | 7600 | 10100 | 830 | 6900 |
| | 6/25/92 | 5.14(Film) | NSC | | | | |
| | 7/30/92 | 5.30(Film) | NSC | | | | |
| 8/20/92 | 5.28(Film) | NSC | | | | | |
| 9/30/92 | 5.66(Film) | NSC | | | | | |
| 12/23/92 | 4.81(Film) | NSC | | | | | |
| RE-2 (167.19) | 4/11/88 | -- | NSC | | | | |
| | 4/09/90 | 4.90 | 850 | 5.8 | 0.5 | 4.8 | 1.1 |
| | 10/30/90 | 5.34 | 440 | 2.8 | 0.91 | 13 | 3.14 |
| | 1/18/91 | 4.90 | 1100 | 8.4 | 3.1 | ND | 10 |
| | 2/12/91 | 4.94 | 1100 | 5.9 | ND | 0.77 | ND |
| | 3/20/91 | 4.32 | 550 | 4.3 | ND | ND | ND |
| | 5/22/91 | 4.43 | 1000 | 5.3 | 3.6 | 4.4 | 8.9 |
| | 6/19/91 | 6.43 | 700 | 2.1 | 1.4 | 3.8 | 3.5 |
| | 7/17/91 | 4.75 | 880 | 12.0 | 8.0 | 4.3 | 28.0 |
| | 8/07/91 | 4.87 | NA | 3.8 | 1.6 | ND | ND |
| | 9/24/91 | 5.50 | 670 | 7.2 | 7.1 | ND | 23 |
| | 10/23/91 | 5.63 | 2700 | 52 | 60 | 22 | 130 |
| | 11/06/91 | 5.14 | 1900 | 18 | 61 | 9.1 | 83 |
| | 12/04/91 | 5.28 | 1100 | 26 | 47 | 4.3 | 42 |
| | 1/29/92 | 5.11 | 900 | 14 | 24 | 5.3 | 19 |
| | 2/26/92 | 4.31 | 500 | 3.4 | 3.5 | 2.7 | 2.7 |
| | 3/19/92 | 4.45 | 1200 | 14 | 20 | 15 | 18 |
| | 4/22/92 | 4.78 | 200 | ND | ND | ND | ND |
| | 5/21/92 | 5.02 | 500 | 7.5 | 6.8 | 3.9 | 7.4 |
| | 6/25/92 | 5.13 | ND | ND | 0.9 | 0.7 | ND |
| | 7/30/92 | 5.19 | 500 | 7.7 | 8.6 | 3.2 | 1.7 |
| 8/20/92 | 5.27 | 1100 | 6.6 | 4.5 | 2.7 | 2.0 | |
| 9/30/92 | 5.45 | 500 | 5.4 | 2.4 | 1.8 | 4.5 | |
| 12/23/92 | 4.60 | 800 | 1.9 | ND | ND | 2.3 | |

Results reported in micrograms per liter (ug/L)

- NA - Not Analyzed.
- TPH - Total Petroleum Hydrocarbons as gasoline.
- D-Wat - Depth to Water.
- NSC - No sample collected due to film or sheen of liquid phase hydrocarbons.

Table 1 (CONT.) - Summary of Analytical Results

| I.D | Date | D-Wat | TPH | Benzene | Toluene | Ethyl-Benzene | Xylenes |
|------------------|------------|------------|--------|---------|---------|---------------|---------|
| RE-3 (167.39) | 4/11/88 | -- | 70000 | 8600 | 5300 | 800 | 13000 |
| | 4/09/90 | 7.15 | 370000 | 2300 | 4900 | 3200 | 31000 |
| | 10/30/90 | 7.84 | 13000 | 860 | 660 | 220 | 2210 |
| | 1/18/91 | 6.90 | 42000 | 4700 | 4500 | 21 | 7700 |
| | 2/12/91 | 6.62 | 72000 | 3600 | 4500 | ND | 7600 |
| | 3/20/91 | 5.87 | 65000 | 2400 | 9400 | 50 | 9800 |
| | 5/22/91 | 5.98(Film) | NSC | | | | |
| | 6/19/91 | 6.84(Film) | NSC | | | | |
| | 7/17/91 | 7.10(Film) | NSC | | | | |
| | 8/07/91 | 7.30(Film) | NSC | | | | |
| | 9/24/91 | 7.84(Film) | NSC | | | | |
| | 10/23/91 | 8.07(Film) | NSC | | | | |
| | 11/06/91 | 7.63(Film) | NSC | | | | |
| | 12/04/91 | 7.83(Film) | NSC | | | | |
| | 1/29/92 | 7.17(Film) | NSC | | | | |
| | 2/28/92 | 5.56(Film) | NSC | | | | |
| | 3/19/92 | 5.44(Film) | NSC | | | | |
| | 4/22/92 | 6.56(Film) | NSC | | | | |
| | 5/21/92 | 6.90(Film) | NSC | | | | |
| | 6/25/92 | 7.18(Film) | NSC | | | | |
| 7/30/92 | 6.80(Film) | NSC | | | | | |
| 8/20/92 | 7.25(Film) | NSC | | | | | |
| 9/30/92 | 7.68(Film) | NSC | | | | | |
| 12/23/92 | 6.07(Film) | NSC | | | | | |
| RE-4 (166.94) | 4/11/88 | -- | 150000 | 12000 | 8000 | 1000 | 27000 |
| | 4/09/90 | -- | NSC | | | | |
| | 10/30/90 | 7.04 | 87000 | 7200 | 10000 | 1600 | 12900 |
| | 1/18/91 | 11.62 | 70000 | 5000 | 5400 | 790 | 9900 |
| | 2/12/91 | 11.63 | 87000 | 5200 | 2800 | 240 | 11000 |
| | 3/20/91 | 11.61 | 6500 | 370 | 230 | 17 | 670 |
| | 5/22/91 | 10.3(Film) | NSC | | | | |
| | 6/19/91 | 11.1(Film) | NSC | | | | |
| | 7/17/91 | 6.20(Film) | NSC | | | | |
| | 8/07/91 | 8.15(Film) | NSC | | | | |
| | 9/24/91 | 10.4(Film) | NSC | | | | |
| | 10/23/91 | 11.2(Film) | NSC | | | | |
| | 11/06/91 | 6.62(Film) | NSC | | | | |
| | 12/04/91 | 11.2(Film) | NSC | | | | |
| | 1/29/92 | 7.72(Film) | NSC | | | | |
| | 2/26/92 | 5.13(Film) | NSC | | | | |
| | 3/19/92 | 5.00(Film) | NSC | | | | |
| | 4/22/92 | 5.94(Film) | NSC | | | | |
| | 5/21/92 | 5.40(Film) | NSC | | | | |
| | 6/25/92 | 5.71(0.02) | NSC | | | | |
| 7/30/92 | 6.33(Film) | NSC | | | | | |
| 8/20/92 | 5.80(Film) | NSC | | | | | |
| 9/30/92 | 6.34(Film) | NSC | | | | | |
| 12/23/93 | 5.50(Film) | NSC | | | | | |

Results reported in micrograms per liter (ug/L)

- NA - Not Analyzed.
- TPH - Total Petroleum Hydrocarbons as gasoline.
- D-Wat - Depth to Water.
- NSC - No sample collected due to film or sheen of liquid phase hydrocarbons.

Table 1 (CONT.) - Summary of Analytical Results

| I.D | Date | D-Wat | TPH | Benzene | Toluene | Ethyl-Benzene | Xylenes |
|------------------|----------|------------|--------|---------|---------|---------------|---------|
| RE-5 (166.51) | 4/11/88 | - | 14000 | 1300 | 1100 | 100 | 2600 |
| | 4/09/90 | 4.79 | 3000 | 690 | 190 | 40 | 270 |
| | 10/30/90 | 5.86 | 3400 | 910 | 48 | 87 | 249 |
| | 1/18/91 | 4.40 | 1400 | 180 | 8.6 | 0.52 | 48 |
| | 2/12/91 | 4.76 | 1000 | ND | ND | 0.65 | ND |
| | 3/20/91 | 5.08 | 3000 | 250 | 53 | ND | 110 |
| | 5/22/91 | 4.52 | 2500 | 330 | 7.8 | 5.6 | 200 |
| | 6/19/91 | 4.39 | 2000 | 59 | 1.6 | 5.1 | 110 |
| | 7/17/91 | 5.05(Film) | NSC | | | | |
| | 8/07/91 | 5.02(Film) | NSC | | | | |
| | 9/24/91 | 5.86(Film) | NSC | | | | |
| | 10/23/91 | 5.84(Film) | NSC | | | | |
| | 11/06/91 | 5.48 | 9900 | 2300 | 37 | 260 | 180 |
| | 12/04/91 | 5.43 | 4500 | 1000 | 27 | ND | 180 |
| | 1/29/92 | 5.12 | 600 | 6.1 | 2.3 | ND | 47 |
| | 2/26/92 | 4.93 | 500 | 5.4 | 2.7 | 1.2 | 14 |
| | 3/19/92 | 4.45 | ND | 1.7 | 1.1 | ND | 5.5 |
| | 4/22/92 | 4.63 | 1600 | 240 | 2.2 | ND | 160 |
| | 5/21/92 | 4.90 | 1200 | 410 | 37 | ND | 118 |
| | 6/25/92 | 5.15 | ND | 1.0 | 0.8 | 0.8 | 0.4 |
| | 7/30/92 | 5.30 | ND | 2.0 | 1.8 | 1.9 | 6.4 |
| | 8/20/92 | 5.44 | 300 | 1.7 | 3.3 | 0.7 | 12 |
| | 9/30/92 | 5.73 | 1900 | 140 | ND | 19 | 35 |
| 12/23/92 | 4.75 | 400 | 8.0 | ND | ND | ND | |
| RE-6 (166.51) | 4/11/88 | - | 6000 | 3000 | 40 | 80 | 140 |
| | 4/09/90 | 5.64 | 3000 | 990 | ND | 70 | ND |
| | 10/30/90 | 6.66 | 3400 | 1000 | 28 | ND | ND |
| | 1/18/91 | 6.61 | 6300 | 1200 | ND | 3 | 15 |
| | 2/12/91 | 6.20 | 5200 | 850 | 6.4 | 4.9 | 41 |
| | 3/20/91 | 5.62 | 5800 | 680 | 12 | 8 | 16 |
| | 5/22/91 | 6.05 | 8500 | 1700 | 14 | 24 | 6.7 |
| | 6/19/91 | 6.12(Film) | NSC | | | | |
| | 7/17/91 | 6.20 | 120000 | 9300 | 13000 | 2400 | 16000 |
| | 8/07/91 | 6.27 | NA | 590 | 5.3 | ND | 14 |
| | 9/24/91 | 6.63 | 7000 | 310 | 11 | 5.3 | 35 |
| | 10/23/91 | 6.36(Film) | NSC | | | | |
| | 11/06/91 | 6.15 | 4000 | 710 | 18 | 29 | 48 |
| | 12/04/91 | 6.19 | 4100 | 1100 | 14 | 33 | 39 |
| | 1/29/92 | 6.70 | 2600 | 790 | 14 | ND | 49 |
| | 2/26/92 | 5.44 | 3100 | 950 | 21 | 30 | 33 |
| | 3/19/92 | 5.30 | 2200 | 630 | 14 | 12 | 40 |
| | 4/22/92 | 6.00 | NA | 730 | 2.2 | ND | 40 |
| | 5/21/92 | 6.25 | 1500 | 840 | 7.8 | 7.1 | 34 |
| | 6/25/92 | 6.38 | < 2000 | 740 | 8 | 27 | 28 |
| | 7/30/92 | 6.42(Film) | NSC | | | | |
| | 8/20/92 | 6.50 | 2800 | 630 | 17 | 23 | 22 |
| | 9/30/92 | 5.66 | 7800 | 540 | ND | 12 | 29 |
| 12/23/92 | 5.83 | 1800 | 350 | ND | 7.7 | 11 | |

Results reported in micrograms per liter (ug/L)

- NA - Not Analyzed.
- TPH - Total Petroleum Hydrocarbons as gasoline.
- D-Wat - Depth to Water.
- NSC - No sample collected due to film or sheen of liquid phase hydrocarbons.

