

# THRIFTY OIL CO.

May 15, 1995

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

EMC  
Alameda Co.  
95 May 31 FTS  
not certified  
by CA registered  
professional

RE: **Thrifty Oil Co. Station #054**  
**2504 Castro Valley Boulevard**  
**Castro Valley, California**  
**1st QUARTER REPORT, 1995**

Dear Mr. Seary,

This letter report presents the results of soil/groundwater treatment and site monitoring during the 1st quarter of 1995 at the subject site. The approximate location of the on- and off-site monitoring wells are shown on **Figure 1**. 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 8, 1995, 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 3.92 to 8.34 feet below grade which is consistent with previous data collected. As of March 8, 1995, wells RE-3, RE-4, and RE-7 exhibited free product visible 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 1**. In general, the *groundwater flow* was to the *east* at a calculated gradient of about 0.05 feet per feet.

Prior to collecting groundwater samples from the wells, 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. Approximately 7 to 42 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 Monitoring Wells.** Groundwater samples were analyzed for total hydrocarbons (TPH) and volatile aromatic compounds (BTEX) using EPA methods 8015 and 602, respectively. Copies of the laboratory analysis reports are attached in **Appendix B**. A summary of the results are presented in **Table 1**. Isoconcentration maps of TPH and benzene based on the March sampling event are presented as **Figures 2 and 3**.

#### **Treatment Unit Operation Status**

Based on the data obtained by EMC, the RSI-SAVE unit operated 286 hours during the reporting period and 11,070 hours total (current meter reading 7986). As of March 8, 1995, a total of about 15,205.5 gallons of water had been processed by the unit and discharged to the local sanitary sewer. During the 1st quarter reporting period, 2246 gallons of water had been processed by the treatment unit and were discharged to the sanitary sewer.

In order to monitor the effects of soil and air removal, field vapor measurements are collected and recorded from each recovery well on a monthly basis. The data is included in **Table 2** attached. Vapor measurements were not recorded from each recovery well this quarter.

#### **Closing**

Thrifty will continue to conduct quarterly groundwater monitoring at the site. In addition, the work plan for installation of one off-site well near the southeast corner of the site has been approved as submitted. A purchase order has been issued and this work is anticipated to be completed during the 2nd quarter of 1995 if encroachment permits can be obtained within the next month. If you have any questions, please contact me at (310) 923-9876.

Very truly yours,



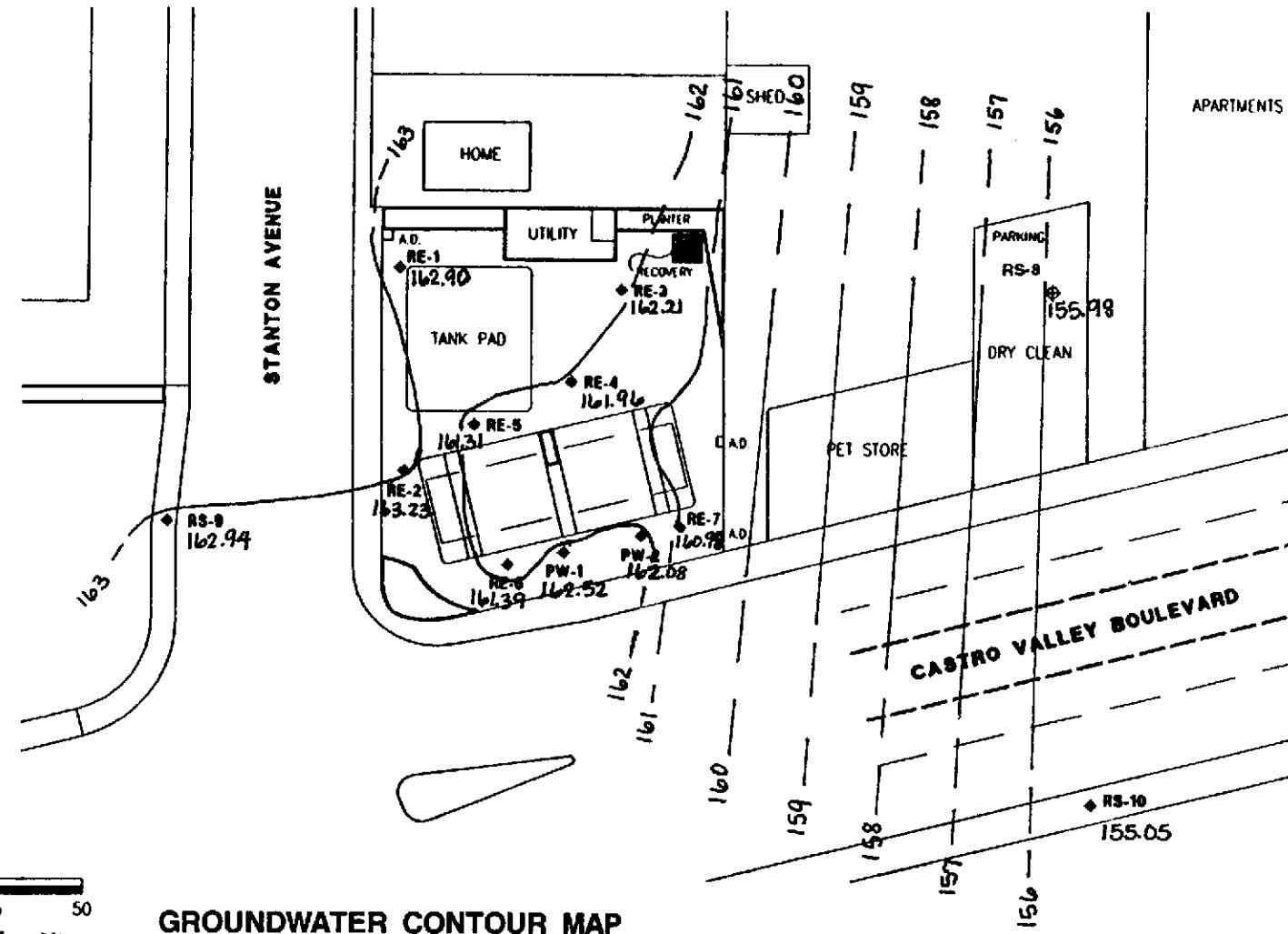
Peter D'Amico  
Manager  
Environmental Affairs

## **FIGURES**

## LEGEND

- ⊕ RE-1 / MONITORING WELL  
A.D. AREA DRAIN  
~ GROUNDWATER CONTOUR (03/08/95)

## REVISIONS

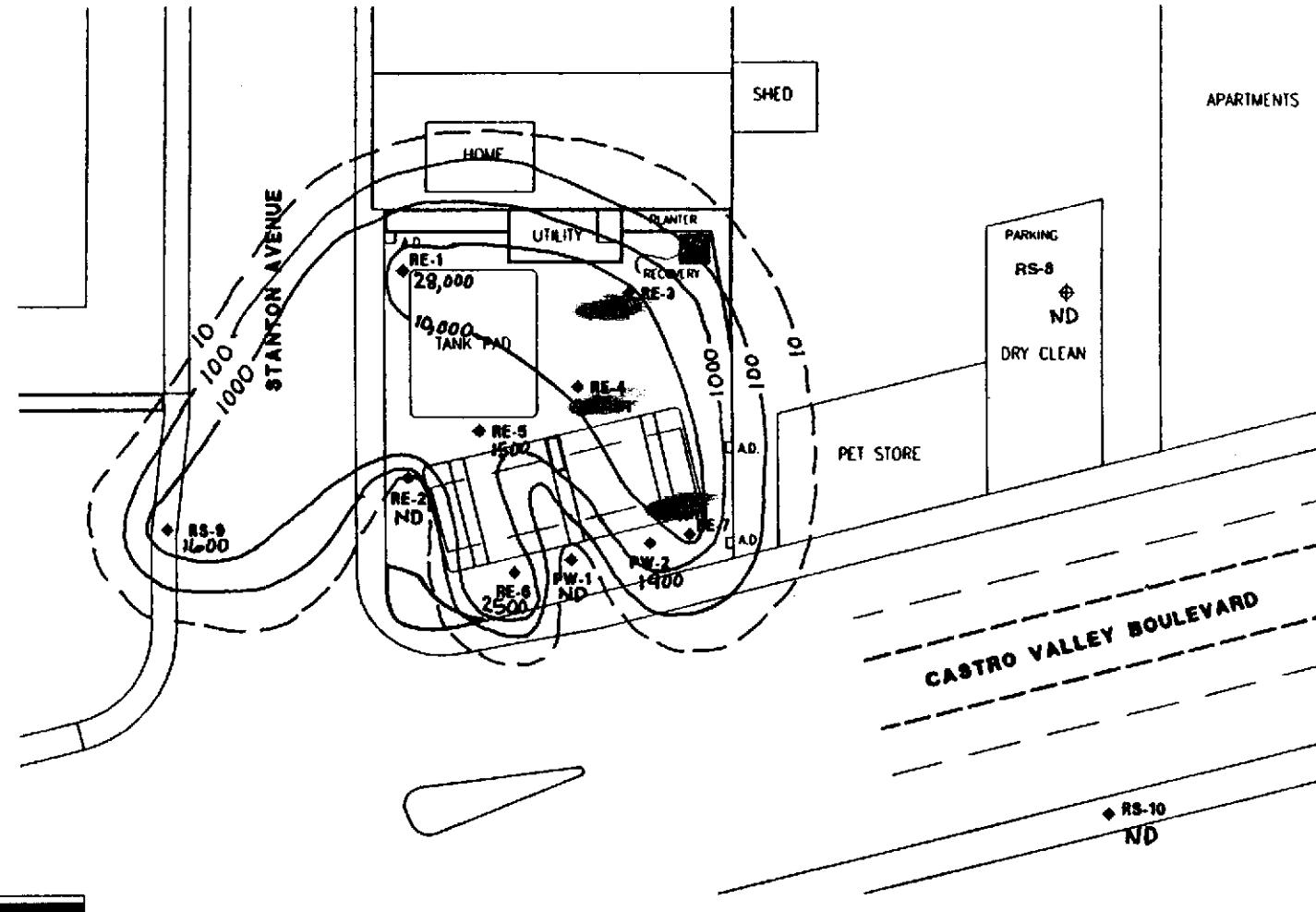


**STATION NO. 054  
CASTRO VALLEY BLVD./STANTON AVE.  
CASTRO VALLEY, CA.**

DRAWN BY RCI  
05-04-94  
F = 30'-0"

## LEGEND

- ⊕ RE-1 / MONITORING WELL  
A.D. AREA DRAIN  
~ TPH CONTOUR (03/08/85, mg/l)



A scale bar with three tick marks labeled 0, 25, and 50. Below the bar, the text "SCALE: 1" = 50'" is written.

## TPH ISOCONCENTRATION MAP

PROPERTY OF COMPANY  
WOOD LAKE FOOD & DRUG  
SACRAMENTO, CA 95814  
PHONE 916-445-1341

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www.ijerpi.org

DRAWN BY 

05-04-94

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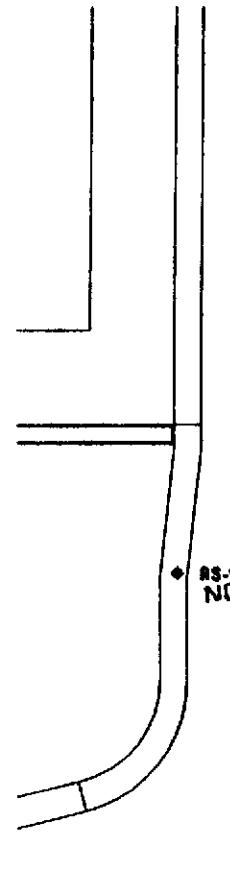
**LEGEND**

◆ RE-1 / MONITORING WELL

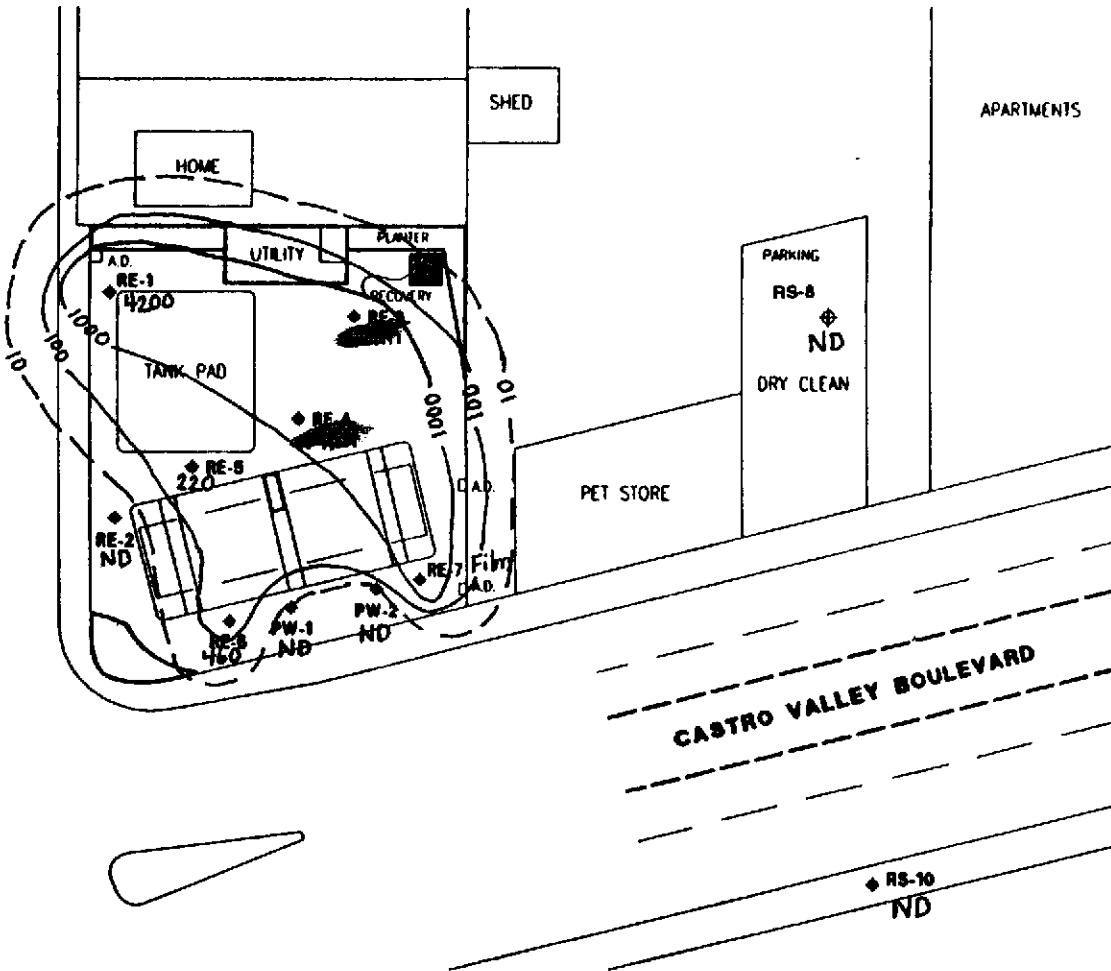
A.D. AREA DRAIN

~ BENZENE CONTOUR (03/08/95,  $\mu\text{g}/\text{m}^3$ )

REVISIONS	BY



STANTON AVENUE



0 25 50  
SCALE: 1" = 50'

**BENZENE ISOCONCENTRATION MAP**

**TP** TRIPOLY OIL COMPANY  
1000 LAKWOOD BLVD.  
DETROIT, MI 48246  
(313) 955-9475

STATION No. 054  
CASTRO VALLEY BLVD./STANTON AVE.  
CASTRO VALLEY, CA.

DRAWN BY PC:  
05-04-94  
1" = 50'-0"

3

## **TABLES**

TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #54

DATE SAMPLED	TPH	BENZENE	TOLUENE	ETHYL BENZENE	XYLENE	TOP OF CASING	DEPTH TO GROUNDWTR
<b>Monitoring Well PW-1</b>							
Apr 11, 1988	NSC					166.46	
Apr 9, 1990	230000	600	2700	1000	16000		5.10
Oct 30, 1990	35000	240	970	240	3580		6.17
Jan 18, 1991	37000	43	140	42	1600		6.28
Feb 12, 1991	45000	99	130	25	700		5.88
Mar 20, 1991	1900	0.43	ND	ND	2.8		4.75
May 22, 1991	41000	600	730	250	3800		5.10
Jun 19, 1991	NSC						5.61
Jul 17, 1991	NSC						5.53 (Film)
Aug 7, 1991	NSC						5.67 (Film)
Sep 24, 1991	NSC						5.57 (Film)
Oct 23, 1991	NSC						6.53 (Film)
Nov 6, 1991	NSC						5.85 (Film)
Dec 4, 1991	NSC						5.91 (Film)
Jan 29, 1992	NSC						5.43 (Film)
Feb 26, 1992	NSC						5.54 (Film)
Mar 19, 1992	ND	ND	ND	ND	ND		5.47
Apr 22, 1992	NSC						5.62 (Film)
May 21, 1992	1300	19	2.9	0.7	58		6.21
Jun 25, 1992	NSC						6.94
Jul 30, 1992	NSC						5.90 (Film)
Aug 20, 1992	NSC						7.12 (Film)
Sep 30, 1992	3400	57	ND	26	240		6.42
Dec 23, 1992	NSC						5.56 (Film)
Mar 10, 1993	NSC						5.65 (Film)
Jun 9, 1993	400	<0.5	1.1	<1.0	<1.0		5.30
Sep 14, 1993	180	3.7	3.2	1.5	14.0		5.43
Dec 14, 1993	<50	<0.3	<0.3	<0.3	<0.5		4.65
Mar 2, 1994	<50	<0.3	<0.3	<0.3	<0.5		5.43
Jun 6, 1994	330	1.3	<0.3	0.88	9.8		4.70
Sep 6, 1994	1100	67	<0.3	<0.3	24		6.48
Dec 7, 1994	<50	<0.3	<0.3	<0.5	<0.5		5.22
Mar 8, 1995	<100	<0.5	<0.5	<0.5	<1		3.94

TABLE 1 (Continued)

Monitoring Well PW-2							
Date	TPH	Benzene	Toluene	E-Benzene	Xylenes	Elevation	Depth to GW
Apr 11, 1988	NSC					166.18	
Apr 9, 1990	600000	1300	11000	4600	43000		5.81
Oct 30, 1990	48000	310	51	10	480		6.95
Jan 18, 1991	86000	230	1400	350	8300		6.92
Feb 12, 1991	160000	680	1300	250	7000		6.78
Mar 20, 1991	17000	34	50	ND	1100		5.54
May 22, 1991	14000	57	2100	500	8200		6.07
Jun 19, 1991	NSC						6.37 (Film)
Jul 17, 1991	NSC						6.38 (Film)
Aug 7, 1991	NSC						6.63 (Film)
Sep 24, 1991	NSC						6.42 (Film)
Oct 23, 1991	NSC						7.25 (Film)
Nov 6, 1991	NSC						6.44 (Film)
Dec 4, 1991	NSC						6.65 (Film)
Jan 29, 1992	NSC						6.17 (Film)
Feb 26, 1992	NSC						5.90 (Film)
Mar 19, 1992	NSC						5.80 (Film)
Apr 22, 1992	NSC						5.88 (Film)
May 21, 1992	NSC						6.03 (Film)
Jun 25, 1992	NSC						6.57 (Film)
Jul 30, 1992	NSC						6.20 (Film)
Aug 20, 1992	NSC						6.64 (Film)
Sep 30, 1992	NSC						6.88 (Film)
Dec 23, 1992	NSC						6.08 (Film)
Mar 10, 1993	NSC						5.95 (Film)
Jun 9, 1993	3400	24	2.2	<0.5	240		5.38
Sep 14, 1993	4900	190	15.0	6.8	480		6.26
Dec 14, 1993	1700	4.2	<0.3	<0.3	<0.5		5.22
Mar 2, 1994	NSC						5.75 (Film)
Jun 6, 1994	980	25	1.2	<0.3	42		5.25
Sep 6, 1994	3200	95	3.0	<1.7	76		6.80
Dec 7, 1994	510	1.8	<0.3	<0.5	1.7		5.57
Mar 8, 1995	1900	<0.5	<0.5	1.4	35		4.10

TABLE 1 (Continued)

Monitoring Well RE-1							
Date	TPH	Benzene	Toluene	E-Benzene	Xylenes	Elevation	Depth to GW
Apr 11, 1988	37000	1900	8400	1200	15000	166.82	
Apr 9, 1990	45000	6100	7000	2000	8800		4.99
Oct 30, 1990	72000	7700	5300	1800	8900		5.95
Jan 18, 1991	150000	11000	14000	1800	4300		5.17
Feb 12, 1991	140000	11000	12000	1600	13000		4.16
Mar 20, 1991	53000	3100	4200	400	5500		4.75
May 22, 1991	85000	8700	10000	1800	12000		4.42
Jun 19, 1991	110000	8500	9600	2600	16000		4.93
Jul 17, 1991	5500	950	ND	26	ND		5.19
Aug 7, 1991	NA	6700	5000	ND	7100		5.12
Sep 24, 1991	60000	6800	4300	640	6900		5.87
Oct 23, 1991	79000	7900	8300	450	7100		5.81
Nov 6, 1991	130000	14000	15000	1100	8800		5.56
Dec 4, 1991	50000	8000	4700	520	4100		5.35
Jan 29, 1992	21000	10300	11000	780	6000		4.50
Feb 26, 1992	38000	8400	10500	720	7100		5.27
Mar 19, 1992	48000	6200	9700	780	7200		4.47
Apr 22, 1992	NSC						4.62
May 21, 1992	20000	7600	10100	830	6900		4.98
Jun 25, 1992	NSC						5.14 (Film)
Jul 30, 1992	NSC						5.30 (Film)
Aug 20, 1992	NSC						5.28 (Film)
Sep 30, 1992	NSC						5.66 (Film)
Dec 23, 1992	NSC						4.81 (Film)
Mar 10, 1993	NSC						4.13 (Film)
Jun 9, 1993	NSC						4.48 (Film)
Sep 14, 1993	19000	3600	1100	740	4300		5.35
Dec 14, 1993	38000	4300	1300	<6.6	11.0		4.38
Mar 2, 1994	NSC						4.22 (Film)
Jun 6, 1994	NSC						2.16 (Film)
Sep 6, 1994	74000	3300	3900	1200	6100		5.00
Dec 7, 1994	30,000	3200	2900	1200	4600		4.10
Mar 8, 1995	28,000	4200	2300	810	7800		3.92