Table 1 (CONT.) - Summary of Analytical Results

| I.D | Date | E-Wat | TPH | Benzene | Toluene | Ethyl-Benzene | Xylenes |
|------------------|------------|------------|--------|---------|---------|---------------|---------|
| RE-7 (166.04) | 4/11/88 | -- | <50000 | 17000 | 4400 | 600 | 8400 |
| | 4/05/90 | 5.93 | 16000 | 7000 | 1200 | 640 | 1600 |
| | 10/30/90 | 8.21 | 31000 | 14000 | ND | ND | ND |
| | 1/18/91 | 11.8(Film) | NSC | | | | |
| | 2/12/91 | 10.8(Film) | NSC | | | | |
| | 3/20/91 | 9.96 | 120000 | 12000 | 2800 | 490 | 6600 |
| | 5/22/91 | 11.7(Film) | NSC | | | | |
| | 6/19/91 | 11.5(Film) | NSC | | | | |
| | 7/17/91 | 7.80(Film) | NSC | | | | |
| | 8/07/91 | 9.88(0.03) | NSC | | | | |
| | 9/24/91 | 9.85(0.03) | NSC | | | | |
| | 10/23/91 | 9.96(Film) | NSC | | | | |
| | 11/06/91 | 6.77(Film) | NSC | | | | |
| | 12/04/91 | 10.8(Film) | NSC | | | | |
| | 1/29/92 | 8.64(Film) | NSC | | | | |
| | 2/26/92 | 6.00(Film) | NSC | | | | |
| | 3/19/92 | 5.55(Film) | NSC | | | | |
| | 4/22/92 | 6.12(Film) | NSC | | | | |
| | 5/21/92 | 6.40(Film) | NSC | | | | |
| | 6/25/92 | 6.73(0.02) | NSC | | | | |
| 7/30/92 | 6.73(Film) | NSC | | | | | |
| 8/20/92 | 6.82(Film) | NSC | | | | | |
| 9/30/92 | 7.26(Film) | NSC | | | | | |
| 12/23/92 | 6.22(Film) | NSC | | | | | |
| RS-8 (164.32) | 8/07/91 | 9.68 | ND | ND | ND | ND | ND |
| | 9/27/91 | 9.89 | ND | ND | ND | ND | ND |
| | 10/23/91 | 10.05 | ND | ND | ND | ND | ND |
| | 11/06/91 | 9.71 | ND | ND | ND | ND | ND |
| | 12/04/91 | 10.00 | ND | ND | ND | ND | ND |
| | 1/29/92 | 9.28 | ND | 2.1 | 1.0 | 2.5 | 3.6 |
| | 2/26/92 | 7.05 | ND | ND | 0.7 | ND | 0.7 |
| | 3/19/92 | 7.30 | ND | 0.5 | 1.0 | 1.5 | 2.7 |
| | 4/22/92 | 8.60 | ND | ND | ND | ND | ND |
| | 5/21/92 | 9.22 | ND | ND | ND | ND | ND |
| | 6/25/92 | 9.49 | ND | ND | ND | ND | ND |
| | 7/30/92 | 9.55 | ND | 1.1 | 4.2 | ND | 3.0 |
| | 8/20/92 | 9.63 | ND | 2.0 | 4.7 | ND | 5.7 |
| 9/30/92 | 9.90 | ND | ND | ND | ND | ND | |
| 12/23/92 | 9.96 | ND | ND | ND | ND | ND | |
| RS-9 (167.51) | 8/07/91 | 2.28 | NA | 0.5 | ND | 330 | 1200 |
| | 9/27/91 | 2.77 | 13000 | 3.5 | 3.0 | 82 | 140 |
| | 10/23/91 | 3.53 | 11000 | ND | ND | 39 | 340 |
| | 11/06/91 | 2.51 | 6800 | 8.4 | 0.6 | 22 | 230 |
| | 12/04/91 | 3.20 | 6500 | 6.5 | 0.7 | 87 | 200 |
| | 1/29/92 | 2.65 | 8100 | 22 | 10 | 140 | 260 |
| | 2/26/92 | 3.42 | 13000 | 40 | 16 | 220 | 600 |
| | 3/19/92 | 3.12 | 12000 | 21 | 12 | 100 | 280 |
| | 4/22/92 | 3.24 | 8600 | ND | ND | 20 | 37 |
| | 5/21/92 | 3.75 | 6000 | 21 | 10 | 53 | 210 |
| | 6/25/92 | 2.65 | 370 | 2.3 | 1.5 | 0.7 | 4.3 |
| | 7/30/92 | 2.70 | 3600 | 20 | ND | 39 | 80 |
| | 8/20/92 | 2.83 | 3000 | 0.7 | 5.2 | 2.0 | 5.3 |
| 9/30/92 | 2.80 | 9200 | 4.8 | 6.5 | 12 | 91 | |
| 12/23/92 | 2.45 | 2000 | 17 | ND | 8.2 | 18 | |

Results reported in micrograms per liter (ug/L)

- NA - Not Analyzed.
- TPH - Total Petroleum Hydrocarbons as gasoline.
- D-Wat - Depth to Water.
- NSC - No sample collected due to film or sheen of liquid phase hydrocarbons.

Table 1(CONT.) - Summary of Analytical Results

| I.D | Date | D-Wat | TPH | Benzene | Toluene | Ethyl-Benzene | Xylenes |
|------------------|----------|-------|-----|---------|---------|---------------|---------|
| RS10 (162.89) | 8/07/91 | 6.16 | ND | ND | ND | ND | ND |
| | 9/27/01 | 6.48 | ND | ND | ND | ND | ND |
| | 10/23/91 | 7.37 | ND | ND | ND | ND | ND |
| | 11/06/91 | 6.44 | ND | ND | ND | ND | ND |
| | 12/04/91 | 7.02 | ND | ND | ND | ND | ND |
| | 1/29/92 | 6.78 | ND | ND | ND | ND | ND |
| | 2/26/92 | 8.33 | ND | ND | ND | ND | ND |
| | 3/19/92 | 8.02 | ND | ND | ND | ND | 0.6 |
| | 4/22/92 | 7.78 | ND | ND | ND | ND | ND |
| | 5/21/92 | 6.21 | ND | ND | 0.6 | ND | 1.2 |
| | 6/25/92 | 7.73 | ND | ND | ND | ND | ND |
| | 7/30/92 | 7.84 | ND | ND | 0.5 | ND | 1.0 |
| | 8/20/92 | 7.50 | ND | ND | ND | ND | ND |
| | 9/30/92 | 7.63 | ND | ND | ND | ND | ND |
| | 12/23/92 | 7.24 | ND | ND | ND | ND | ND |

Results reported in micrograms per liter (ug/L)

- NA - Not Analyzed.
- TPH - Total Petroleum Hydrocarbons as gasoline.
- D-Wat - Depth to Water.
- NSC - No sample collected due to film or sheen of liquid phase hydrocarbons.



PROJECT STATUS REPORT
 THRIFTY OIL CO. S.S. #054
 2504 CASTRO VALLEY BLVD.
 CASTRO VALLEY, CA 94546
 DATE: 12/23/1992

| F R E Q . | MONITORING | | | | ODORS | | | FREE | | WELLS CONNECTED TO SYSTEM (W) | | | | | | | |
|-----------------------|-------------------|------|--------|----|------------|----|---|---------|----|-------------------------------|----|-----------|----|-------|-----|-------|-----|
| | OBSERVATION WELLS | | | | (S=SLIGHT) | | | PRODUCT | | CONNECT | | INTEGRITY | | VAPOR | | WATER | |
| | NO. | DTW | DTP | PT | YES | NO | S | YES | NO | YES | NO | OK | NO | ON | OFF | ON | OFF |
| M | PW-1 | 5.56 | SCREEN | | | | Y | | Y | | X | - | | | | | |
| M | PW-2 | 6.08 | SCREEN | | | | Y | | Y | | X | - | | | | | |
| M | RE-1 | 4.81 | SCREEN | | | | Y | | Y | | X | - | | | | | |
| M | RE-2 | 4.60 | | | | Y | | | Y | | X | - | | | | | |
| M | RE-3 | 6.07 | SCREEN | | | | Y | | Y | | X | - | | | | | |
| M | RE-4 | 5.50 | Film | | Y | | | | Y | | X | - | | | | | |
| M | RE-5 | 4.75 | | | | Y | | | Y | | X | - | | | | | |
| M | RE-6 | 5.83 | | | | Y | | | Y | | X | - | | | | | |
| M | RE-7 | 6.22 | Film | | Y | | | | Y | | X | - | | | | | |
| M | RS-8 | 9.96 | | | | Y | | | Y | | - | X | | | | | |
| M | RS-9 | 2.45 | | | | Y | | | Y | | - | X | | | | | |
| M | RS-10 | 7.24 | | | | Y | | | Y | | - | X | | | | | |

SAVE SYSTEM WEEKLY

| PARAMETER | U/M | DATA | PARAMETER | U/M | DATA |
|---------------|--------|------|-------------------|---------|------|
| TIME | AM/PM | | AIR FLOW | C F M | |
| WORKING | YES/NO | No | VAPOR FLOW | C F M | |
| RESTARTED | YES/NO | | FUEL FLOW | C F M/H | |
| HOURS | # | | WELL VACUUM | IN H2O | |
| ENGINE ROT. | RPM | | L P G TANKS | % | #1: |
| ENGINE VACUUM | IN HG | | GAS METER READING | - | N/A |
| TANK VACUUM | IN HG | | WATER FLOWMETER | GALL. | |

EXHAUST (By others) _____

INLET TO ENGINE _____

MAINTENANCE ES/100/400/800 _____ FOR SPECIFIC OPERATIONS SEE FIELD RECORD

WATER SAMPLING - CHECK () WHEN DONE

| EFFLUENT | INFLUENT | WELLS |
|-----------|-----------|--------------------|
| () _____ | () _____ | () Q.-SEE C.CUST. |

REMARKS: _____

FREE PRODUCT REMOVED: APPROX. _____ GALLONS WATER REMOVED: APPROX. 115 GALLONS

DATA RECORDED BY : _____ INPUT BY: M.M. >\FF\054rsirt

FIELD DATA - GROUNDWATER WELL SAMPLING PROGRAM

DATE 12/23/1992 STATION NO. 054
 PERSONNEL E. GARMAN, T. ROU
 WELL NO. RE 2 WEATHER PARTLY CLOUDY
 SAMPLE EQUIPMENT TEFLON BAILER

Before Sampling

Total Well Depth 17.10 Ft. Well Diameter 4"
 Depth to Water 4.60 Ft. Purge Volume 32 gallons

Sampling Data

| Time | <u>11:20</u> | <u>11:30</u> | <u>11:40</u> | <u>11:50</u> | <u>12:00</u> | <u>12:05</u> | |
|------|--------------|--------------|--------------|--------------|--------------|--------------|--|
| EC | <u>860</u> | <u>870</u> | <u>900</u> | <u>950</u> | <u>950</u> | <u>950</u> | |
| pH | <u>7.90</u> | <u>7.80</u> | <u>7.70</u> | <u>7.60</u> | <u>7.60</u> | <u>7.60</u> | |
| Temp | <u>65</u> | <u>66</u> | <u>66.2</u> | <u>67</u> | <u>67</u> | <u>67</u> | |
| Gal. | <u>10</u> | <u>15</u> | <u>20</u> | <u>25</u> | <u>30</u> | <u>32</u> | |
| Time | | | | | | | |
| EC | | | | | | | |
| pH | | | | | | | |
| Temp | | | | | | | |
| Gal. | | | | | | | |

After Sampling

Depth to Water 5.10 Ft. Total Well Depth 17.10 Ft.