TABLE 1 (Continued)

Monitoring Well RE-2							
Date	TPH	Benzene	Toluene	E-Benzene	Xylenes	Elevation	Depth to GW
Apr 11, 1988	NSC					167.19	
Apr 9, 1990	850	5.8	0.5	4.8	1.1		4.90
Oct 30, 1990	440	2.8	0.91	13	3.14		5.34
Jan 18, 1991	1100	8.4	3.1	ND	10		4.90
Feb 12, 1991	1100	5.9	ND	01.77	ND		4.94
Mar 20, 1991	550	4.3	ND	ND	ND		4.32
May 22, 1991	1000	5.3	3.6	4.4	8.9		4.43
Jun 19, 1991	700	2.1	1.4	3.8	3.5		6.43
Jul 17, 1991	880	12.0	8.0	4.3	28.0		4.75
Aug 7, 1991	NA	3.8	1.6	ND	ND		4.87
Sep 24, 1991	670	7.2	7.1	ND	23		5.50
Oct 23, 1991	2700	52	60	22	130		5.63
Nov 6, 1991	1900	18	61	9.1	83		5.14
Dec 4, 1991	1100	26	47	4.3	42		5.26
Jan 29, 1992	900	14	24	5.3	19		5.11
Feb 26, 1992	500	3.4	3.5	2.7	2.7		4.31
Mar 19, 1992	1200	14	20	15	18		4.45
Apr 22, 1992	200	ND	ND	ND	ND		4.78
May 21, 1992	500	7.5	6.8	3.9	7.4		5.02
Jun 25, 1992	ND	ND	0.9	0.7	ND		5.13
Jul 30, 1992	500	7.7	8.6	3.2	1.7		5.19
Aug 20, 1992	1100	6.6	4.5	2.7	2.0		5.27
Sep 30, 1992	500	5.4	2.4	1.8	4.5		5.45
Dec 23, 1992	800	1.9	ND	ND	2.3		4.60
Mar 10, 1993	1200	ND	1.4	ND	2.1		4.18
Jun 9, 1993	200	ND	ND	ND	ND		4.53
Sep 14, 1993	360	1.6	1.1	3.2	8.9		5.26
Dec 14, 1993	260	5.6	3.9	<0.3	21.0		2.75
Mar 2, 1994	410	<0.3	<0.3	<0.3	<0.5		4.27
Jun 6, 1994	760	4.6	<0.3	0.32	1.3		4.88
Sep 6, 1994	1300	43	45	8.9	69		5.16
Dec 7, 1994	NA	NA	NA	NA	NA		4.16
Mar 8, 1995	<100	<0.5	<0.5	<0.5	<1		3.96

TABLE 1 (Continued)

Monitoring Well RE-3							
Date	TPH	Benzene	Toluene	E-Benzene	Xylenes	Elevation	Depth to GW
Apr 11, 1988	70000	6600	5300	800	13000	167.39	
Apr 9, 1990	370000	2300	4900	3200	31000		7.15
Oct 30, 1990	13000	860	660	220	2210		7.84
Jan 18, 1991	42000	4700	4500	21	7700		6.90
Feb 12, 1991	72000	3600	4500	ND	7600		6.62
Mar 20, 1991	65000	2400	9400	50	9800		5.87
May 22, 1991	NSC						5.98 (Film)
Jun 19, 1991	NSC						6.84 (Film)
Jul 17, 1991	NSC						7.10 (Film)
Aug 7, 1991	NSC						7.30 (Film)
Sep 24, 1991	NSC						7.84 (Film)
Oct 23, 1991	NSC						8.07 (Film)
Nov 6, 1991	NSC						7.63 (Film)
Dec 4, 1991	NSC						7.83 (Film)
Jan 29, 1992	NSC						7.17 (Film)
Feb 26, 1992	NSC						5.56 (Film)
Mar 19, 1992	NSC						5.44 (Film)
Apr 22, 1992	NSC						6.56 (Film)
May 21, 1992	NSC						6.90 (Film)
Jun 25, 1992	NSC						7.18 (Film)
Jul 30, 1992	NSC						6.80 (Film)
Aug 20, 1992	NSC						7.25 (Film)
Sep 30, 1992	NSC						7.68 (Film)
Dec 23, 1992	NSC						6.07 (Film)
Mar 10, 1993	NSC						5.66 (Film)
Jun 9, 1993	NSC						6.66 (Film)
Sep 14, 1993	40000	2900	1500	180	6900		7.30
Dec 14, 1993	NSC						5.95
Mar 2, 1994	NSC						5.08
Jun 6, 1994	NSC						6.35 (Film)
Sep 6, 1994	11000	260	26	<6.6	1000		7.50
Dec 7, 1994	NSC						5.48 (Film)
Mar 8, 1995	NSC						5.18 (Film)

TABLE 1 (Continued)

Monitoring Well RE-4							
Date	TPH	Benzene	Toluene	E-Benzene	Xylenes	Elevation	Depth to GW
Apr 11, 1988	150000	12000	8000	1000	27000	166.94	
Apr 9, 1990	NSC						
Oct 30, 1990	87000	7200	10000	1600	12900		7.04
Jan 18, 1991	70000	5000	5400	790	9900		11.62
Feb 12, 1991	87000	5200	2800	240	11000		11.63
Mar 20, 1991	6500	370	230	17	670		11.61
May 22, 1991	NSC						10.3 (Film)
Jun 19, 1991	NSC						11.1 (Film)
Jul 17, 1991	NSC						6.20 (Film)
Aug 7, 1991	NSC						8.15 (Film)
Sep 24, 1991	NSC						10.4 (Film)
Oct 23, 1991	NSC						11.2 (Film)
Nov 6, 1991	NSC						6.62 (Film)
Dec 4, 1991	NSC						11.2 (Film)
Jan 29, 1992	NSC						7.72 (Film)
Feb 26, 1992	NSC						5.13 (Film)
Mar 19, 1992	NSC						5.00 (Film)
Apr 22, 1992	NSC						5.94 (Film)
May 21, 1992	NSC						5.40 (Film)
Jun 25, 1992	NSC						5.71 (Film)
Jul 30, 1992	NSC						6.33 (Film)
Aug 20, 1992	NSC						5.80 (Film)
Sep 30, 1992	NSC						6.34 (Film)
Dec 23, 1992	NSC						5.50 (Film)
Mar 10, 1993	NSC						4.67 (Film)
Jun 9, 1993	NSC						5.12 (Film)
Sep 14, 1993	NSC						10.44
Dec 14, 1993	NSC						7.52
Mar 2, 1994	NSC						4.85
Jun 6, 1994	NSC						5.20 (Film)
Sep 6, 1994	NSC						9.85 (Film)
Dec 7, 1994	NSC						5.20 (Film)
Mar 8, 1995	NSC						4.98 (Film)

TABLE 1 (Continued)

Monitoring Well RE-5							
Date	TPH	Benzene	Toluene	E-Benzene	Xylenes	Elevation	Depth to GW
Apr 11, 1988	14000	1300	1100	100	2600	166.51	
Apr 9, 1990	3000	690	190	40	270		4.79
Oct 30, 1990	3400	910	48	87	249		5.86
Jan 18, 1991	1400	180	8.6	0.52	48		4.40
Feb 12, 1991	1000	ND	ND	0.65	ND		4.76
Mar 20, 1991	3000	250	53	ND	110		5.08
May 22, 1991	2500	330	7.8	5.6	200		4.52
Jun 19, 1991	2000	59	1.6	5.1	110		4.39
Jul 17, 1991	NSC						5.05 (Film)
Aug 7, 1991	NSC						5.02 (Film)
Sep 24, 1991	NSC						5.86 (Film)
Oct 23, 1991	NSC						5.84 (Film)
Nov 6, 1991	9900	2300	37	260	160		5.48
Dec 4, 1991	4500	1000	27	ND	180		5.43
Jan 29, 1992	600	6.1	2.3	ND	47		5.12
Feb 26, 1992	500	5.4	2.7	1.2	14		4.93
Mar 19, 1992	ND	1.7	1.1	ND	5.5		4.45
Apr 22, 1992	1600	240	2.2	ND	160		4.63
May 21, 1992	1200	410	37	ND	118		4.90
Jun 25, 1992	ND	1.0	0.8	0.8	0.4		5.15
Jul 30, 1992	ND	2.0	1.8	1.9	6.4		5.30
Aug 20, 1992	300	1.7	3.3	0.7	12		5.44
Sep 30, 1992	1900	140	ND	19	35		5.73
Dec 23, 1992	400	8.0	ND	ND	ND		4.75
Mar 10, 1993	1100	290	9.7	ND	75		4.14
Jun 9, 1993	400	1.5	0.5	ND	12		5.42
Sep 14, 1993	240	6.9	8.8	1.4	67		5.53
Dec 14, 1993	3300	510	5.4	4.1	55		4.78
Mar 2, 1994	2400	270	4.5	<0.3	13		4.20
Jun 6, 1994	730	<0.3	<0.3	0.70	22		5.13
Sep 6, 1994	2400	180	28	2.3	76		5.45
Dec 7, 1994	540	5.6	<0.3	<0.5	6.9		4.13
Mar 8, 1995	1500	220	5.5	<0.5	83		5.2

TABLE 1 (Continued)

Monitoring Well RE-6							
Date	TPH	Benzene	Toluene	E-Benzene	Xylenes	Elevation	Depth to GW
Apr 11, 1988	6000	3000	40	80	140	166.51	
Apr 9, 1990	3000	990	ND	70	ND		5.64
Oct 30, 1990	3400	1000	28	ND	ND		6.68
Jan 18, 1991	6300	1200	ND	3	15		6.61
Feb 12, 1991	5200	850	8.4	4.9	41		6.20
Mar 20, 1991	5800	680	12	8	16		5.62
May 22, 1991	8500	1700	14	24	6.7		6.05
Jun 19, 1991	NSC						6.12 (Film)
Jul 17, 1991	120000	9300	13000	2400	16000		6.20
Aug 7, 1991	NA	590	5.3	ND	14		6.27
Sep 24, 1991	7000	310	11	5.3	35		6.63
Oct 23, 1991	NSC						6.36 (Film)
Nov 6, 1991	4000	710	18	29	49		6.15
Dec 4, 1991	4100	1100	14	33	39		6.19
Jan 29, 1992	2600	790	14	ND	49		6.70
Feb 26, 1992	3100	950	21	30	33		5.44
Mar 19, 1992	2200	630	14	12	40		5.30
Apr 22, 1992	NA	730	2.2	ND	40		6.00
May 21, 1992	1500	840	7.8	7.1	34		6.25
Jun 25, 1992	<2000	740	8	27	28		6.38
Jul 30, 1992	NSC						6.42 (Film)
Aug 20, 1992	2800	630	17	23	22		6.50
Sep 30, 1992	7800	540	ND	12	29		6.66
Dec 23, 1992	1800	350	ND	7.7	11		5.83
Mar 10, 1993	3000	830	5.6	19	16		5.63
Jun 9, 1993	4800	920	6.2	3.2	12		6.01
Sep 14, 1993	3600	660	7.5	11	27		6.53
Dec 14, 1993	1500	200	<0.3	<0.3	8.8		3.58
Mar 2, 1994	NSC						5.12
Jun 6, 1994	2400	290	4.6	1.3	24		1.85
Sep 6, 1994	4300	230	21	<6.6	130		6.40
Dec 7, 1994	1500	17	2.5	3.2	22		5.68
Mar 8, 1995	2500	460	5.5	2.1	51		5.12