FIELD DATA - GROUNDWATER WELL SAMPLING PROGRAM

DATE 12/23/92 STATION NO. 054
 PERSONNEL E. GARMAN, T. ROW
 WELL NO. RE.5 WEATHER PARTLY CLOUDY
 SAMPLE EQUIPMENT TETLON BAILER

Before Sampling

Total Well Depth 18.25 Ft. Well Diameter 4"
 Depth to Water 5.83 Ft. Purge Volume 32 gallons

Sampling Data

| Time | <u>12:25</u> | <u>12:35</u> | <u>12:45</u> | <u>12:55</u> | <u>1:05</u> | <u>1:15</u> | |
|------|--------------|--------------|--------------|--------------|-------------|-------------|--|
| EC | <u>1050</u> | <u>1080</u> | <u>1100</u> | <u>1120</u> | <u>1120</u> | <u>1120</u> | |
| pH | <u>7.50</u> | <u>7.45</u> | <u>7.41</u> | <u>7.20</u> | <u>7.20</u> | <u>7.20</u> | |
| Temp | <u>60</u> | <u>63</u> | <u>62.7</u> | <u>65</u> | <u>65</u> | <u>65</u> | |
| Gal. | <u>10</u> | <u>15</u> | <u>20</u> | <u>25</u> | <u>30</u> | <u>32</u> | |
| Time | | | | | | | |
| EC | | | | | | | |
| pH | | | | | | | |
| Temp | | | | | | | |
| Gal. | | | | | | | |

After Sampling

Depth to Water 6.25 Ft. Total Well Depth 18.25 Ft.

FIELD DATA - GROUNDWATER WELL SAMPLING PROGRAM

DATE 12/23/1992 STATION NO. 054
 PERSONNEL E. CALMAN - T. ROU
 WELL NO. RE-6 WEATHER PARTLY CLOUDY
 SAMPLE EQUIPMENT TEFLON BAILER

Before Sampling

Total Well Depth 13.65 Ft. Well Diameter 4"
 Depth to Water 5.83 Ft. Purge Volume 20 gallons

Sampling Data

| Time | <u>1:25</u> | <u>1:30</u> | <u>1:35</u> | <u>1:45</u> | <u>1:55</u> | | |
|------|-------------|-------------|-------------|-------------|-------------|--|--|
| EC | <u>1370</u> | <u>1400</u> | <u>1430</u> | <u>1430</u> | <u>1430</u> | | |
| pH | <u>6.80</u> | <u>6.60</u> | <u>6.44</u> | <u>6.44</u> | <u>6.44</u> | | |
| Temp | <u>64</u> | <u>66.5</u> | <u>67.9</u> | <u>68</u> | <u>68</u> | | |
| Gal. | <u>5</u> | <u>8</u> | <u>10</u> | <u>15</u> | <u>20</u> | | |
| Time | | | | | | | |
| EC | | | | | | | |
| pH | | | | | | | |
| Temp | | | | | | | |
| Gal. | | | | | | | |

After Sampling

Depth to Water 6.48 Ft. Total Well Depth 13.65 Ft.

FIELD DATA - GROUNDWATER WELL SAMPLING PROGRAM

DATE 12/23/1992 STATION NO. 054
 PERSONNEL E. GASMAN, T. ROSU
 WELL NO. RS-8 WEATHER PARTLY CLOUDY
 SAMPLE EQUIPMENT TEFLON BAILER

Before Sampling

Total Well Depth 25.20 Ft. Well Diameter 2"
 Depth to Water 9.96 Ft. Purge Volume 10 gallons

Sampling Data

| | | | | | | | |
|------|-------------|-------------|--------------|--------------|--------------|-------|-------|
| Time | <u>9:50</u> | <u>9:55</u> | <u>10:00</u> | <u>10:05</u> | <u>10:10</u> | _____ | _____ |
| EC | <u>1710</u> | <u>1470</u> | <u>1440</u> | <u>1440</u> | <u>1440</u> | _____ | _____ |
| pH | <u>6.71</u> | <u>6.65</u> | <u>6.42</u> | <u>6.42</u> | <u>6.42</u> | _____ | _____ |
| Temp | <u>62.4</u> | <u>65</u> | <u>66</u> | <u>66</u> | <u>66</u> | _____ | _____ |
| Gal. | <u>2</u> | <u>4</u> | <u>6</u> | <u>8</u> | <u>10</u> | _____ | _____ |
| Time | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| EC | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| pH | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| Temp | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| Gal. | _____ | _____ | _____ | _____ | _____ | _____ | _____ |

After Sampling

Depth to Water 12.03 Ft. Total Well Depth 25.20 Ft.

FIELD DATA - GROUNDWATER WELL SAMPLING PROGRAM

DATE 12/23/92 STATION NO. 054
 PERSONNEL E. GASMAN, T. ROSU
 WELL NO. RS-9 WEATHER PARTLY CLOUDY
 SAMPLE EQUIPMENT TEFLON BAITER

Before Sampling

Total Well Depth 15 Ft. Well Diameter 2"
 Depth to Water 2.45 Ft. Purge Volume 2 gallons

Sampling Data

| Time | <u>10:30</u> | <u>10:35</u> | <u>10:40</u> | <u>10:45</u> | <u>10:50</u> | _____ | _____ |
|------|--------------|--------------|--------------|--------------|--------------|-------|-------|
| EC | <u>1000</u> | <u>1010</u> | <u>1030</u> | <u>1030</u> | <u>1030</u> | _____ | _____ |
| pH | <u>6.15</u> | <u>6.10</u> | <u>6.03</u> | <u>6.03</u> | <u>6.03</u> | _____ | _____ |
| Temp | <u>60</u> | <u>61.5</u> | <u>62</u> | <u>62</u> | <u>62</u> | _____ | _____ |
| Gal. | <u>1</u> | <u>2</u> | <u>4</u> | <u>6</u> | <u>8</u> | _____ | _____ |
| Time | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| EC | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| pH | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| Temp | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| Gal. | _____ | _____ | _____ | _____ | _____ | _____ | _____ |

After Sampling

Depth to Water 3.10 Ft. Total Well Depth 15 Ft.

FIELD DATA - GROUNDWATER WELL SAMPLING PROGRAM

DATE 12/23/1992 STATION NO. 054
 PERSONNEL E. GARMAN, T. ROFU
 WELL NO. RS-10 WEATHER PARTLY CLOUDY
 SAMPLE EQUIPMENT TEFLON BAILER

Before Sampling

Total Well Depth 24.45 Ft. Well Diameter 2"
 Depth to Water 7.24 Ft. Purge Volume 11 gallons

Sampling Data

| Time | 9:10 | 9:15 | 9:20 | 9:25 | 9:30 | 9:35 | |
|------|------|------|------|------|------|------|--|
| EC | 5050 | 5100 | 5220 | 5300 | 5300 | 5300 | |
| pH | 7.37 | 7.35 | 7.30 | 7.23 | 7.23 | 7.23 | |
| Temp | 66 | 66.2 | 66.5 | 66.7 | 66.7 | 66.8 | |
| Gal. | 2 | 4 | 6 | 8 | 10 | 11 | |
| Time | | | | | | | |
| EC | | | | | | | |
| pH | | | | | | | |
| Temp | | | | | | | |
| Gal. | | | | | | | |

After Sampling

Depth to Water 8.10 Ft. Total Well Depth 24.45 Ft.



LABORATORY ANALYSIS RESULTS

Client: Thrifty Oil Company
Project No.: N/A
Project Name: TOC #054
Sample Matrix: Water
Method: EPA 8020 (BTEX)/8015M (Gasoline)

AA Project No.: A135054-7
Date Sampled: 12/23/92
Date Received: 12/28/92
Date Reported: 1/15/93

| Date Analyzed: | 12/29/92 | 12/30/92 | 12/30/92 | 12/29/92 | Reporting | Units |
|-------------------------|----------|----------|----------|----------|------------------|-------|
| AA I.D. #: | 12887 | 12888 | 12889 | 12890 | Detection Limits | |
| Client I.D. #: | RE 2 | RE 5 | RE 6 | RE 8 | | |
| <u>Compound</u> | | | | | | |
| Benzene | 1.9 | 8.0 | 350 | <0.5 | 5 | µg/L |
| Toluene | <0.5 | <0.5 | <2.5 | <0.5 | 5 | µg/L |
| Ethylbenzene | <0.5 | <0.5 | 7.7 | <0.5 | 5 | µg/L |
| Xylenes | 2.3 | 1.7 | 11 | <1 | 1 | µg/L |
| Gasoline Range Organics | 0.8 | 0.4 | 1.8 | <0.2 | 0.2 | mg/L |

<: Not detected at or above the value of the concentration indicated.


George Havalias
Laboratory Director

mls



LABORATORY ANALYSIS RESULTS

Client: Thrifty Oil Company
Project No.: N/A
Project Name: TOC #054
Sample Matrix: Water
Method: EPA 8020 (BTEX)/8015M (Gasoline)

AA Project No.: A135054-7
Date Sampled: 12/23/92
Date Received: 12/28/92
Date Reported: 1/15/93

| Date Analyzed: | 12/30/92 | 12/29/92 | 12/29/92 | Reporting | Units |
|-------------------------|----------|----------|------------|------------------|-------|
| AA I.D. #: | 12891 | 12892 | 12893 | Detection Limits | |
| Client I.D. #: | RS 9 | RS 10 | Trip Blank | | |
| <u>Compound</u> | | | | | |
| Benzene | 17 | <0.5 | <0.5 | 5 | µg/L |
| Toluene | <0.5 | <0.5 | <0.5 | 5 | µg/L |
| Ethylbenzene | 8.2 | <0.5 | <0.5 | 5 | µg/L |
| Xylenes | 18 | <1 | <1 | 1 | µg/L |
| Gasoline Range Organics | 2 | <0.2 | <0.2 | 0.2 | mg/L |

<: Not detected at or above the value of the concentration indicated.



George Havalias
Laboratory Director

mls



LABORATORY QA/QC REPORT

Client: Thrifty Oil Company
Method: EPA 8020 (BTEX)/8015M (Gasoline), QC, Spike
A.A. Project No.: A135054-7

Sample Matrix: Water
Date Analyzed: 12/29/92
Date Reported: 1/15/93

| Compound | Spike Recovery (%) | Spike/Duplicate Recovery (%) | RPD (%) |
|-------------------------|--------------------|------------------------------|---------|
| Benzene | 76 | 62 | 20 |
| Toluene | 87 | 72 | 19 |
| Ethylbenzene | 92 | 86 | 6.7 |
| Total Xylenes | 97 | 91 | 6.4 |
| Gasoline Range Organics | 95 | 94 | 1.0 |

RPD: Relative Percent Difference


George Havalias
Laboratory Director

mls




LABORATORY QA/QC REPORT

Client: Thrifty Oil Company
Method: EPA 8020 (BTEX)/8015M (Gasoline), QC, Spike
A.A. Project No.: A135054-7

Sample Matrix: Water
Date Analyzed: 12/30/92
Date Reported: 1/15/93

| Compound | Spike Recovery (%) | Spike/Duplicate Recovery (%) | RPD (%) |
|-------------------------|--------------------|------------------------------|---------|
| Benzene | 81 | 80 | 1.2 |
| Toluene | 89 | 89 | 0 |
| Ethylbenzene | 91 | 90 | 1.1 |
| Total Xylenes | 96 | 95 | 1.0 |
| Gasoline Range Organics | 90 | 99 | 9.5 |

RPD: Relative Percent Difference



George Havalias
Laboratory Director

mls

THRIFTY OIL CO.