TABLE 1 (Continued)

Monitoring Well RE-7							
Date	TPH	Benzene	Toluene	E-Benzene	Xylenes	Elevation	Depth to GW
Apr 11, 1988	<50000	17000	4400	600	8400	166.04	
Apr 9, 1990	16000	7000	1200	640	1600		5.93
Oct 30, 1990	31000	14000	ND	ND	ND		8.21
Jan 18, 1991	NSC						11.8 (Film)
Feb 12, 1991	NSC						10.8 (Film)
Mar 20, 1991	120000	12000	2800	490	6600		9.96
May 22, 1991	NSC						11.7 (Film)
Jun 19, 1991	NSC						11.5 (Film)
Jul 17, 1991	NSC						7.80 (Film)
Aug 7, 1991	NSC						9.88 (0.03)
Sep 24, 1991	NSC						9.85 (0.03)
Oct 23, 1991	NSC						9.96 (Film)
Nov 6, 1991	NSC						6.77 (Film)
Dec 4, 1991	NSC						10.8 (Film)
Jan 29, 1992	NSC						8.64 (Film)
Feb 26, 1992	NSC						6.00 (Film)
Mar 19, 1992	NSC						5.55 (Film)
Apr 22, 1992	NSC						6.12 (Film)
May 21, 1992	NSC						6.40 (Film)
Jun 25, 1992	NSC						6.73 (0.02)
Jul 30, 1992	NSC						6.73 (Film)
Aug 20, 1992	NSC						6.82 (Film)
Sep 30, 1992	NSC						7.26 (Film)
Dec 23, 1992	NSC						6.22 (Film)
Mar 10, 1993	NSC						5.82 (Film)
Jun 9, 1993	NSC						6.17 (Film)
Sep 14, 1993	NSC						11.33
Dec 14, 1993	NSC						8.40
Mar 2, 1994	NSC						6.82
Jun 6, 1994	NSC						10.95 (Film)
Sep 6, 1994	NSC						11.30 (Film)
Dec 7, 1994	NSC						5.63 (Film)
Mar 8, 1995	NSC						5.06 (Film)

TABLE 1 (Continued)

Monitoring Well RS-8							
Date	TPH	Benzene	Toluene	E-Benzene	Xylenes	Elevation	Depth to GW
Aug 7, 1991	ND	ND	ND	ND	ND	164.32	9.68
Sep 27, 1991	ND	ND	ND	ND	ND		9.89
Oct 23, 1991	ND	ND	ND	ND	ND		10.05
Nov 6, 1991	ND	ND	ND	ND	ND		9.71
Dec 4, 1991	ND	ND	ND	ND	ND		10.00
Jan 29, 1992	ND	2.1	1.0	2.5	3.6		9.28
Feb 26, 1992	ND	ND	0.7	ND	0.7		7.05
Mar 19, 1992	ND	0.5	1.0	1.5	2.7		7.30
Apr 22, 1992	ND	ND	ND	ND	ND		8.60
May 21, 1992	ND	ND	ND	ND	ND		9.22
Jun 25, 1992	ND	ND	ND	ND	ND		9.49
Jul 30, 1992	ND	1.1	4.2	ND	3.0		9.55
Aug 20, 1992	ND	2.0	4.7	ND	5.7		9.63
Sep 30, 1992	ND	ND	ND	ND	ND		9.90
Dec 23, 1992	ND	ND	ND	ND	ND		9.96
Mar 10, 1993	ND	ND	ND	ND	ND		8.95
Jun 9, 1993	ND	ND	ND	ND	ND		9.00
Sep 14, 1993	200	0.3	ND	ND	ND		9.50
Dec 14, 1993	ND	ND	ND	ND	ND		8.75
Mar 2, 1994	<50	<0.3	<0.3	<0.3	<0.5		7.52
Jun 6, 1994	54	<0.3	<0.3	<0.3	2.4		9.00
Sep 6, 1994	<50	<0.3	<0.3	<0.3	<0.5		9.26
Dec 7, 1994	130	2.5	1.9	1.3	3.6		8.67
Mar 8, 1995	<100	<0.5	<0.5	<0.5	<1		8.34

TABLE 1 (Continued)

Monitoring Well RS-9							
Date	TPH	Benzene	Toluene	E-Benzene	Xylenes	Elevation	Depth to GW
Aug 7, 1991	NA	0.5	ND	330	1200	167.51	2.28
Sep 27, 1991	13000	3.5	3.0	82	140		2.77
Oct 23, 1991	11000	ND	ND	39	340		3.53
Nov 6, 1991	6800	8.4	0.6	22	230		2.51
Dec 4, 1991	6500	6.5	0.7	87	200		3.20
Jan 29, 1992	8100	22	10	140	260		2.65
Feb 26, 1992	13000	40	16	220	600		3.42
Mar 19, 1992	12000	21	12	100	280		3.12
Apr 22, 1992	8600	ND	ND	20	37		3.24
May 21, 1992	6000	21	10	53	210		3.75
Jun 25, 1992	370	2.3	1.5	0.7	4.3		2.65
Jul 30, 1992	3600	20	ND	39	80		2.70
Aug 20, 1992	3000	0.7	5.2	2.0	5.3		2.83
Sep 30, 1992	9200	4.8	6.5	12	91		2.80
Dec 23, 1992	2000	17	ND	8.2	18		2.45
Mar 10, 1993	1500	ND	2.6	21	12		2.40
Jun 9, 1993	1300	0.6	1.7	ND	7.5		3.55
Sep 14, 1993	1500	1.3	7.6	4.1	14.0		2.81
Dec 14, 1993	560	ND	ND	ND	5.5		2.63
Mar 2, 1994	1100	<0.3	<0.3	<0.3	<0.5		2.60
Jun 6, 1994	290	0.58	0.53	1.1	5.8		2.52
Sep 6, 1994	890	<0.3	<0.3	<0.3	3.1		3.16
Dec 7, 1994	940	22	23	10	32		5.18
Mar 8, 1995	1600	<0.5	<0.5	<0.5	2.3		4.57

TABLE 1 (Continued)

Monitoring Well RS-10							
Date	TPH	Benzene	Toluene	E-Benzene	Xylenes	Elevation	Depth to GW
Aug 7, 1991	ND	ND	ND	ND	ND	162.89	6.16
Sep 27, 1991	ND	ND	ND	ND	ND		6.48
Oct 23, 1991	ND	ND	ND	ND	ND		7.37
Nov 6, 1991	ND	ND	ND	ND	ND		6.44
Dec 4, 1991	ND	ND	ND	ND	ND		7.02
Jan 29, 1992	ND	ND	ND	ND	ND		6.78
Feb 26, 1992	ND	ND	ND	ND	ND		8.33
Mar 19, 1992	ND	ND	ND	ND	0.6		8.02
Apr 22, 1992	ND	ND	ND	ND	ND		7.78
May 21, 1992	ND	ND	0.6	ND	1.2		6.21
Jun 25, 1992	ND	ND	ND	ND	ND		7.73
Jul 30, 1992	ND	ND	0.5	ND	1.0		7.84
Aug 20, 1992	ND	ND	ND	ND	ND		7.50
Sep 30, 1992	ND	ND	ND	ND	ND		7.63
Dec 23, 1992	ND	ND	ND	ND	ND		7.24
Mar 10, 1993	ND	ND	ND	ND	ND		6.38
Jun 9, 1993	ND	ND	ND	ND	ND		7.98
Sep 14, 1993	ND	ND	ND	ND	ND		7.35
Mar 2, 1994	<50	<0.3	<0.3	<0.3	<0.3		7.00
Jun 6, 1994	<50	<0.3	<0.3	<0.3	<0.5		6.55
Sep 6, 1994	<50	<0.3	<0.3	<0.3	<0.5		7.63
Dec 7, 1994	56	<0.3	<0.3	<0.5	2.1		5.92
Mar 8, 1995	<100	<0.5	<0.5	<0.5	<1		7.84

Benzene, toluene, ethlybenzene, and xylene analyzed by EPA method 8020 and concentrations reported in ug/l.

Total petroleum hydrocarbons analyzed by EPA method 8015 and concentrations reported in ug/l.

NSC = Not sampled due to product film on groundwater.

ND = Not Detected.

NA = Not Analyzed.

**Table 2 - Vapor Concentrations in Wells**  
**Thrifty Oil Co. Station #054**  
**Castro Valley, CA**

Well I.D.	Date	Vapor Conc., ppmv
PW-1	05-16-94	150
	06-06-94	28
	07-11-94	160
	08-15-94	100
	09-06-94	12
PW-2	05-16-94	150
	06-06-94	25
	07-11-94	150
	08-15-94	100
	09-06-94	18
RE-1	05-16-94	>10,000
	06-06-94	>10,000
	07-11-94	>10,000
	08-15-94	>10,000
	09-06-94	50
RE-2	05-16-94	200
	06-06-94	20
	07-11-94	210
	08-15-94	160
	09-06-94	4
RE-3	05-16-94	6,000
	06-06-94	>10,000
	07-11-94	5,000
	08-15-94	>6,000
	09-06-94	150
RE-4	05-16-94	1,000
	06-06-94	40
	07-11-94	1,500
	08-15-94	>1,000
	09-06-94	70
RE-5	05-16-94	400
	06-06-94	220
	07-11-94	300
	08-15-94	300
	09-06-94	2
RE-6	05-16-94	>10,000
	06-06-94	20
	07-11-94	>10,000
	08-15-94	>10,000
	09-06-94	200

(Table 2 Continued)

<b>Well ID.</b>	<b>Date</b>	<b>Vapor Conc., ppmv</b>
RE-7	05-16-94	200
	06-06-94	500
	07-11-94	>10,000
	08-15-94	>300
	09-06-94	100
RS-8	05-16-94	--
	06-06-94	0
	07-11-94	--
	08-15-94	--
	09-06-94	0
RS-9	05-16-94	--
	06-06-94	5,000
	07-11-94	--
	08-15-94	--
	09-06-94	>10,000
RS-10	05-16-94	--
	06-06-94	0
	07-11-94	--
	08-15-94	--
	09-06-94	0

## **APPENDIX A**

**EARTH MANAGEMENT CO.**

Environmental Remediation

**FIELD STATUS REPORT**
**GROUND WATER AND SOIL CLEAN-UP SYSTEM**

MAINFOLD							
WELLS	WATER			VAPORS			
	ON	RE4	RE7	ON	RE1	RE3	RE7
OFF							

WELL MONITORING				RSI SYSTEM				
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	8:00	
					HOURS	#	7742	
					ENGINE RPM	RPM	1900	
					ENGINE VACUUM	IN HG	16	
					TK REC TEMP	F	100	
					AIR TEMP	F	53	
					AIR FLOW	CFM	14	
					VAPOR FLOW	CFM	16	
					FUEL FLOW	CFM/H	85	
					WELL VACUUM	IN H2O	25	
					GAS METER		80%	
					CATALYST IN	F		
					CATALYST OUT	F		
					EXHAUST HC	PPM/%		
					EXHAUST CO	%PPM		
					EXHAUST CO2	%		
					EXHAUST NOX	%PPM		
					CATALYST REPLACEMENT			
					EXHAUST O2	%		
					INLET	PPM		
					OUTLET	PPM		

**HYDROCARBON STRIPPER & VAPOR EXTRACTION SYSTEM W/ACU OR CAT**

PARAMETER	U/M	LIMIT	DATA
FLOWMETER			
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS: Change oil filter, oil engine, replace spark plugs, adjust ignition timing, replace + battery cable.