March 3, 1993

Mr. Scott O. Seary
Alameda County
Department of Environmental Health
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, California 94621

RE: Thrifty Oil Co. Station #054
2504 Castro Valley Boulevard
Castro Valley, California
4th. QUARTER REPORT, 1992

Dear Mr. Seary,

This letter report presents the results of soil/groundwater treatment and site monitoring during the 1st. quarter of 1993 at the subject site. A vicinity map is presented as **Figure 1**. The approximate location of the on- and off-site monitoring wells are shown on **Figure 2**. During the reporting period, the engine of the RSI unit was replaced and was operational the first week in May, 1993. **All monitoring is conducted by Earth Management Co. (EMC).**

Site Monitoring and Sample Collection

The site was visited on March 10, 1993, by an EMC technician in order to gauge the wells and collect groundwater samples. Water levels were measured in each well from the rim of well cover using a Marine Moisture Tape (nearest 0.01 feet) capable of also measuring the presence of free floating hydrocarbons. *Depth to water* ranged from about 2.40 to 8.95 feet below grade which is consistent with previous data collected, only a slight rise noted. **As of March 10, 1993, six of the twelve wells exhibited noticeable floating product that was measurable only as a sheen or film.** The depth to water data was used in conjunction with the recent survey data to determine groundwater elevations across the site. The interpretation of groundwater flow across the site is depicted on **Figure 2**. **In general, the groundwater flow was to the east at a gradient of about 4 feet per 100 feet. No pumping depressions were noted as the unit was not yet operational.**

Prior to collecting groundwater samples from the wells that did not exhibit free floating hydrocarbons, about 4 well volumes of groundwater was removed using a PVC bailer. During the purging process, the pH, conductivity and temperature were checked and recorded to insure formation water was entering the well to be sampled. About 8 to 37 gallons of water were



removed from each well and stored in 55 gallon D.O.T approved drums pending disposal or discharge through the treatment unit. Groundwater samples were collected with a Teflon bailer. Samples were maintained and transported in 40 milliliter vials placed on ice pending delivery to American Analytics, a state certified analytical laboratory headquartered in Chatsworth, California. Field monitoring sheets prepared by EMC personnel are included in Appendix A.

Analytical Results

Groundwater samples were analyzed for total hydrocarbons (TPH) and volatile aromatic compounds (BETX) using EPA methods 8015 and 8020, respectively. Copies of the laboratory analysis reports are attached in Appendix B. A summary of the results are presented in Table 1. The two down-gradient wells, RS-8 and RS-10 indicate no detectable hydrocarbons. Iso-concentration maps of TPH and benzene based on the March sampling event are presented as Figures 3 and 4.

Treatment Unit Operation Status

Based on the data obtained by EMC, ~~the RSI-SAVE unit has operated a total of 5209 hours. The unit did not operate this quarter.~~ A total of about 2672 gallons of water has been processed by the unit and discharged to the local sanitary sewer to date. However, no discharge of water occurred this period.

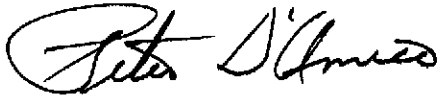
~~Over the last year of operation it is apparent that the RSI-SAVE unit has had some operational problems.~~ In January, 1993, EMC conducted a detailed inspection of the equipment and determined that the internal combustion engine needed to be replaced for adequate system operation. This work is now complete and the treatment unit is operational.

As stated in the previous status report, weekly site visits will be made to provide system adjustments. ~~After twelve months of continuous operation, the progress of treatment will be evaluated by estimating hydrocarbon removal rates, monitoring well water quality data and vapor/groundwater capture.~~ If progress is being made on plume containment and clean-up, the unit will be operated as installed for another twelve month evaluation period. If the evaluation of the data suggests that modifications are needed to enhance the clean-up efforts at the site, proposals for pilot studies involving air sparging or enhancing the indigenous microbial population will be prepared and included in the quarterly status reports.

Closing

Thrifty will continue to conduct quarterly groundwater monitoring at the site. In addition, the RSI-SAVE system will be restarted and appropriate monitoring will be accomplished. If you have any questions please contact me at (310) 923-9876.

Very truly yours,



Peter D'Amico
Manager
Environmental Affairs



Table 1 - Summary of Analytical Results

| I.D | Date | D-Wat | TPH | Benzene | Toluene | E-Benzene | Xylenes |
|------------------|------------|------------|--------|---------|---------|-----------|---------|
| PW-1 (166.46) | 4/11/88 | - | NSC | | | | |
| | 4/09/90 | 5.10 | 230000 | 600 | 2700 | 1000 | 16000 |
| | 10/30/90 | 6.17 | 35000 | 240 | 970 | 240 | 3580 |
| | 1/18/91 | 6.28 | 37000 | 43 | 140 | 42 | 1600 |
| | 2/12/91 | 5.88 | 45000 | 99 | 130 | 25 | 700 |
| | 3/20/91 | 4.75 | 1900 | 0.43 | ND | ND | 2.8 |
| | 5/22/91 | 5.10 | 41000 | 600 | 730 | 250 | 3800 |
| | 6/19/91 | 5.61 | NSC | | | | |
| | 7/17/91 | 5.53(Film) | NSC | | | | |
| | 8/07/91 | 5.67(Film) | NSC | | | | |
| | 9/24/91 | 5.57(Film) | NSC | | | | |
| | 10/23/91 | 6.53(Film) | NSC | | | | |
| | 11/06/91 | 5.85(Film) | NSC | | | | |
| | 12/04/91 | 5.91(Film) | NSC | | | | |
| | 1/29/92 | 5.43(Film) | NSC | | | | |
| | 2/26/92 | 5.54(Film) | NSC | | | | |
| | 3/19/92 | 5.47 | ND | ND | ND | ND | ND |
| | 4/22/92 | 5.62(Film) | NSC | | | | |
| | 5/21/92 | 6.21 | 1300 | 19 | 2.9 | 0.7 | 58 |
| | 6/25/92 | 6.94 | NSC | | | | |
| 7/30/92 | 5.90(Film) | NSC | | | | | |
| 8/20/92 | 7.12(Film) | NSC | | | | | |
| 9/30/92 | 6.42 | 3400 | 57 | ND | 26 | 240 | |
| 12/23/92 | 5.56(Film) | NSC | | | | | |
| 3/10/93 | 5.65(Film) | NSC | | | | | |
| PW-2 (166.18) | 4/11/88 | - | NSC | | | | |
| | 4/09/90 | 5.81 | 600000 | 1300 | 11000 | 4600 | 43000 |
| | 10/30/90 | 6.95 | 48000 | 310 | 51 | 10 | 480 |
| | 1/18/91 | 6.92 | 86000 | 230 | 1400 | 350 | 8300 |
| | 2/12/91 | 6.78 | 160000 | 680 | 1300 | 250 | 7000 |
| | 3/20/91 | 5.54 | 17000 | 34 | 50 | ND | 1100 |
| | 5/22/91 | 6.07 | 14000 | 57 | 2100 | 500 | 8200 |
| | 6/19/91 | 6.37(Film) | NSC | | | | |
| | 7/17/91 | 6.38(Film) | NSC | | | | |
| | 8/07/91 | 6.63(Film) | NSC | | | | |
| | 9/24/91 | 6.42(Film) | NSC | | | | |
| | 10/23/91 | 7.25(Film) | NSC | | | | |
| | 11/06/91 | 6.44(Film) | NSC | | | | |
| | 12/04/91 | 6.65(Film) | NSC | | | | |
| | 1/29/92 | 6.17(Film) | NSC | | | | |
| | 2/26/92 | 5.90(Film) | NSC | | | | |
| | 3/19/92 | 5.80(Film) | NSC | | | | |
| | 4/22/92 | 5.88(Film) | NSC | | | | |
| | 5/21/92 | 6.03(Film) | NSC | | | | |
| | 6/25/92 | 6.57(Film) | NSC | | | | |
| 7/30/92 | 6.20(Film) | NSC | | | | | |
| 8/20/92 | 6.64(Film) | NSC | | | | | |
| 9/30/92 | 6.88(Film) | NSC | | | | | |
| 12/23/92 | 6.08(Film) | NSC | | | | | |
| 3/10/93 | 5.95(Film) | NSC | | | | | |

Results reported in micrograms per liter (ug/L)

- NA - Not Analyzed.
- TPH - Total Petroleum Hydrocarbons as gasoline.
- D-Wat - Depth to Water.
- NSC - No sample collected due to film or sheen of liquid phase hydrocarbons.

Table 1(CONT.) - Summary of Analytical Results

| I.D | Date | D-Wat | TPH | Benzene | Toluene | E-Benzene | Xylenes | |
|------------------|------------|------------|--------|---------|---------|-----------|---------|--|
| RE-1 (166.82) | 4/11/88 | -- | 37000 | 1900 | 8400 | 1200 | 15000 | |
| | 4/09/90 | 4.99 | 45000 | 6100 | 7000 | 2000 | 8800 | |
| | 10/30/90 | 5.95 | 72000 | 7700 | 5300 | 1800 | 8900 | |
| | 1/18/91 | 5.17 | 150000 | 11000 | 14000 | 1800 | 4300 | |
| | 2/12/91 | 4.16 | 140000 | 11000 | 12000 | 1600 | 13000 | |
| | 3/20/91 | 4.75 | 53000 | 3100 | 4200 | 400 | 5500 | |
| | 5/22/91 | 4.42 | 85000 | 8700 | 10000 | 1800 | 12000 | |
| | 6/19/91 | 4.93 | 110000 | 8500 | 9600 | 2600 | 16000 | |
| | 7/17/91 | 5.19 | 5500 | 950 | ND | 26 | ND | |
| | 8/07/91 | 5.12 | NA | 6700 | 5000 | ND | 7100 | |
| | 9/24/91 | 5.87 | 60000 | 6800 | 4300 | 640 | 6900 | |
| | 10/23/91 | 5.81 | 79000 | 7900 | 8300 | 450 | 7100 | |
| | 11/06/91 | 5.56 | 130000 | 14000 | 15000 | 1100 | 8800 | |
| | 12/04/91 | 5.35 | 50000 | 8000 | 4700 | 520 | 4100 | |
| | 1/29/92 | 4.50 | 21000 | 10300 | 11000 | 780 | 6000 | |
| | 2/26/92 | 5.27 | 38000 | 8400 | 10500 | 720 | 7100 | |
| | 3/19/92 | 4.47 | 48000 | 6200 | 9700 | 780 | 7200 | |
| | 4/22/92 | 4.62 | NSC | | | | | |
| | 5/21/92 | 4.98 | 20000 | 7600 | 10100 | 830 | 6900 | |
| | 6/25/92 | 5.14(Film) | NSC | | | | | |
| | 7/30/92 | 5.30(Film) | NSC | | | | | |
| 8/20/92 | 5.28(Film) | NSC | | | | | | |
| 9/30/92 | 5.66(Film) | NSC | | | | | | |
| 12/23/92 | 4.81(Film) | NSC | | | | | | |
| 3/10/93 | 4.13(Film) | NSC | | | | | | |
| RE-2 (167.19) | 4/11/88 | -- | NSC | | | | | |
| | 4/09/90 | 4.90 | 850 | 5.8 | 0.5 | 4.8 | 1.1 | |
| | 10/30/90 | 5.34 | 440 | 2.8 | 0.91 | 13 | 3.14 | |
| | 1/18/91 | 4.90 | 1100 | 8.4 | 3.1 | ND | 10 | |
| | 2/12/91 | 4.94 | 1100 | 5.9 | ND | 0.77 | ND | |
| | 3/20/91 | 4.32 | 550 | 4.3 | ND | ND | ND | |
| | 5/22/91 | 4.43 | 1000 | 5.3 | 3.6 | 4.4 | 8.9 | |
| | 6/19/91 | 6.43 | 700 | 2.1 | 1.4 | 3.8 | 3.5 | |
| | 7/17/91 | 4.75 | 880 | 12.0 | 8.0 | 4.3 | 28.0 | |
| | 8/07/91 | 4.87 | NA | 3.8 | 1.6 | ND | ND | |
| | 9/24/91 | 5.50 | 670 | 7.2 | 7.1 | ND | 23 | |
| | 10/23/91 | 5.63 | 2700 | 52 | 60 | 22 | 130 | |
| | 11/06/91 | 5.14 | 1900 | 18 | 61 | 9.1 | 83 | |
| | 12/04/91 | 5.26 | 1100 | 26 | 47 | 4.3 | 42 | |
| | 1/29/92 | 5.11 | 900 | 14 | 24 | 5.3 | 19 | |
| | 2/26/92 | 4.31 | 500 | 3.4 | 3.5 | 2.7 | 2.7 | |
| | 3/19/92 | 4.45 | 1200 | 14 | 20 | 15 | 18 | |
| | 4/22/92 | 4.78 | 200 | ND | ND | ND | ND | |
| | 5/21/92 | 5.02 | 500 | 7.5 | 6.8 | 3.9 | 7.4 | |
| | 6/25/92 | 5.13 | ND | ND | 0.9 | 0.7 | ND | |
| | 7/30/92 | 5.19 | 500 | 7.7 | 8.6 | 3.2 | 1.7 | |
| 8/20/92 | 5.27 | 1100 | 6.6 | 4.5 | 2.7 | 2.0 | | |
| 9/30/92 | 5.45 | 500 | 5.4 | 2.4 | 1.8 | 4.5 | | |
| 12/23/92 | 4.60 | 800 | 1.9 | ND | ND | 2.3 | | |
| 3/10/93 | 4.18 | 1200 | ND | 1.4 | ND | 2.1 | | |

Results reported in micrograms per liter (ug/L)

- NA - Not Analyzed.
- TPH - Total Petroleum Hydrocarbons as gasoline.
- D-Wat - Depth to Water.
- NSC - No sample collected due to film or sheen of liquid phase hydrocarbons.