 SERVICE TECHNICIAN Verlon Phillips DATE 01-06-95 THRIFTY OIL CO # 054



**EARTH MANAGEMENT CO.**

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

MAINFOLD								
WELLS	WATER					VAPORS		
	ON	RE4	OFF	RE7	ON	RE1	OFF	RE3

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	9:00	
					HOURS	#	40	
					ENGINE RPM	RPM	21	
					ENGINE VACUUM	IN HG	20	
					TK REC TEMP	F	70	
					AIR TEMP	F	45	
					AIR FLOW	CFM	16	
					VAPOR FLOW	CFM	13	
					FUEL FLOW	CFM/H	85	
					WELL VACUUM	IN H2O	17	
					GAS METER	%	85	
					CATALYST IN	F		
					CATALYST OUT	F		
					EXHAUST HC	PPM/%		
					EXHAUST CO	%PPM		
					EXHAUST CO2	%		
					EXHAUST NOX	%PPM		
					CATALYST REPLACEMENT			
					EXHAUST O2	%		
					INLET	PPM		
					OUTLET	PPM		
HYDROCARBON STRIPPER & VAPOR EXTRACTION SYSTEM W/ACU OR CAT								
PARAMETER	U/M	LIMIT	DATA					
FLOWMETER								
ROTAMETER								
VPI FLOW								
VPI VACUUM								
AIR COMPRES								
VAPOR								
INLET VAPOR								
TEMPERATURE								
LEL								
COMMENTS:								
SERVICE TECHNICIAN	Levi L. Taylor				DATE	01-12-95	THRIFTY OIL CO #	054

13415 Carmenita Road/P.O. Box 2129, Santa Fe Springs, CA 90670



**EARTH MANAGEMENT CO.**

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

MAINFOLD													
WELLS	WATER						WELLS	VAPORS					
	ON	RE4	RE7	OFF	RE1	RE3	ON	RE6	RE7	OFF	RE2	RE4	RE5

WELL MONITORING				RSI SYSTEM				
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	AM	
					HOURS	#	20	
					ENGINE RPM	RPM	19	
					ENGINE VACUUM	IN HG	12	
					TK REC TEMP	F	90	
					AIR TEMP	F	50	
					AIR FLOW	CFM	12	
					VAPOR FLOW	CFM	10	
					FUEL FLOW	CFM/H	90	
					WELL VACUUM	IN H2O	9	
					GAS METER	%	80	
					CATALYST IN	F		
					CATALYST OUT	F		
					EXHAUST HC	PPM/%		
					EXHAUST CO	%PPM		
					EXHAUST CO2	%		
					EXHAUST NOX	%PPM		
					CATALYST REPLACEMENT			
					EXHAUST O2	%		
					INLET	PPM		
					OUTLET	PPM		
HYDROCARBON STRIPPER & VAPOR EXTRACTION SYSTEM W/ACU OR CAT								
PARAMETER	U/M	LIMIT	DATA					
FLOWMETER								
ROTAMETER								
VPI FLOW								
VPI VACUUM								
AIR COMPRES								
VAPOR								
INLET VAPOR								
TEMPERATURE								
LEL								
COMMENTS:								
SERVICE TECHNICIAN <u>Debra Butler</u>				DATE <u>01-20-95</u> THRIFTY OIL CO # <u>054</u>				

13415 Carmenita Road/P.O. Box 2129, Santa Fe Springs, CA 90670

OFFICE RECORD



**EARTH MANAGEMENT CO.**

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

MAINFOLD									
WELLS	WATER				VAPORS				
	ON	RE4	RE7	OFF	ON	RE1	RE3	RE6	RE7

WELL MONITORING				RSI SYSTEM				
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	8:20	
					HOURS	#	30	
					ENGINE RPM	RPM	20	
					ENGINE VACUUM	IN HG	11	
					TK REC TEMP	F	90	
					AIR TEMP	F	60	
					AIR FLOW	CFM	14	
					VAPOR FLOW	CFM	10	
					FUEL FLOW	CFM/H	90	
					WELL VACUUM	IN H2O	13	
					GAS METER			
					CATALYST IN	F		
					CATALYST OUT	F		
					EXHAUST HC	PPM/%		
					EXHAUST CO	%PPM		
					EXHAUST CO2	%		
					EXHAUST NOX	%PPM		
					CATALYST REPLACEMENT			
					EXHAUST O2	%		
					INLET	PPM		
					OUTLET	PPM		
HYDROCARBON STRIPPER & VAPOR EXTRACTION SYSTEM W/ACU OR CAT								
PARAMETER	U/M	LIMIT	DATA					
FLOWMETER								
ROTAMETER								
VPI FLOW								
VPI VACUUM								
AIR COMPRES								
VAPOR								
INLET VAPOR								
TEMPERATURE								
LEL								
COMMENTS:								
SERVICE TECHNICIAN	<i>John Phillips</i>		DATE	01-25-95	THRIFTY OIL CO #	054		

13415 Carmenita Road/P.O. Box 2129, Santa Fe Springs, CA 90670



**EARTH MANAGEMENT CO.**

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

MAINFOLD						
WELLS	WATER					VAPORS
	ON	OFF	REF	REF	REF	
ON			REF		REF	REF
OFF						REF

WELL MONITORING				RSI SYSTEM				
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM		
					HOURS	#	40	
					ENGINE RPM	RPM	1900	
					ENGINE VACUUM	IN HG	10	
					TK REC TEMP	F	90	
					AIR TEMP	F	65	
					AIR FLOW	CFM	19	
					VAPOR FLOW	CFM	16	
					FUEL FLOW	CFM/H	90	
					WELL VACUUM	IN H2O	15	
					GAS METER	%	70	
					CATALYST IN	F		
					CATALYST OUT	F		
					EXHAUST HC	PPM/%		
					EXHAUST CO	%PPM		
					EXHAUST CO2	%		
					EXHAUST NOX	%PPM		
					CATALYST REPLACEMENT			
					EXHAUST O2	%		
					INLET	PPM		
					OUTLET	PPM		
HYDROCARBON STRIPPER & VAPOR EXTRACTION SYSTEM W/ACU OR CAT								
PARAMETER	U/M	LIMIT	DATA					
FLOWMETER								
ROTAMETER								
VPI FLOW								
VPI VACUUM								
AIR COMPRES								
VAPOR								
INLET VAPOR								
TEMPERATURE								
LEL								
COMMENTS:								
SERVICE TECHNICIAN	<i>Dela Pintura</i>		DATE	02-02-95	THRIFTY OIL CO #	054		

13415 Carmenita Road/P.O. Box 2129, Santa Fe Springs, CA 90670



**EARTH MANAGEMENT CO.**

### **Environmental Remediation**

## **FIELD STATUS REPORT**

## **GROUND WATER AND SOIL CLEAN-UP SYSTEM**

MAINFOLD											
WELLS	WATER					WELLS	VAPORS				
	ON	OFF	REF	REG	REF		ON	REF	REG	REF	ON
ON			REF		REF	ON	REF	REG	REF	ON	
OFF						OFF					

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	9:00	
					HOURS	#	7906	
					ENGINE RPM	RPM	1800	
					ENGINE VACUUM	IN HG	11	
					TK REC TEMP	F	95	
					AIR TEMP	F	64	
					AIR FLOW	CFM	16	
					VAPOR FLOW	CFM	12	
					FUEL FLOW	CFM/H	85	
					WELL VACUUM	IN H2O	17	
					GAS METER	%	80	
					CATALYST IN	F		
					CATALYST OUT	F		
					EXHAUST HC	PPM/%		
					EXHAUST CO	%PPM		
					EXHAUST CO2	%		
					EXHAUST NOX	%PPM		
					CATALYST REPLACEMENT			
					EXHAUST O2	%		
					INLET	PPM		
					OUTLET	PPM		
COMMENTS: FID don't work - Water came too slow -								
SERVICE TECHNICIAN <u>John Polley</u>					DATE 02.19.93 THRIFTY OIL CO # 034			

COMMENTS: F.I.D don't work - Water came too slow -

• SERVICE TECHNICIAN 

DATE 02.14.96 THRIFTY OIL CO # 034



# EARTH MANAGEMENT CO.

Environmental Remediation

PROJECT STATUS REPORT

THRIFTY OIL CO. S.S. #054

2504 CASTRO VALLEY BLVD.

CASTRO VALLEY, CA 94546

DATE:

FREQ.	MONITORING				ODORS			FREE PRODUCT		WELLS CONNECTED TO SYSTEM (W)							
	OBSERVATION WELLS				(S=SLIGHT)					CONNECT	INTEGRITY	VAPOR	WATER	ON	OFF	ON	OFF
	NO.	DTW	DTP	PT	YES	NO	S	YES	NO	YES	NO	OK	NO	ON	OFF	ON	OFF
M	PW-1	5.50								X	-						
M	PW-2	7.40								X	-						
M	RE-1	6.25	-		X					X	-						X
M	RE-2	6.12								X	-						
M	RE-3	8.60								X	-						X
M	RE-4	7.20								X	-						X
M	RE-5	6.40								X	X	-					
M	RE-6	7.32								X	X	-					X
M	RE-7	8.50								X	X	-					X
M	RS-8	10.60								X	-	X					
M	RS-9	4.20								X	-	X					
M	RS-10	8.80								X	-	X					

SAVE SYSTEM WEEKLY					
PARAMETER	U/M	DATA	PARAMETER	U/M	DATA
TIME	AM/PM	9:00	AIR FLOW	C F M	16
WORKING	YES/NO	HO	VAPOR FLOW	C F M	12
RESTARTED	YES/NO	Yes	FUEL FLOW	C F M/H	85
HOURS	#	7906	WELL VACUUM	IN H2O	17
ENGINE ROT.	RPM	1800	L P G TANKS	%	#1: 80
ENGINE VACUUM	IN HG	11	GAS METER READING	-	N/A
TANK VACUUM	IN HG	19	WATER FLOWMETER	GALL.	1766
EXHAUST (By others)					
INLET TO ENGINE					
MAINTENANCE	ES/100/400/800		FOR SPECIFIC OPERATIONS SEE FIELD RECORD		
WATER SAMPLING - CHECK ( <u>HO</u> ) WHEN DONE					
EFFLUENT				INFLUENT	
(__)	(__)	(__)	(__)	(__)	(__)
Q.-SEE C.CUST.					
REMARKS: Water system is too slow					
FREE PRODUCT REMOVED: APPROX. <u>0</u> GALLONS			WATER REMOVED: APPROX. <u>0</u> GALLONS		
DATA RECORDED BY: <u>Dee Dab</u>			INPUT BY: M.M. >\FF\054rsirt		



**EARTH MANAGEMENT CO.**

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

MAINFOLD									
WELLS	WATER					VAPORS			
	ON	OFF	REF	ON	OFF	REF	ON	OFF	REF
ON			REF			REF			
OFF									

WELL MONITORING				RSI SYSTEM				
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	8:20	
					HOURS	#	7921	
					ENGINE RPM	RPM	1900	
					ENGINE VACUUM	IN HG	18	
					TK REC TEMP	F	90	
					AIR TEMP	F	60	
					AIR FLOW	CFM	20	
					VAPOR FLOW	CFM	14	
					FUEL FLOW	CFM/H	90	
					WELL VACUUM	IN H2O	14	
					GAS METER			
					CATALYST IN	F		
					CATALYST OUT	F		
					EXHAUST HC	PPM/%		
					EXHAUST CO	%PPM		
					EXHAUST CO2	%		
					EXHAUST NOX	%PPM		
					CATALYST REPLACEMENT			
					EXHAUST O2	%		
					INLET	PPM		
					OUTLET	PPM		

### HYDROCARBON STRIPPER & VAPOR EXTRACTION SYSTEM W/ACU OR CAT

PARAMETER	U/M	LIMIT	DATA
FLOWMETER	Gall.	1886	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS: Water come too slow. Add oil, change one short hose from the water pump.

SERVICE TECHNICIAN Peter J.

DATE 02-21-91 THRIFTY OIL CO # 059



**EARTH MANAGEMENT CO.**

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

MAINFOLD									
WELLS	WATER					VAPORS			
	ON	OFF	REC 1	REC 2	REC 3	ON	OFF	REC 1	REC 2
ON			REC 1	REC 2		ON		REC 1	REC 2
OFF						OFF			

WELL MONITORING					RSI SYSTEM				
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS	
					TIME	AM/PM	8:00		
					HOURS	#	7941		
					ENGINE RPM	RPM	1900		
					ENGINE VACUUM	IN HG	12		
					TK REC TEMP	F	90		
					AIR TEMP	F	64		
					AIR FLOW	CFM	14		
					VAPOR FLOW	CFM	11		
					FUEL FLOW	CFM/H	85		
					WELL VACUUM	IN H2O	11		
					GAS METER				
					CATALYST IN	F			
					CATALYST OUT	F			
					EXHAUST HC	PPM/%			
					EXHAUST CO	%PPM			
					EXHAUST CO2	%			
					EXHAUST NOX	%PPM			
					CATALYST REPLACEMENT				
					EXHAUST O2	%			
					INLET	PPM			
					OUTLET	PPM			
HYDROCARBON STRIPPER & VAPOR EXTRACTION SYSTEM W/ACU OR CAT									
PARAMETER	U/M	LIMIT	DATA						
FLOWMETER	Gall.	120							
ROTAMETER									
VPI FLOW									
VPI VACUUM									
AIR COMPRES									
VAPOR									
INLET VAPOR									
TEMPERATURE									
LEL									

COMMENTS: Fix few connection inside the wells - Clean air tank

SERVICE TECHNICIAN John DATE 02-21-91 THRIFTY OIL CO # 054

13415 Carmenita Road/P.O. Box 2129, Santa Fe Springs, CA 90670

# EARTH MANAGEMENT CO.



Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

MAINFOLD							
WELLS	WATER			VAPORS			
	ON	RE4	RE7	ON	RE1	RE3	RE7
OFF							

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	8:00	
					HOURS	#	7956	
					ENGINE RPM	RPM	1850	
					ENGINE VACUUM	IN HG	12	
					TK REC TEMP	F	90	
					AIR TEMP	F	60	
					AIR FLOW	CFM	15	
					VAPOR FLOW	CFM	13	
					FUEL FLOW	CFM/H	75	
					WELL VACUUM	IN H2O	20	
					GAS METER		80%	
HYDROCARBON STRIPPER & VAPOR EXTRACTION SYSTEM W/ACU OR CAT					CATALYST IN	F		
PARAMETER	U/M	LIMIT	DATA		CATALYST OUT	F		
FLOWMETER	Gall.	2866			EXHAUST HC	PPM/%		
ROTAMETER					EXHAUST CO	%PPM		
VPI FLOW					EXHAUST CO2	%		
VPI VACUUM					EXHAUST NOX	%PPM		
AIR COMPRES					CATALYST REPLACEMENT			
VAPOR					EXHAUST O2	%		
INLET VAPOR					INLET	PPM		
TEMPERATURE					OUTLET	PPM		
LEL								
COMMENTS:	RE4 - water line is blocked -							
SERVICE TECHNICIAN	<i>Dele Pinto</i>			DATE	02-28-95	THRIFTY OIL CO #	054	

13415 Carmenita Road/P.O. Box 2129, Santa Fe Springs, CA 90670

OFFICE RECORD

**EARTH MANAGEMENT CO.**

Environmental Remediation


**FIELD STATUS REPORT**
**GROUND WATER AND SOIL CLEAN-UP SYSTEM**

MAINFOLD							
WELLS	WATER			VAPORS			
	ON	RE4	RE7	ON	RE1	RE3	RE7
OFF							

WELL MONITORING				RSI SYSTEM				
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	8:00	
					HOURS	#	7976	
					ENGINE RPM	RPM	1900	
					ENGINE VACUUM	IN HG	11	
					TK REC TEMP	F	90	
					AIR TEMP	F	60	
					AIR FLOW	CFM	16	
					VAPOR FLOW	CFM	13	
					FUEL FLOW	CFM/H	85	
					WELL VACUUM	IN H2O	20	
					GAS METER		20%	
HYDROCARBON STRIPPER & VAPOR EXTRACTION SYSTEM W/ACU OR CAT				CATALYST IN	F			
PARAMETER	U/M	LIMIT	DATA	CATALYST OUT	F			
FLOWMETER	Cell	2986		EXHAUST HC	PPM/%			
ROTAMETER				EXHAUST CO	%PPM			
VPI FLOW				EXHAUST CO2	%			
VPI VACUUM				EXHAUST NOX	%PPM			
AIR COMPRES				CATALYST REPLACEMENT				
VAPOR				EXHAUST O2	%			
INLET VAPOR				INLET	PPM			
TEMPERATURE				OUTLET	PPM			
LEL								
COMMENTS: Water line it is 0.12, but water still run too slow								
SERVICE TECHNICIAN	<u>John Pastor</u>		DATE	03-02-95	THRIFTY OIL CO #	054		



# EARTH MANAGEMENT CO.

Environmental Remediation

PROJECT STATUS REPORT

THRIFTY OIL CO. S.S. #054

2504 CASTRO VALLEY BLVD.

CASTRO VALLEY, CA 94546

DATE: 03-08-1995

FREQUENCY	MONITORING				ODORS			FREE PRODUCT	WELLS CONNECTED TO SYSTEM (W)								
	OBSERVATION WELLS				(S=SLIGHT)				CONNECT	INTEGRITY	VAPOR	WATER	ON	OFF	ON	OFF	
	NO.	DTW	DTP	PT	YES	NO	S										
M	PW-1	3.94				X		X	X	-							
M	PW-2	4.10				X		X	X	-							
M	RE-1	3.92	-			X		X	X	-							X
M	RE-2	3.96				X		X	X	-							
M	RE-3	5.18			X			Y	X	-							Y
M	RE-4	4.98			X			X	X	-							X
M	RE-5	5.20			X			X	X	-							
M	RE-6	5.12			X			X	X	-							
M	RE-7	5.06			X			X	X	-							X X
M	RS-8	8.34			X			X	-	X							
M	RS-9	4.57			X			X	-	X							
M	RS-10	7.84			X			X	-	X							

SAVE SYSTEM WEEKLY					
PARAMETER	U/M	DATA	PARAMETER	U/M	DATA
TIME	AM/PM	8:20	AIR FLOW	C F M	
WORKING	YES/NO	NO	VAPOR FLOW	C F M	
RESTARTED	YES/NO	Yes	FUEL FLOW	C F M/H	
HOURS	#		WELL VACUUM	IN H2O	
ENGINE ROT.	RPM	1900	L P G TANKS	%	#1: 65%
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: R3 and RE-7 had sheen, RE-7 film					
FREE PRODUCT REMOVED: APPROX. 0 GALLONS			WATER REMOVED: APPROX. 345 GALLONS		
DATA RECORDED BY: SERBAN FLORIN			INPUT BY: M.M. >FF\054rsirt		



**EARTH MANAGEMENT CO.**

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

MAINFOLD						
WELLS	WATER			VAPORS		
ON		RE4		RE7		
OFF						
					REG	REF

WELL MONITORING				RSI SYSTEM				
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	8:00	
					HOURS	#	7986	
					ENGINE RPM	RPM	1800	
					ENGINE VACUUM	IN HG	13	
					TK REC TEMP	F	90	
					AIR TEMP	F	54	
					AIR FLOW	CFM	15	
					VAPOR FLOW	CFM	12	
					FUEL FLOW	CFM/H	85	
					WELL VACUUM	IN H2O	14	
					GAS METER		1/2	
					CATALYST IN	F		
					CATALYST OUT	F		
					EXHAUST HC	PPM/%		
					EXHAUST CO	%PPM		
					EXHAUST CO2	%		
					EXHAUST NOX	%PPM		
					CATALYST REPLACEMENT			
					EXHAUST O2	%		
					INLET	PPM		
					OUTLET	PPM		

COMMENTS: Water still run too slow -

SERVICE TECHNICIAN Steve Rogers

DATE 03-08-95 THRIFTY OIL CO # 059

## FIELD DATA - GROUNDWATER SAMPLING PROGRAM

Site <u>SS #054</u>	Date <u>03-08-1995</u>
Address _____	
Personnel <u>SERBAN FLORIN</u>	Weather <u>Rain</u>
Well No. <u>RE-1</u>	Equip. <u>BAILER</u>

<b>Before Purging</b>					
Total Well Depth <u>19.85</u>	ft.	Well Diameter <u>4"</u>			
Depth to Water <u>3.92</u>	ft.	Est. Purge Vol. <u>42</u>			

<b>Sampling Data</b>					
Initial Turbidity			Final Turbidity		
Time <u>12:33</u>	<u>12:36</u>	<u>12:39</u>	<u>12:42</u>	<u>12:46</u>	<u>12:49</u>
EC <u>1411</u>	<u>1415</u>	<u>1422</u>	<u>1428</u>	<u>1425</u>	<u>1428</u>
pH <u>8.07</u>	<u>7.86</u>	<u>7.62</u>	<u>7.67</u>	<u>7.59</u>	<u>7.54</u>
Temp <u>62.4</u>	<u>63.6</u>	<u>63.7</u>	<u>63.3</u>	<u>63.9</u>	<u>64.1</u>
Gal. <u>9</u>	<u>8</u>	<u>12</u>	<u>16</u>	<u>21</u>	<u>25</u>
Time <u>12:52</u>	<u>12:55</u>	<u>12:57</u>	<u>13:00</u>		
EC <u>1426</u>	<u>1428</u>	<u>1431</u>	<u>1431</u>		
pH <u>8.07</u>	<u>8.03</u>	<u>7.57</u>	<u>7.54</u>		
Temp <u>64.3</u>	<u>64.5</u>	<u>64.7</u>	<u>64.5</u>		
Gal. <u>29</u>	<u>33</u>	<u>37</u>	<u>42</u>		

<b>After Purging/Before Sample Collection</b>					
Depth to Water _____	ft.	Total Well Depth _____	ft.		