Table 1 (CONT.) - Summary of Analytical Results

| I:D | Date | D-Wat | TPH | Benzene | Toluene | Ethyl-Benzene | Xylenes |
|------------------|------------|------------|--------|---------|---------|---------------|---------|
| RE-3 (167.39) | 4/11/88 | -- | 70000 | 6600 | 5300 | 800 | 13000 |
| | 4/09/90 | 7.15 | 370000 | 2300 | 4900 | 3200 | 31000 |
| | 10/30/90 | 7.84 | 13000 | 860 | 660 | 220 | 2210 |
| | 1/18/91 | 6.90 | 42000 | 4700 | 4500 | 21 | 7700 |
| | 2/12/91 | 6.62 | 72000 | 3600 | 4500 | ND | 7600 |
| | 3/20/91 | 5.87 | 65000 | 2400 | 9400 | 50 | 9800 |
| | 5/22/91 | 5.98(Film) | NSC | | | | |
| | 6/19/91 | 6.84(Film) | NSC | | | | |
| | 7/17/91 | 7.10(Film) | NSC | | | | |
| | 8/07/91 | 7.30(Film) | NSC | | | | |
| | 9/24/91 | 7.84(Film) | NSC | | | | |
| | 10/23/91 | 8.07(Film) | NSC | | | | |
| | 11/06/91 | 7.63(Film) | NSC | | | | |
| | 12/04/91 | 7.83(Film) | NSC | | | | |
| | 1/29/92 | 7.17(Film) | NSC | | | | |
| | 2/26/92 | 5.56(Film) | NSC | | | | |
| | 3/19/92 | 5.44(Film) | NSC | | | | |
| | 4/22/92 | 6.56(Film) | NSC | | | | |
| | 5/21/92 | 6.90(Film) | NSC | | | | |
| | 6/25/92 | 7.18(Film) | NSC | | | | |
| 7/30/92 | 6.80(Film) | NSC | | | | | |
| 8/20/92 | 7.25(Film) | NSC | | | | | |
| 9/30/92 | 7.68(Film) | NSC | | | | | |
| 12/23/92 | 6.07(Film) | NSC | | | | | |
| 3/10/93 | 5.66(Film) | NSC | | | | | |
| RE-4 (166.94) | 4/11/88 | -- | 150000 | 12000 | 8000 | 1000 | 27000 |
| | 4/09/90 | -- | NSC | | | | |
| | 10/30/90 | 7.04 | 87000 | 7200 | 10000 | 1600 | 12900 |
| | 1/18/91 | 11.62 | 70000 | 6000 | 5400 | 790 | 9900 |
| | 2/12/91 | 11.63 | 87000 | 5200 | 2800 | 240 | 11000 |
| | 3/20/91 | 11.61 | 6500 | 370 | 230 | 17 | 670 |
| | 5/22/91 | 10.3(Film) | NSC | | | | |
| | 6/19/91 | 11.1(Film) | NSC | | | | |
| | 7/17/91 | 6.20(Film) | NSC | | | | |
| | 8/07/91 | 8.15(Film) | NSC | | | | |
| | 9/24/91 | 10.4(Film) | NSC | | | | |
| | 10/23/91 | 11.2(Film) | NSC | | | | |
| | 11/06/91 | 6.62(Film) | NSC | | | | |
| | 12/04/91 | 11.2(Film) | NSC | | | | |
| | 1/29/92 | 7.72(Film) | NSC | | | | |
| | 2/26/92 | 5.13(Film) | NSC | | | | |
| | 3/19/92 | 5.00(Film) | NSC | | | | |
| | 4/22/92 | 5.94(Film) | NSC | | | | |
| | 5/21/92 | 5.40(Film) | NSC | | | | |
| | 6/25/92 | 5.71(0.02) | NSC | | | | |
| 7/30/92 | 5.33(Film) | NSC | | | | | |
| 8/20/92 | 5.80(Film) | NSC | | | | | |
| 9/30/92 | 6.34(Film) | NSC | | | | | |
| 12/23/92 | 5.50(Film) | NSC | | | | | |
| 3/10/93 | 4.67(Film) | NSC | | | | | |

Results reported in micrograms per liter (ug/L)

- NA - Not Analyzed.
- TPH - Total Petroleum Hydrocarbons as gasoline.
- D-Wat - Depth to Water.
- NSC - No sample collected due to film or sheen of liquid phase hydrocarbons.

Table 1 (CONT.) - Summary of Analytical Results

| I.D | Date | D-Wat | TPH | Benzene | Toluene | Ethyl-Benzene | Xylenes |
|------------------|------------|------------|--------|---------|---------|---------------|---------|
| RE-5 (166.51) | 4/11/88 | -- | 14000 | 1300 | 1100 | 100 | 2600 |
| | 4/09/90 | 4.79 | 3000 | 690 | 190 | 40 | 270 |
| | 10/30/90 | 5.86 | 3400 | 910 | 48 | 87 | 249 |
| | 1/18/91 | 4.40 | 1400 | 180 | 8.6 | 0.52 | 48 |
| | 2/12/91 | 4.76 | 1000 | ND | ND | 0.65 | ND |
| | 3/20/91 | 5.08 | 3000 | 250 | 53 | ND | 110 |
| | 5/22/91 | 4.52 | 2500 | 330 | 7.8 | 5.6 | 200 |
| | 6/19/91 | 4.39 | 2000 | 59 | 1.6 | 5.1 | 110 |
| | 7/17/91 | 5.05(Film) | NSC | | | | |
| | 8/07/91 | 5.02(Film) | NSC | | | | |
| | 9/24/91 | 5.86(Film) | NSC | | | | |
| | 10/23/91 | 5.84(Film) | NSC | | | | |
| | 11/06/91 | 5.48 | 9900 | 2300 | 37 | 260 | 160 |
| | 12/04/91 | 5.43 | 4500 | 1000 | 27 | ND | 180 |
| | 1/29/92 | 5.12 | 600 | 6.1 | 2.3 | ND | 47 |
| | 2/26/92 | 4.93 | 500 | 5.4 | 2.7 | 1.2 | 14 |
| | 3/19/92 | 4.45 | ND | 1.7 | 1.1 | ND | 5.5 |
| | 4/22/92 | 4.63 | 1600 | 240 | 2.2 | ND | 160 |
| | 5/21/92 | 4.90 | 1200 | 410 | 37 | ND | 118 |
| | 6/25/92 | 5.15 | ND | 1.0 | 0.8 | 0.8 | 0.4 |
| 7/30/92 | 5.30 | ND | 2.0 | 1.8 | 1.9 | 6.4 | |
| 8/20/92 | 5.44 | 300 | 1.7 | 3.3 | 0.7 | 12 | |
| 9/30/92 | 5.73 | 1900 | 140 | ND | 19 | 35 | |
| 12/23/92 | 4.75 | 400 | 8.0 | ND | ND | ND | |
| 3/10/93 | 4.14 | 1100 | 290 | 9.7 | ND | 75 | |
| RE-6 (166.51) | 4/11/88 | -- | 6000 | 3000 | 40 | 80 | 140 |
| | 4/09/90 | 5.64 | 3000 | 990 | ND | 70 | ND |
| | 10/30/90 | 6.68 | 3400 | 1000 | 28 | ND | ND |
| | 1/18/91 | 6.61 | 8300 | 1200 | ND | 3 | 15 |
| | 2/12/91 | 6.20 | 5200 | 850 | 8.4 | 4.9 | 41 |
| | 3/20/91 | 5.62 | 5800 | 680 | 12 | 8 | 16 |
| | 5/22/91 | 6.05 | 8500 | 1700 | 14 | 24 | 6.7 |
| | 6/19/91 | 6.12(Film) | NSC | | | | |
| | 7/17/91 | 6.20 | 120000 | 9300 | 13000 | 2400 | 16000 |
| | 8/07/91 | 6.27 | NA | 590 | 5.3 | ND | 14 |
| | 9/24/91 | 6.63 | 7000 | 310 | 11 | 5.3 | 35 |
| | 10/23/91 | 6.36(Film) | NSC | | | | |
| | 11/06/91 | 6.15 | 4000 | 710 | 18 | 29 | 49 |
| | 12/04/91 | 6.19 | 4100 | 1100 | 14 | 33 | 39 |
| | 1/29/92 | 6.70 | 2600 | 790 | 14 | ND | 49 |
| | 2/26/92 | 5.44 | 3100 | 950 | 21 | 30 | 33 |
| | 3/19/92 | 5.30 | 2200 | 630 | 14 | 12 | 40 |
| | 4/22/92 | 6.00 | NA | 730 | 2.2 | ND | 40 |
| | 5/21/92 | 6.25 | 1500 | 840 | 7.8 | 7.1 | 34 |
| | 6/25/92 | 6.38 | <2000 | 740 | 8 | 27 | 28 |
| 7/30/92 | 6.42(Film) | NSC | | | | | |
| 8/20/92 | 6.50 | 2800 | 630 | 17 | 23 | 22 | |
| 9/30/92 | 6.66 | 7800 | 540 | ND | 12 | 29 | |
| 12/23/92 | 5.83 | 1800 | 350 | ND | 7.7 | 11 | |
| 3/10/93 | 5.63 | 3000 | 830 | 5.6 | 19 | 16 | |

Results reported in micrograms per liter (ug/L)

- NA - Not Analyzed.
- TPH - Total Petroleum Hydrocarbons as gasoline.
- D-Wat - Depth to Water.
- NSC - No sample collected due to film or sheen of liquid phase hydrocarbons.

Table 1 (CONT.) - Summary of Analytical Results

| I.D | Date | E-Wat | TPH | Benzene | Toluene | Ethyl-Benzene | Xylenes |
|------------------|------------|------------|--------|---------|---------|---------------|---------|
| RE-7 (166.04) | 4/11/88 | -- | <50000 | 17000 | 4400 | 600 | 8400 |
| | 4/05/90 | 5.93 | 16000 | 7000 | 1200 | 640 | 1600 |
| | 10/30/90 | 8.21 | 31000 | 14000 | ND | ND | ND |
| | 1/18/91 | 11.8(Film) | NSC | | | | |
| | 2/12/91 | 10.8(Film) | NSC | | | | |
| | 3/20/91 | 9.96 | 120000 | 12000 | 2800 | 490 | 6600 |
| | 5/22/91 | 11.7(Film) | NSC | | | | |
| | 6/19/91 | 11.5(Film) | NSC | | | | |
| | 7/17/91 | 7.80(Film) | NSC | | | | |
| | 8/07/91 | 9.88(0.03) | NSC | | | | |
| | 9/24/91 | 9.85(0.03) | NSC | | | | |
| | 10/23/91 | 9.96(Film) | NSC | | | | |
| | 11/06/91 | 6.77(Film) | NSC | | | | |
| | 12/04/91 | 10.8(Film) | NSC | | | | |
| | 1/29/92 | 8.64(Film) | NSC | | | | |
| | 2/26/92 | 6.00(Film) | NSC | | | | |
| | 3/19/92 | 5.55(Film) | NSC | | | | |
| | 4/22/92 | 6.12(Film) | NSC | | | | |
| | 5/21/92 | 6.40(Film) | NSC | | | | |
| | 6/25/92 | 6.73(0.02) | NSC | | | | |
| 7/30/92 | 6.73(Film) | NSC | | | | | |
| 8/20/92 | 6.82(Film) | NSC | | | | | |
| 9/30/92 | 7.26(Film) | NSC | | | | | |
| 12/23/92 | 6.22(Film) | NSC | | | | | |
| 3/10/93 | 5.82(Film) | NSC | | | | | |
| RS-8 (164.32) | 8/07/91 | 9.68 | ND | ND | ND | ND | ND |
| | 9/27/91 | 9.89 | ND | ND | ND | ND | ND |
| | 10/23/91 | 10.05 | ND | ND | ND | ND | ND |
| | 11/06/91 | 9.71 | ND | ND | ND | ND | ND |
| | 12/04/91 | 10.00 | ND | ND | ND | ND | ND |
| | 1/28/92 | 9.28 | ND | 2.1 | 1.0 | 2.5 | 3.6 |
| | 2/26/92 | 7.05 | ND | ND | 0.7 | ND | 0.7 |
| | 3/19/92 | 7.30 | ND | 0.5 | 1.0 | 1.5 | 2.7 |
| | 4/22/92 | 8.60 | ND | ND | ND | ND | ND |
| | 5/21/92 | 9.22 | ND | ND | ND | ND | ND |
| | 6/25/92 | 9.49 | ND | ND | ND | ND | ND |
| | 7/30/92 | 9.55 | ND | 1.1 | 4.2 | ND | 3.0 |
| | 8/20/92 | 9.63 | ND | 2.0 | 4.7 | ND | 5.7 |
| | 9/30/92 | 9.90 | ND | ND | ND | ND | ND |
| 12/23/92 | 9.96 | ND | ND | ND | ND | ND | |
| 3/10/93 | 8.95 | ND | ND | ND | ND | ND | |
| RS-9 (167.51) | 8/07/91 | 2.28 | NA | 0.5 | ND | 330 | 1200 |
| | 9/27/91 | 2.77 | 13000 | 3.5 | 3.0 | 82 | 140 |
| | 10/23/91 | 3.53 | 11000 | ND | ND | 39 | 340 |
| | 11/06/91 | 2.51 | 6800 | 8.4 | 0.6 | 22 | 230 |
| | 12/04/91 | 3.20 | 6500 | 6.5 | 0.7 | 87 | 200 |
| | 1/29/92 | 2.65 | 8100 | 22 | 10 | 140 | 260 |
| | 2/26/92 | 3.42 | 13000 | 40 | 16 | 220 | 600 |
| | 3/19/92 | 3.12 | 12000 | 21 | 12 | 100 | 280 |
| | 4/22/92 | 3.24 | 8600 | ND | ND | 20 | 37 |
| | 5/21/92 | 3.75 | 6000 | 21 | 10 | 53 | 210 |
| | 6/25/92 | 2.65 | 370 | 2.3 | 1.5 | 0.7 | 4.3 |
| | 7/30/92 | 2.70 | 3600 | 20 | ND | 39 | 80 |
| | 8/20/92 | 2.83 | 3000 | 0.7 | 5.2 | 2.0 | 5.3 |
| | 9/30/92 | 2.80 | 9200 | 4.8 | 6.5 | 12 | 91 |
| | 12/23/92 | 2.45 | 2000 | 17 | ND | 8.2 | 18 |
| 3/10/93 | 2.40 | 1500 | ND | 2.6 | 21 | 12 | |

Results reported in micrograms per liter (ug/L)

- NA - Not Analyzed.
- TPH - Total Petroleum Hydrocarbons as gasoline.
- D-Wat - Depth to Water.
- NSC - No sample collected due to film or sheen of liquid phase hydrocarbons.

Table 1(CONT.) - Summary of Analytical Results

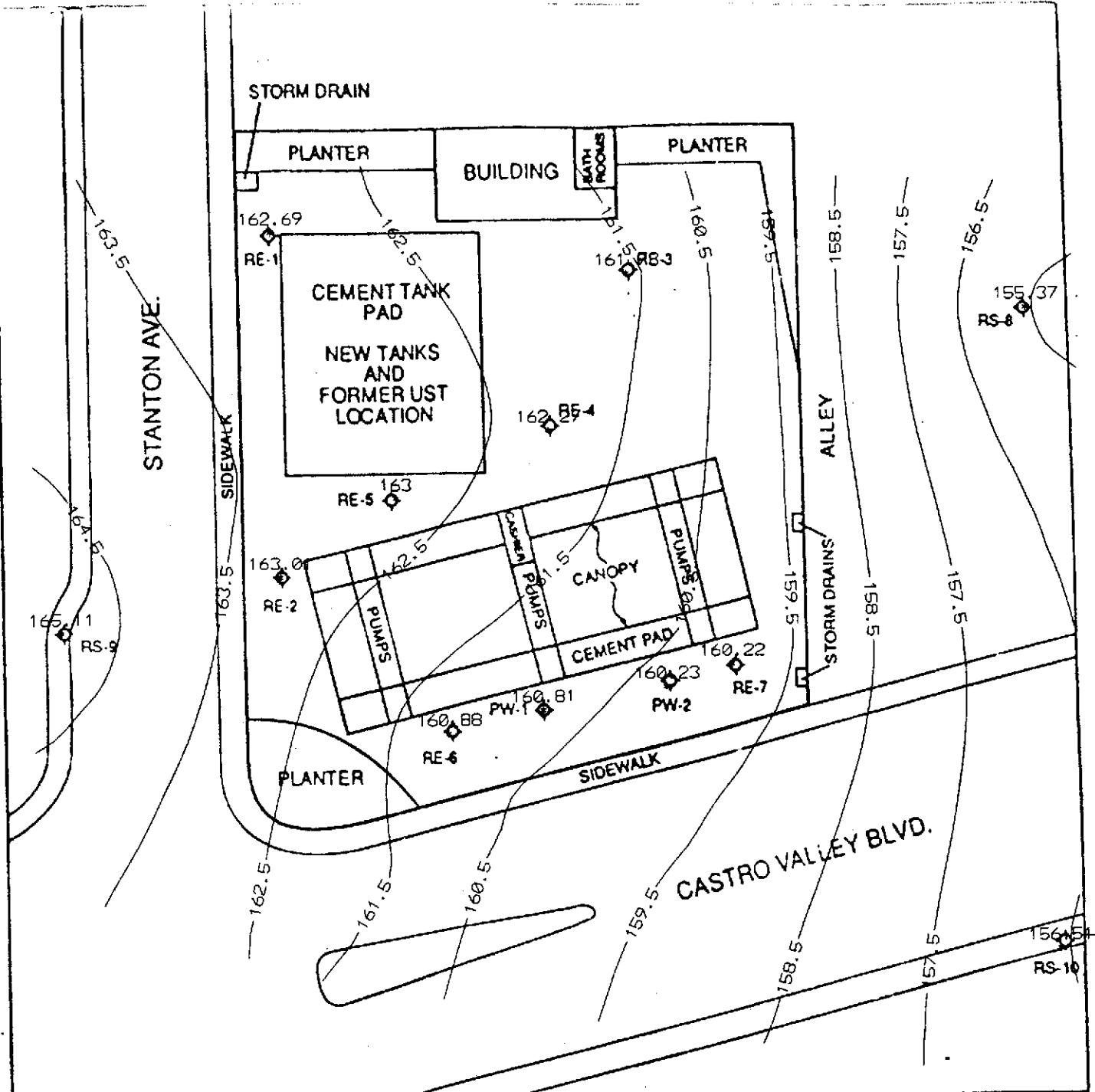
| I.D | Date | D-Wat | TPH | Benzene | Toluene | Ethyl-Benzene | Xylenes |
|------------------|----------|-------|-----|---------|---------|---------------|---------|
| RS10 (162.89) | 8/07/91 | 6.16 | ND | ND | ND | ND | ND |
| | 9/27/01 | 6.48 | ND | ND | ND | ND | ND |
| | 10/23/91 | 7.37 | ND | ND | ND | ND | ND |
| | 11/06/91 | 6.44 | ND | ND | ND | ND | ND |
| | 12/04/91 | 7.02 | ND | ND | ND | ND | ND |
| | 1/29/92 | 6.78 | ND | ND | ND | ND | ND |
| | 2/26/92 | 8.33 | ND | ND | ND | ND | ND |
| | 3/19/92 | 8.02 | ND | ND | ND | ND | 0.6 |
| | 4/22/92 | 7.78 | ND | ND | ND | ND | ND |
| | 5/21/92 | 6.21 | ND | ND | 0.6 | ND | 1.2 |
| | 6/25/92 | 7.73 | ND | ND | ND | ND | ND |
| | 7/30/92 | 7.84 | ND | ND | 0.5 | ND | 1.0 |
| | 8/20/92 | 7.50 | ND | ND | ND | ND | ND |
| | 9/30/92 | 7.63 | ND | ND | ND | ND | ND |
| | 12/23/92 | 7.24 | ND | ND | ND | ND | ND |
| | 2/10/93 | 6.38 | ND | ND | ND | ND | ND |

Results reported in micrograms per liter (ug/L)

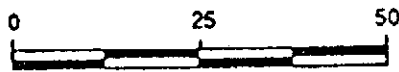
- NA - Not Analyzed.
- TPH - Total Petroleum Hydrocarbons as gasoline.
- D-Wat - Depth to Water.
- NSC - No sample collected due to film or sheen of liquid phase hydrocarbons.



| | | |
|---------------|--|---------------------|
| 21161-002-044 | THRIFTY OIL STORE #054 | VICINITY MAP |
| DAMES & MOORE | 2504 CASTRO VALLEY BLVD CASTRO VALLEY, CA | |