## FIELD DATA - GROUNDWATER SAMPLING PROGRAM

Site <u>SS #054</u>	Date <u>03-08-1995</u>
Address _____	
Personnel <u>SERBAN FLORIN</u>	Weather <u>Rain</u>
Well No. <u>RE-2</u>	Equip. <u>Boiler</u>

<b>Before Purging</b>	
Total Well Depth <u>17.10</u>	ft. Well Diameter <u>4"</u>
Depth to Water <u>3.96</u>	ft. Est. Purge Vol. <u>34</u>

<b>Sampling Data</b>						
Initial Turbidity _____			Final Turbidity _____			
Time	<u>13:10</u>	<u>13:13</u>	<u>13:16</u>	<u>13:19</u>	<u>13:22</u>	<u>13:25</u>
EC	<u>2730</u>	<u>2630</u>	<u>2620</u>	<u>2610</u>	<u>2580</u>	<u>2540</u>
pH	<u>9.70</u>	<u>9.65</u>	<u>9.56</u>	<u>9.54</u>	<u>9.49</u>	<u>9.46</u>
Temp	<u>62.1</u>	<u>63.1</u>	<u>62.8</u>	<u>62.5</u>	<u>62.1</u>	<u>64.9</u>
Gal.	<u>6</u>	<u>12</u>	<u>18</u>	<u>24</u>	<u>30</u>	<u>34</u>
Time	_____	_____	_____	_____	_____	_____
EC	_____	_____	_____	_____	_____	_____
pH	_____	_____	_____	_____	_____	_____
Temp	_____	_____	_____	_____	_____	_____
Gal.	_____	_____	_____	_____	_____	_____

<b>After Purging/Before Sample Collection</b>	
Depth to Water <u> </u>	ft. Total Well Depth <u> </u> ft.

# FIELD DATA - GROUNDWATER SAMPLING PROGRAM

Site <u>554 054</u>	Date <u>03-08-1995</u>
Address _____	
Personnel <u>SERBAN FLORIN</u>	Weather <u>Rain</u>
Well No. <u>AS-9</u>	Equip. <u>BAILER</u>

<b>Before Purging</b>					
Total Well Depth	<u>15.00</u>	ft.	Well Diameter	<u>2"</u>	
Depth to Water	<u>4.57</u>	ft.	Est. Purge Vol.	<u>7</u>	

<b>Sampling Data</b>						
Initial Turbidity			Final Turbidity			
Time	<u>13:34</u>	<u>13:36</u>	<u>13:37</u>	<u>13:38</u>	<u>13:39</u>	<u>13:40</u>
EC	<u>1196</u>	<u>1219</u>	<u>1225</u>	<u>1225</u>	<u>1227</u>	<u>1225</u>
pH	<u>10.33</u>	<u>10.25</u>	<u>10.17</u>	<u>10.15</u>	<u>10.08</u>	<u>10.07</u>
Temp	<u>62.1</u>	<u>62.3</u>	<u>62.4</u>	<u>62.3</u>	<u>62.1</u>	<u>62.3</u>
Gal.	<u>1</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Time	_____	_____	_____	_____	_____	_____
EC	_____	_____	_____	_____	_____	_____
pH	_____	_____	_____	_____	_____	_____
Temp	_____	_____	_____	_____	_____	_____
Gal.	_____	_____	_____	_____	_____	_____

<b>After Purging/Before Sample Collection</b>					
Depth to Water	ft.	Total Well Depth	ft.		

# EARTH MANAGEMENT CO.

Environmental Remediation

## FIELD DATA - GROUNDWATER SAMPLING EVENT

DATE 03-08-1995

STATION NO. 55 # 054

PERSONNEL SERBAN

FLORIN

WELL NO. RS-8

WEATHER Rain

SAMPLE EQUIPMENT Boiler

### BEFORE SAMPLING

TOTAL WELL DEPTH 25.20 Ft. WELL DIAMETER 2"

DEPTH TO WATER 8.34 Ft. PURGE VOLUME 11

RECOVERY RATE \_\_\_\_\_ FINAL TURBIDITY \_\_\_\_\_

### SAMPLING DATA

TIME 13:50 13:51 13:52 13:54 13:55 13:56 13:58 14:00

EC 1776 1788 1794 1801 1796 1780 1760 1750

pH 10.07 10.11 10.15 10.22 10.23 10.21 10.20 10.22

TEMP 64.1 64.3 64.6 64.4 64.2 64.4 64.6 64.4

GAL. 1 2 3 5 6 7 9 11

TURB \_\_\_\_\_

TIME \_\_\_\_\_

EC \_\_\_\_\_

pH \_\_\_\_\_

TEMP \_\_\_\_\_

GAL. \_\_\_\_\_

TURB \_\_\_\_\_

### AFTER SAMPLING

DEPTH TO WATER \_\_\_\_\_ Ft. TOTAL WELL DEPTH \_\_\_\_\_ Ft.



# EARTH MANAGEMENT CO.

Environmental Remediation

## FIELD DATA - GROUNDWATER SAMPLING EVENT

DATE 03-08-1995 STATION NO. 054  
PERSONNEL SERBAN FLORIN  
WELL NO. RS-10 WEATHER Rain  
SAMPLE EQUIPMENT Boiler

### BEFORE SAMPLING

TOTAL WELL DEPTH 24.45 FT. WELL DIAMETER 2<sup>4</sup>  
DEPTH TO WATER 7.84 FT. PURGE VOLUME 11  
RECOVERY RATE \_\_\_\_\_ FINAL TURBIDITY \_\_\_\_\_

### SAMPLING DATA

TIME	<u>14:05</u>	<u>14:06</u>	<u>14:07</u>	<u>14:09</u>	<u>14:10</u>	<u>14:11</u>	<u>14:13</u>	<u>14:15</u>
EC	<u>1625</u>	<u>1636</u>	<u>1642</u>	<u>1650</u>	<u>1658</u>	<u>1660</u>	<u>1662</u>	<u>1660</u>
pH	<u>10.42</u>	<u>10.39</u>	<u>10.32</u>	<u>10.34</u>	<u>10.30</u>	<u>10.26</u>	<u>10.23</u>	<u>10.20</u>
TEMP	<u>65.0</u>	<u>65.3</u>	<u>65.0</u>	<u>65.4</u>	<u>65.6</u>	<u>65.8</u>	<u>65.8</u>	<u>66.3</u>
GAL.	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>9</u>	<u>11</u>
TURB	_____	_____	_____	_____	_____	_____	_____	_____

TIME	_____	_____	_____	_____	_____	_____	_____	_____
EC	_____	_____	_____	_____	_____	_____	_____	_____
pH	_____	_____	_____	_____	_____	_____	_____	_____
TEMP	_____	_____	_____	_____	_____	_____	_____	_____
GAL.	_____	_____	_____	_____	_____	_____	_____	_____
TURB	_____	_____	_____	_____	_____	_____	_____	_____

### AFTER SAMPLING

DEPTH TO WATER \_\_\_\_\_ FT. TOTAL WELL DEPTH \_\_\_\_\_ FT.



# EARTH MANAGEMENT CO.

Environmental Remediation

## FIELD DATA - GROUNDWATER SAMPLING EVENT

DATE 03-08-1995

STATION NO. 054

PERSONNEL SERBAN FLORIN

WELL NO. RE-5 WEATHER Rain

SAMPLE EQUIPMENT Bailer

### BEFORE SAMPLING

TOTAL WELL DEPTH 18.25 Ft. WELL DIAMETER 4"

DEPTH TO WATER 5.20 Ft. PURGE VOLUME 34

RECOVERY RATE \_\_\_\_\_ FINAL TURBIDITY \_\_\_\_\_

### SAMPLING DATA

TIME 14:08 14:11 14:14 14:17 14:20 14:23 14:26 14:28

EC 1510 1530 1550 1580 1560 1580 1560 1580

pH 11.37 11.43 11.48 11.53 11.56 11.54 11.51 11.50

TEMP 63.2 62.9 62.7 62.3 61.9 61.7 61.5 61.1

GAL. 3 6 9 12 15 18 21 24

TURB \_\_\_\_\_

TIME 14:31 14:35 \_\_\_\_\_

EC 1580 1610 \_\_\_\_\_

pH 11.48 11.43 \_\_\_\_\_

TEMP 61.3 61.1 \_\_\_\_\_

GAL. 27 34 \_\_\_\_\_

TURB \_\_\_\_\_

### AFTER SAMPLING

DEPTH TO WATER \_\_\_\_\_ Ft. TOTAL WELL DEPTH \_\_\_\_\_ Ft.



# EARTH MANAGEMENT CO.

Environmental Remediation

## FIELD DATA - GROUNDWATER SAMPLING EVENT

DATE 03-08-1995

STATION NO. 054

PERSONNEL SERBAN FLORIN

WELL NO. RE-6 WEATHER Rain

SAMPLE EQUIPMENT Bailex

### BEFORE SAMPLING

TOTAL WELL DEPTH 13.65 Ft. WELL DIAMETER 4"

DEPTH TO WATER 5.12 Ft. PURGE VOLUME 22

RECOVERY RATE \_\_\_\_\_ FINAL TURBIDITY \_\_\_\_\_

### SAMPLING DATA

TIME 14:46 14:48 14:50 14:52 14:54 14:56 14:58 15:00

EC 2360 2380 2370 2360 2340 2310 2320 2330

pH 10.83 10.78 10.64 10.60 10.54 10.52 10.48 10.42

TEMP 64.1 63.8 63.9 63.6 63.4 63.0 62.9 62.7

GAL. 2 5 8 10 13 16 19 22

TURB + 6 + 9 + 22

TIME \_\_\_\_\_

EC \_\_\_\_\_

pH \_\_\_\_\_

TEMP \_\_\_\_\_

GAL. \_\_\_\_\_

TURB \_\_\_\_\_

### AFTER SAMPLING

DEPTH TO WATER \_\_\_\_\_ Ft. TOTAL WELL DEPTH \_\_\_\_\_ Ft.