SITE PLAN II
THRIFTY OIL CO. #054
CASTRO VALLEY, CALIFORNIA
 *Prepared for
THRIFTY OIL CO.
DOWNY, CALIFORNIA

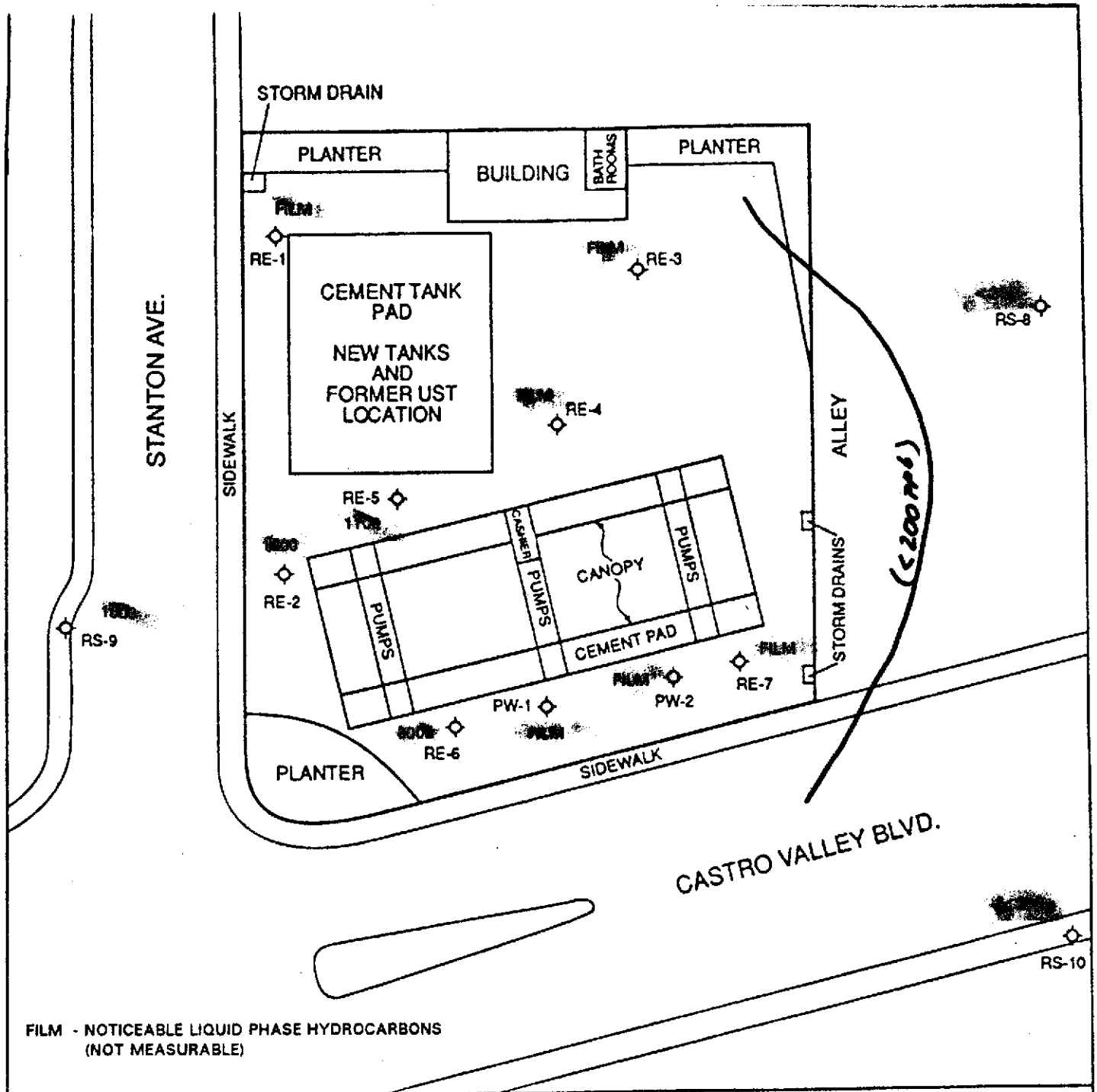


SCALE IN FEET

-  GROUNDWATER CONTOUR
157.0 - 158.0
-  EXISTING MONITORING WELL

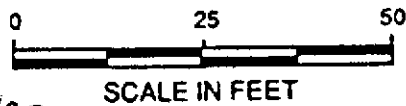


FIGURE 2



FILM - NOTICEABLE LIQUID PHASE HYDROCARBONS
(NOT MEASURABLE)

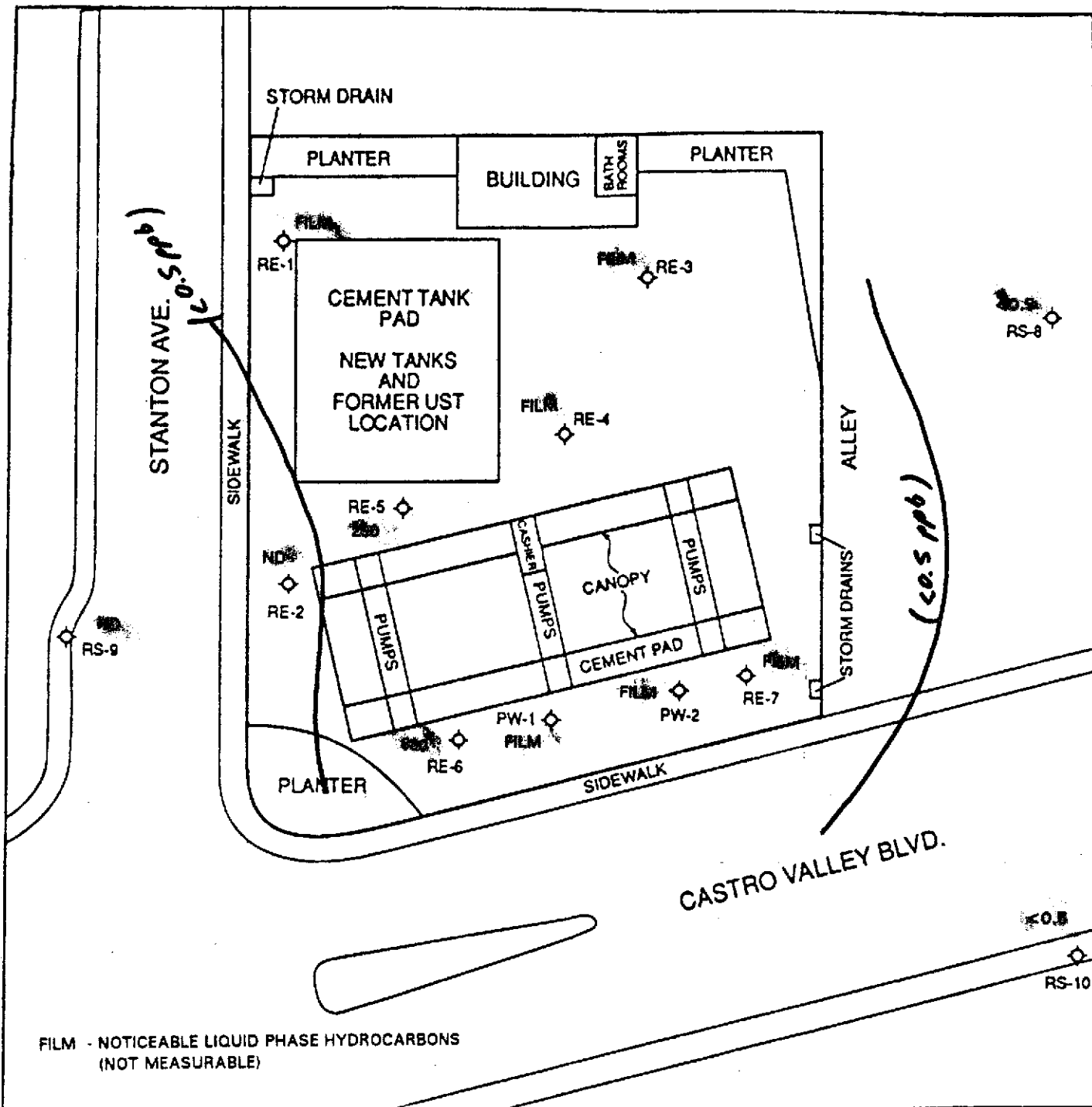
SITE PLAN II
THRIFTY OIL CO. #054
CASTRO VALLEY, CALIFORNIA
 Prepared for
THRIFTY OIL CO.
DOWNEY, CALIFORNIA



<200 - TPH CONCENTRATION, ppb, 3/10/93

◇ EXISTING MONITORING WELL

FIGURE 3



FILM - NOTICEABLE LIQUID PHASE HYDROCARBONS
(NOT MEASURABLE)

SITE PLAN II
THRIFTY OIL CO. #054
CASTRO VALLEY, CALIFORNIA
 Prepared for
THRIFTY OIL CO.
DOWNEY, CALIFORNIA



<0.2 - BENZENE CONCENTRATION, ppb, 3/10/93

◊ EXISTING MONITORING WELL

FIGURE 4



PROJECT STATUS REPORT
 THRIFTY OIL CO. S.S. #054
 2504 CASTRO VALLEY BLVD.
 CASTRO VALLEY, CA 94546
 DATE: 3.10.1993

| FREQ. | MONITORING | | | | ODORS | | | FREE | | WELLS CONNECTED TO SYSTEM (W) | | | | | | | |
|-------|-------------------|------|------------------|----|------------|----|---|---------|----|-------------------------------|----|-----------|----|-------|-----|-------|-----|
| | OBSERVATION WELLS | | | | (S=SLIGHT) | | | PRODUCT | | CONNECT | | INTEGRITY | | VAPOR | | WATER | |
| | NO. | DTW | DTP | PT | YES | NO | S | YES | NO | YES | NO | OK | NO | ON | OFF | ON | OFF |
| M | PW-1 | 5.65 | SHEEN | | | | Y | Y | | | X | - | | | | | |
| M | PW-2 | 5.95 | SHEEN | | | | Y | Y | | | X | - | | | | | |
| M | RE-1 | 4.13 | SHEEN | | | | Y | Y | | | X | - | | | | | |
| M | RE-2 | 4.18 | SHEEN | | | X | | X | | | X | - | | | | | |
| M | RE-3 | 5.66 | SHEEN | | | | Y | X | | | X | - | | | | | |
| M | RE-4 | 4.67 | SHEEN | | | | X | X | | | X | - | | | | | |
| M | RE-5 | 4.14 | | | | X | | X | | | X | - | | | | | |
| M | RE-6 | 5.63 | | | | X | | X | | | X | - | | | | | |
| M | RE-7 | 5.82 | Film | | X | | | X | | | X | - | | | | | |
| M | RS-8 | 8.95 | | | | X | | Y | | | - | X | | | | | |
| M | RS-9 | 2.40 | | | | X | | X | | | - | X | | | | | |
| M | RS-10 | 6.38 | | | | X | | Y | | | - | X | | | | | |

SAVE SYSTEM WEEKLY

| PARAMETER | U/M | DATA | PARAMETER | U/M | DATA |
|---------------|--------|------|-------------------|--------|------|
| TIME | AM/PM | | AIR FLOW | CFM | |
| WORKING | YES/NO | No | VAPOR FLOW | CFM | |
| RESTARTED | YES/NO | | FUEL FLOW | CFM/H | |
| HOURS | # | | WELL VACUUM | IN H2O | |
| ENGINE ROT. | RPM | | LPG TANKS | % | #1: |
| ENGINE VACUUM | IN HG | | GAS METER READING | - | N/A |
| TANK VACUUM | IN HG | | WATER FLOWMETER | GALL. | |

| | | | | | |
|---------------------|--|--|--|--|--|
| EXHAUST (By others) | | | | | |
| INLET TO ENGINE | | | | | |

MAINTENANCE ES/100/400/800 FOR SPECIFIC OPERATIONS SEE FIELD RECORD

| | | |
|--------------------------------------|----------|--------------------|
| WATER SAMPLING - CHECK () WHEN DONE | | |
| EFFLUENT | INFLUENT | WELLS |
| () | () | () Q.-SEE C.CUST. |

REMARKS:

FREE PRODUCT REMOVED: APPROX. GALLONS WATER REMOVED: APPROX. 122 GALLONS

DATA RECORDED BY: E. GABMAN INPUT BY: M.M. >|FF\054rsirt

FIELD DATA - GROUNDWATER WELL SAMPLING PROGRAM

DATE 3.10.1993 STATION NO. 054
PERSONNEL E. GASMAN, T. ROBU
WELL NO. RS 10 WEATHER _____
SAMPLE EQUIPMENT TEFLON BAILER

Before Sampling

Total Well Depth 24.45 Ft. Well Diameter 2'
Depth to Water 6.32 Ft. Purge Volume 12 gallons

Sampling Data

| Time | 9:10 | 9:15 | 9:20 | 9:25 | 9:30 | | |
|------|-------------|-------------|-------------|-------------|-------------|--|--|
| EC | <u>6440</u> | <u>6310</u> | <u>6300</u> | <u>6300</u> | <u>6300</u> | | |
| pH | <u>7.23</u> | <u>7.22</u> | <u>7.20</u> | <u>7.22</u> | <u>7.20</u> | | |
| Temp | <u>69</u> | <u>68</u> | <u>67</u> | <u>67</u> | <u>67</u> | | |
| Gal. | <u>4</u> | <u>6</u> | <u>8</u> | <u>10</u> | <u>12</u> | | |
| Time | | | | | | | |
| EC | | | | | | | |
| pH | | | | | | | |
| Temp | | | | | | | |
| Gal. | | | | | | | |

After Sampling

Depth to Water 7.20 Ft. Total Well Depth 24.45 Ft.

FIELD DATA - GROUNDWATER WELL SAMPLING PROGRAM

DATE 3.10.1993 STATION NO. 054
 PERSONNEL E. GARMAN, T. ROSE
 WELL NO. R5-2 WEATHER _____
 SAMPLE EQUIPMENT TEFLON BAILER

Before Sampling

Total Well Depth 25.20 Ft. Well Diameter 2"
 Depth to Water 8.95 Ft. Purge Volume 11 gallons

Sampling Data

| Time | 9:50 | 9:55 | 10:00 | 10:05 | 10:10 | | |
|------|-------------|-------------|-------------|-------------|-------------|--|--|
| EC | <u>1540</u> | <u>1540</u> | <u>1510</u> | <u>1510</u> | <u>1510</u> | | |
| pH | <u>7.60</u> | <u>7.50</u> | <u>7.50</u> | <u>7.48</u> | <u>7.45</u> | | |
| Temp | <u>67.4</u> | <u>66.6</u> | <u>66.8</u> | <u>66.8</u> | <u>66.8</u> | | |
| Gal. | <u>4</u> | <u>6</u> | <u>8</u> | <u>10</u> | <u>11</u> | | |
| Time | | | | | | | |
| EC | | | | | | | |
| pH | | | | | | | |
| Temp | | | | | | | |
| Gal. | | | | | | | |

After Sampling

Depth to Water 9.10 Ft. Total Well Depth 25.20 Ft.

FIELD DATA - GROUNDWATER WELL SAMPLING PROGRAM

DATE 3.10.1993 STATION NO. 054
PERSONNEL E. GARMAN, T. ROSU
WELL NO. RS-9 WEATHER _____
SAMPLE EQUIPMENT TEFLON BAIKER

Before Sampling

Total Well Depth 15 Ft. Well Diameter 2"
Depth to Water 2.40 Ft. Purge Volume 8 gallons

Sampling Data

| Time | <u>10:30</u> | <u>10:35</u> | <u>10:40</u> | <u>10:45</u> | <u>10:50</u> | _____ | _____ |
|------|--------------|--------------|--------------|--------------|--------------|-------|-------|
| EC | <u>1030</u> | <u>990</u> | <u>1000</u> | <u>1000</u> | <u>1000</u> | _____ | _____ |
| pH | <u>7.98</u> | <u>7.85</u> | <u>7.74</u> | <u>7.66</u> | <u>7.66</u> | _____ | _____ |
| Temp | <u>65</u> | <u>63.7</u> | <u>63.4</u> | <u>63</u> | <u>63</u> | _____ | _____ |
| Gal. | <u>2</u> | <u>3</u> | <u>4</u> | <u>6</u> | <u>8</u> | _____ | _____ |
| Time | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| EC | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| pH | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| Temp | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| Gal. | _____ | _____ | _____ | _____ | _____ | _____ | _____ |

After Sampling

Depth to Water 2.60 Ft. Total Well Depth 15 Ft.

FIELD DATA - GROUNDWATER WELL SAMPLING PROGRAM

DATE 3.10.1993 STATION NO. 054
 PERSONNEL E. GASMAN, T. ROSU
 WELL NO. RE-5 WEATHER SUNNY
 SAMPLE EQUIPMENT TEFLON BAILER

Before Sampling

Total Well Depth 18.25 Ft. Well Diameter 4"
 Depth to Water 4.14 Ft. Purge Volume 37 gallons

Sampling Data

| Time | <u>11:10</u> | <u>11:15</u> | <u>11:20</u> | <u>11:25</u> | <u>11:30</u> | _____ | _____ |
|------|--------------|--------------|--------------|--------------|--------------|-------|-------|
| EC | <u>1270</u> | <u>1260</u> | <u>1240</u> | <u>1240</u> | <u>1240</u> | _____ | _____ |
| pH | <u>7.64</u> | <u>7.37</u> | <u>7.36</u> | <u>7.25</u> | <u>7.36</u> | _____ | _____ |
| Temp | <u>68</u> | <u>67</u> | <u>66.5</u> | <u>66.4</u> | <u>66.4</u> | _____ | _____ |
| Gal. | <u>15</u> | <u>20</u> | <u>25</u> | <u>30</u> | <u>37</u> | _____ | _____ |
| Time | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| EC | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| pH | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| Temp | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| Gal. | _____ | _____ | _____ | _____ | _____ | _____ | _____ |

After Sampling

Depth to Water 5.00 Ft. Total Well Depth 18.25 Ft

FIELD DATA - GROUNDWATER WELL SAMPLING PROGRAM

DATE 3.10.1993 STATION NO. 054
 PERSONNEL E. GASHAN, T. ROSU
 WELL NO. RE 2 WEATHER SUNNY
 SAMPLE EQUIPMENT TEFLON DAILER

Before Sampling

Total Well Depth 17.10 Ft. Well Diameter 4"
 Depth to Water 4.12 Ft. Purge Volume 34 gallons

Sampling Data

| Time | <u>11:50</u> | <u>11:55</u> | <u>12:00</u> | <u>12:05</u> | <u>12:10</u> | <u>12:15</u> | |
|------|--------------|--------------|--------------|--------------|--------------|--------------|--|
| EC | <u>760</u> | <u>800</u> | <u>810</u> | <u>810</u> | <u>810</u> | <u>810</u> | |
| pH | <u>7.73</u> | <u>7.56</u> | <u>7.49</u> | <u>7.46</u> | <u>7.45</u> | <u>7.45</u> | |
| Temp | <u>68.5</u> | <u>66.8</u> | <u>66.1</u> | <u>66.2</u> | <u>66.1</u> | <u>66.1</u> | |
| Gal. | <u>10</u> | <u>15</u> | <u>20</u> | <u>25</u> | <u>30</u> | <u>34</u> | |
| Time | | | | | | | |
| EC | | | | | | | |
| pH | | | | | | | |
| Temp | | | | | | | |
| Gal. | | | | | | | |

After Sampling

Depth to Water 5.12 Ft. Total Well Depth 17.10 Ft.

FIELD DATA - GROUNDWATER WELL SAMPLING PROGRAM

DATE 3. 10. 1993 STATION NO. 054
PERSONNEL E. GASMAN, T. ROSU
WELL NO. REG WEATHER SUNNY
SAMPLE EQUIPMENT TEFLON BAILER

Before Sampling

Total Well Depth 13.25 Ft. Well Diameter 4"
Depth to Water 5.63 Ft. Purge Volume 20 gallons

Sampling Data

| Time | <u>12:50</u> | <u>1:00</u> | <u>1:10</u> | <u>1:20</u> | <u>1:30</u> | | |
|------|--------------|-------------|-------------|-------------|-------------|--|--|
| EC | <u>1420</u> | <u>1500</u> | <u>1510</u> | <u>1520</u> | <u>1520</u> | | |
| pH | <u>7.37</u> | <u>7.25</u> | <u>7.15</u> | <u>7.05</u> | <u>7.07</u> | | |
| Temp | <u>66.5</u> | <u>66.4</u> | <u>66</u> | <u>66</u> | <u>66</u> | | |
| Gal. | <u>4</u> | <u>8</u> | <u>12</u> | <u>16</u> | <u>20</u> | | |
| Time | | | | | | | |
| EC | | | | | | | |
| pH | | | | | | | |
| Temp | | | | | | | |
| Gal. | | | | | | | |

After Sampling

Depth to Water 6.43 Ft. Total Well Depth 13.25 Ft.



LABORATORY ANALYSIS RESULTS

Client: Thrifty Oil Company
Project No.: N/A
Project Name: TOC #054
Sample Matrix: Water
Method: EPA 8020 (BTEX)/8015M (Gasoline)

AA Project No.: A135054-8
Date Sampled: 3/10/93
Date Received: 3/12/93
Date Reported: 3/22/93

| Date Analyzed: | 3/15/93 | 3/15/93 | 3/15/93 | 3/17/93 | Reporting | Units |
|------------------|---------|---------|---------|---------|------------------|-------|
| AA I.D. No.: | 14140 | 14141 | 14142 | 14143 | Detection Limits | |
| Client I.D. No.: | RS-10 | RS-9 | RS-8 | RE 6 | | |

Compounds

| | | | | | | |
|-------------------------|------|------|------|-----|-----|------|
| Benzene | <0.5 | <0.5 | <0.5 | 830 | 0.5 | µg/L |
| Toluene | <0.5 | 2.6 | <0.5 | 5.6 | 0.5 | µg/L |
| Ethylbenzene | <0.5 | 21 | <0.5 | 19 | 0.5 | µg/L |
| Xylenes | <1 | 12 | <1 | 16 | 1 | µg/L |
| Gasoline Range Organics | <0.2 | 1.5 | <0.2 | 3 | 0.2 | mg/L |

<: Not detected at or above the value of the concentration indicated.

George Havalias
Laboratory Director

mls



LABORATORY ANALYSIS RESULTS

Client: Thrifty Oil Company

Project No.: N/A

Project Name: TOC #054

Sample Matrix: Water

Method: EPA 8020 (BTEX)/8015M (Gasoline)

AA Project No.: A135054-8

Date Sampled: 3/10/93

Date Received: 3/12/93

Date Reported: 3/22/93

| Date Analyzed: | 3/17/93 | 3/15/93 | 3/15/93 | Reporting Detection Limits | Units |
|------------------|---------|---------|------------|----------------------------------|-------|
| AA I.D. No.: | 14144 | 14145 | 14146 | | |
| Client I.D. No.: | RE 5 | RE 2 | Trip Blank | | |

Compounds

| | | | | | |
|-------------------------|-----|------|------|-----|------|
| Benzene | 290 | <0.5 | <0.5 | 0.5 | µg/L |
| Toluene | 9.7 | 1.4 | <0.5 | 0.5 | µg/L |
| Ethylbenzene | <5 | <0.5 | <0.5 | 0.5 | µg/L |
| Xylenes | 75 | 2.1 | <1 | 1 | µg/L |
| Gasoline Range Organics | 1.1 | 1.2 | <0.2 | 0.2 | mg/L |

<: Not detected at or above the value of the concentration indicated.

George Havalias
Laboratory Director

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LABORATORY QA/QC REPORT

Client: Thrifty Oil Company
Method: EPA 8020 (BTEX)/8015M (Gasoline)
Sample ID: Matrix Spike

AA Project No.: A135054-8
Sample Matrix: Water
Date Analyzed: 3/15/93
Date Reported: 3/22/93

| Compounds | Spike Recovery (%) | Spike/Duplicate Recovery (%) | RPD (%) |
|-------------------------|--------------------|------------------------------|---------|
| Benzene | 66 | 58 | 12.9 |
| Toluene | 109 | 95 | 13.7 |
| Ethylbenzene | 110 | 95 | 14.6 |
| Xylenes | 109 | 95 | 13.7 |
| Gasoline Range Organics | 120 | 104 | 14.3 |

RPD: Relative Percent Difference

George Havalias
Laboratory Director

mls



LABORATORY QA/QC REPORT

Client: Thrifty Oil Company
Method: EPA 8020 (BTEX)/8015M (Gasoline)
Sample ID: Matrix Spike

AA Project No.: A135054-8
Sample Matrix: Water
Date Analyzed: 3/17/93
Date Reported: 3/22/93

| Compounds | Spike Recovery (%) | Spike/Duplicate Recovery (%) | RPD (%) |
|-------------------------|--------------------|------------------------------|---------|
| Benzene | 100 | 100 | 0 |
| Toluene | 98 | 98 | 0 |
| Ethylbenzene | 98 | 97 | 1 |
| Xylenes | 110 | 110 | 0 |
| Gasoline Range Organics | 68 | 77 | 12 |

RPD: Relative Percent Difference

George Havalias
Laboratory Director

mls