# EARTH MANAGEMENT CO.

Environmental Remediation

## FIELD DATA - GROUNDWATER SAMPLING EVENT

DATE 03-08-1995

STATION NO. 054

PERSONNEL SERBAN FLORIN

WELL NO. PW-1 WEATHER Rain

SAMPLE EQUIPMENT Bailer

### BEFORE SAMPLING

TOTAL WELL DEPTH 14.10 FT. WELL DIAMETER 4"

DEPTH TO WATER 3.94 FT. PURGE VOLUME 27

RECOVERY RATE \_\_\_\_\_ FINAL TURBIDITY \_\_\_\_\_

### SAMPLING DATA

TIME	<u>15:04</u>	<u>15:06</u>	<u>15:09</u>	<u>15:11</u>	<u>15:13</u>	<u>15:15</u>	<u>15:18</u>	<u>15:20</u>
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EC	<u>970</u>	<u>940</u>	<u>910</u>	<u>890</u>	<u>880</u>	<u>890</u>	<u>870</u>	<u>860</u>
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pH	<u>9.68</u>	<u>9.54</u>	<u>9.49</u>	<u>9.43</u>	<u>9.38</u>	<u>9.36</u>	<u>9.33</u>	<u>9.33</u>
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TEMP	<u>65.2</u>	<u>65.6</u>	<u>65.8</u>	<u>65.6</u>	<u>66.1</u>	<u>66.4</u>	<u>66.7</u>	<u>66.9</u>
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GAL.	<u>3</u>	<u>6</u>	<u>9</u>	<u>13</u>	<u>16</u>	<u>19</u>	<u>23</u>	<u>27</u>
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TURB	_____	_____	_____	_____	_____	_____	_____	_____
------	-------	-------	-------	-------	-------	-------	-------	-------

TIME	_____	_____	_____	_____	_____	_____	_____	_____
------	-------	-------	-------	-------	-------	-------	-------	-------

EC	_____	_____	_____	_____	_____	_____	_____	_____
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pH	_____	_____	_____	_____	_____	_____	_____	_____
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TEMP	_____	_____	_____	_____	_____	_____	_____	_____
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GAL.	_____	_____	_____	_____	_____	_____	_____	_____
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TURB	_____	_____	_____	_____	_____	_____	_____	_____
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### AFTER SAMPLING

DEPTH TO WATER \_\_\_\_\_ FT. TOTAL WELL DEPTH \_\_\_\_\_ FT.



# EARTH MANAGEMENT CO.

Environmental Remediation

## FIELD DATA - GROUNDWATER SAMPLING EVENT

DATE 03-08-1995 STATION NO. 054

PERSONNEL SERBAN FLORIN

WELL NO. PW-2 WEATHER Rain

SAMPLE EQUIPMENT Bailer

### BEFORE SAMPLING

TOTAL WELL DEPTH 14.40 Ft. WELL DIAMETER 4"

DEPTH TO WATER 4.10 Ft. PURGE VOLUME 27

RECOVERY RATE \_\_\_\_\_ FINAL TURBIDITY \_\_\_\_\_

### SAMPLING DATA

TIME 15:26 15:28 15:30 15:32 15:34 15:36 15:38 15:40

EC 1860 1890 1890 1870 1850 1830 1850 1830

pH 8.94 8.86 8.80 8.76 8.70 8.73 8.70 8.72

TEMP 64.6 65.8 65.4 65.0 64.7 64.4 64.4 64.1

GAL. 3 6 9 13 16 19 23 27

TURB \_\_\_\_\_

TIME \_\_\_\_\_

EC \_\_\_\_\_

pH \_\_\_\_\_

TEMP \_\_\_\_\_

GAL. \_\_\_\_\_

TURB \_\_\_\_\_

### AFTER SAMPLING

DEPTH TO WATER \_\_\_\_\_ Ft. TOTAL WELL DEPTH \_\_\_\_\_ Ft.

## **APPENDIX B**



## LABORATORY ANALYSIS RESULTS

Page 1

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

**AA Project No.:** A135054-11  
**Date Received:** 03/14/95  
**Date Reported:** 03/22/95  
**Units:** mg/L

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
30980	RE-1	03/08/95	03/15/95	28	0.1
30981	RE-2	03/08/95	03/15/95	<0.1	0.1
30982	RS-9	03/08/95	03/15/95	1.6	0.1
30983	RS-8	03/08/95	03/15/95	<0.1	0.1
30984	RS-10	03/08/95	03/15/95	<0.1	0.1
30985	RE-5	03/08/95	03/15/95	1.5	0.1
30986	RE-6	03/08/95	03/15/95	2.5	0.1
30987	PW-1	03/08/95	03/15/95	<0.1	0.1
30988	PW-2	03/08/95	03/15/95	1.9	0.1
30989	Trip Blank	03/08/95	03/15/95	<0.1	0.1

MRL: Method Reporting Limit

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

George Havallas  
Laboratory Director



## LABORATORY QA/QC REPORT

Page 1

**Client:** Thrifty Oil Company  
**Project Name:** SS # 054  
**Method:** EPA 8015M (Gasoline)  
**Sample ID:** Matrix Spike  
**Concentration:** 0.5 mg/L

**AA ID No.:** 30989  
**Project No.:** N/A  
**AA Project No.:** A135054-11  
**Date Analyzed:** 03/15/95  
**Date Reported:** 03/22/95

Compounds	Result (mg/L)	Spike Recovery (%)	Dup. Result (mg/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept.Rec. Range (%)
Gasoline Range Organics	0.4	80.0	0.43	86.0	7.2	51 - 149



George Havallas  
Laboratory Director



## LABORATORY ANALYSIS RESULTS

Page 1

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

AA Project No.: A135054-11  
Date Received: 03/14/95  
Date Reported: 03/22/95  
Units: ug/L

Date Sampled:	03/08/95	03/08/95	03/08/95	03/08/95	
Date Analyzed:	03/15/95	03/15/95	03/15/95	03/17/95	
AA ID No.:	30980	30981	30982	30983	
Client ID No.:	RE-1	RE-2	RS-9	RS-8	MRL
<b>Compounds:</b>					
Benzene	4200	<0.5	<0.5	<0.5	0.5
Ethylbenzene	810	<0.5	<0.5	<0.5	0.5
Toluene	2300	<0.5	<0.5	<0.5	0.5
Xylenes	7800	<1	2.3	<1	1

George Havalas  
Laboratory Director



## LABORATORY ANALYSIS RESULTS

Page 2

**Client:** Thrifty Oil Company  
**Project No.:** N/A  
**Project Name:** SS # 054  
**Sample Matrix:** Water  
**Method:** EPA 8020 (BTEX)

**AA Project No.:** A135054-11  
**Date Received:** 03/14/95  
**Date Reported:** 03/22/95  
**Units:** ug/L

<b>Date Sampled:</b>	03/08/95	03/08/95	03/08/95	03/08/95	
<b>Date Analyzed:</b>	03/15/95	03/15/95	03/15/95	03/15/95	
<b>AA ID No.:</b>	30984	30985	30986	30987	
<b>Client ID No.:</b>	RS-10	RE-5	RE-6	PW-1	MRL
<b>Compounds:</b>					
Benzene	<0.5	220	460	<0.5	0.5
Ethylbenzene	<0.5	<0.5	2.1	<0.5	0.5
Toluene	<0.5	5.5	5.5	<0.5	0.5
Xylenes	<1	83	51	<1	1

George Havallas  
Laboratory Director



## LABORATORY ANALYSIS RESULTS

Page 3

**Client:** Thrifty Oil Company  
**Project No.:** N/A  
**Project Name:** SS # 054  
**Sample Matrix:** Water  
**Method:** EPA 8020 (BTEX)

**AA Project No.:** A135054-11  
**Date Received:** 03/14/95  
**Date Reported:** 03/22/95  
**Units:** ug/L

<b>Date Sampled:</b>	03/08/95	03/08/95	
<b>Date Analyzed:</b>	03/15/95	03/15/95	
<b>AA ID No.:</b>	30988	30989	
<b>Client ID No.:</b>	PW-2	Trip Blank	MRL
<b>Compounds:</b>			
Benzene	<0.5	<0.5	0.5
Ethylbenzene	1.4	<0.5	0.5
Toluene	<0.5	0.87	0.5
Xylenes	35	<1	1

MRL: Method Reporting Limit

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

George Havallas  
Laboratory Director



## LABORATORY QA/QC REPORT

Page 1

**Client:** Thrifty Oil Company  
**Project Name:** SS # 054  
**Method:** EPA 8020 (BTEX)  
**Sample ID:** Matrix Spike  
**Concentration:** 20 ug/L

**AA ID No.:** 30989  
**Project No.:** N/A  
**AA Project No.:** A135054-11  
**Date Analyzed:** 03/15/95  
**Date Reported:** 03/22/95

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept.Rec. Range (%)
Benzene	24.87	124	24.95	125	1	65 - 135
Ethylbenzene	21.64	108	26.71	134	21	77 - 123
Toluene	22.06	110	23.58	118	7	66 - 134
Xylenes	23.57	118	24.16	121	3	73 - 127

George Havalas  
Laboratory Director



# AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311

DATE: 03/08/95

(818) 998-5547

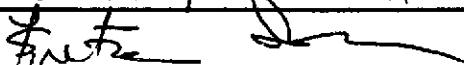
(818) 998-5548

1-800-533-TEST

1-800-533-8378

FAX (818) 998-7258

PAGE \_\_\_\_ OF \_\_\_\_

AA Client						Phone	Sampler's Name	FLORIN & SERBAN					
Project Manager MICHAEL COSBY						P.O. No.	Sampler's Signature						
Project Name SS# 054						Project No.	Project Manager's Signature						
Job Name and Address						ANALYSIS REQUIRED							
						Detection Limits	TPET	BTEX					
AA ID #	Client's ID.	Date	Time	Sample Type	Number of Containers								
30980	RE-1	03/08/95	15:46	WATER	2	X	X						
30981	RE-2	03/08/95	15:51	-u-	2	R	X						
30982	RS-9	03/08/95	15:56	-u-	2	R	X						
30983	RS-8	03/08/95	16:02	-u-	2	X	X						
30984	RS-10	03/08/95	16:08	-u-	2	R	X						
30985	RE-5	03/08/95	16:15	-u-	2	X	X						
30986	RE-6	03/08/95	16:22	-u-	2	X	X						
30987	PW-1	03/08/95	16:28	-u-	2	X	X						
30988	PW-2	03/08/95	16:34	-u-	2	X	X						
30989	Trip BIK	03/08/95	6:30	-	2	X	X						
						← We received this sample in the package but was not logged in the chain. Should we run it or what?							
												MC	
												3/15/95	
SAMPLE INTEGRITY-TO BE FILLED IN BY RECEIVING LAB						Relinquished by:			Date	Time	Received by:		
Samples Intact						Yes _____	No _____			3/16/95			
Samples Properly Cooled						Yes _____	No _____					Major Chong	
Samples Accepted						Yes _____	No _____						
If Not Why:													
AA Project No.						A135054-11							