

# THRIFTY OIL CO.

February 13, 1996

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  
Quarterly Monitoring Report  
3rd Quarter 1995

Dear Mr. Seary,

Enclosed, please find a 3rd Quarterly Monitoring Report for Thrifty Service Station #054, dated February 3, 1996.

I certify under the penalty of law that this document and all attachments are prepared under my direction in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any question, please call Raymond C. Friedrichsen or myself at (310) 923-9876.

Respectfully,



PETER D'AMICO  
Manager  
Environmental Affairs



02 FEB 14 1996

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# THRIFTY OIL CO.

February 3, 1996

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*  
**3rd QUARTER REPORT, 1995**

Dear Mr. Seary,

This letter report presents the results of soil/groundwater treatment and site monitoring during the 3rd 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 September 5, 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 the 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 4.76 to 13.72 feet below grade which is consistent with previous data collected. As of September 5, 1995, wells RE-1, 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 *southeast* at a calculated gradient of about 0.03 feet per foot.

On September 21, 1995, monitoring well RS-11 was installed and sampled. Its location is included in **Figure 1**. A complete assessment report documenting investigation activities is forthcoming.

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 6 to 34 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 petroleum hydrocarbons (TPH) and volatile aromatic compounds (BETX) 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 September sampling event are presented as **Figures 2 and 3**.

### **Treatment Unit Operation Status**

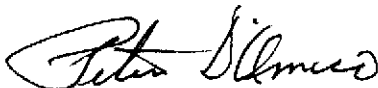
Based on the data obtained by EMC, the RSI-SAVE unit operated 454 hours during the reporting period and 12,196 hours total (current meter reading 9112). As of September 25, 1995, a total of about 15,730.8 gallons of water (current meter reading 523.4) had been processed by the unit and discharged to the local sanitary sewer. During the 3rd quarter reporting period, 88.2 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 vapor removal, field vapor measurements are collected and recorded from each recovery well on a monthly basis. However, no vapor data was collected during this reporting period. The historical data is included in **Table 2** attached.

### **Closing**

Thrifty will continue to conduct quarterly groundwater monitoring at the site. In addition, the report documenting installation of one off-site well near the southeast corner of the site is currently being prepared and will be submitted in the near future. If you have any questions, please contact either the undersigned or Ray Friedrichson at (310) 923-9876.

Very truly yours,

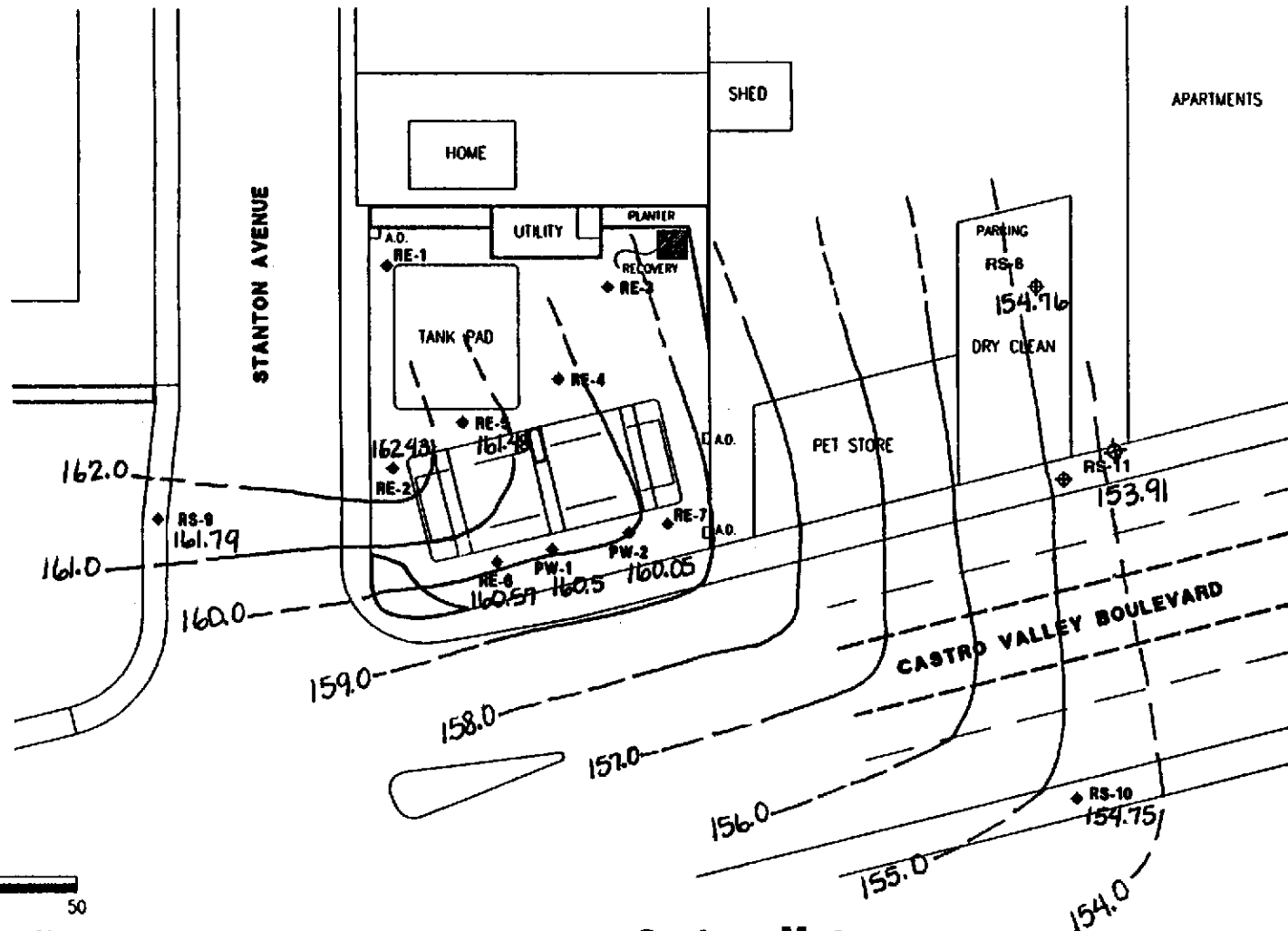


Peter D'Amico  
Manager Environmental Affairs

# FIGURES


**LEGEND**

- ⊕ RE-1 / MONITORING WELL
- A.D. AREA DRAIN
- ~ Groundwater Contour (09/05/95)



**Groundwater Contour Map**

REVISIONS	BY

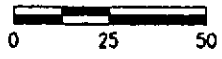
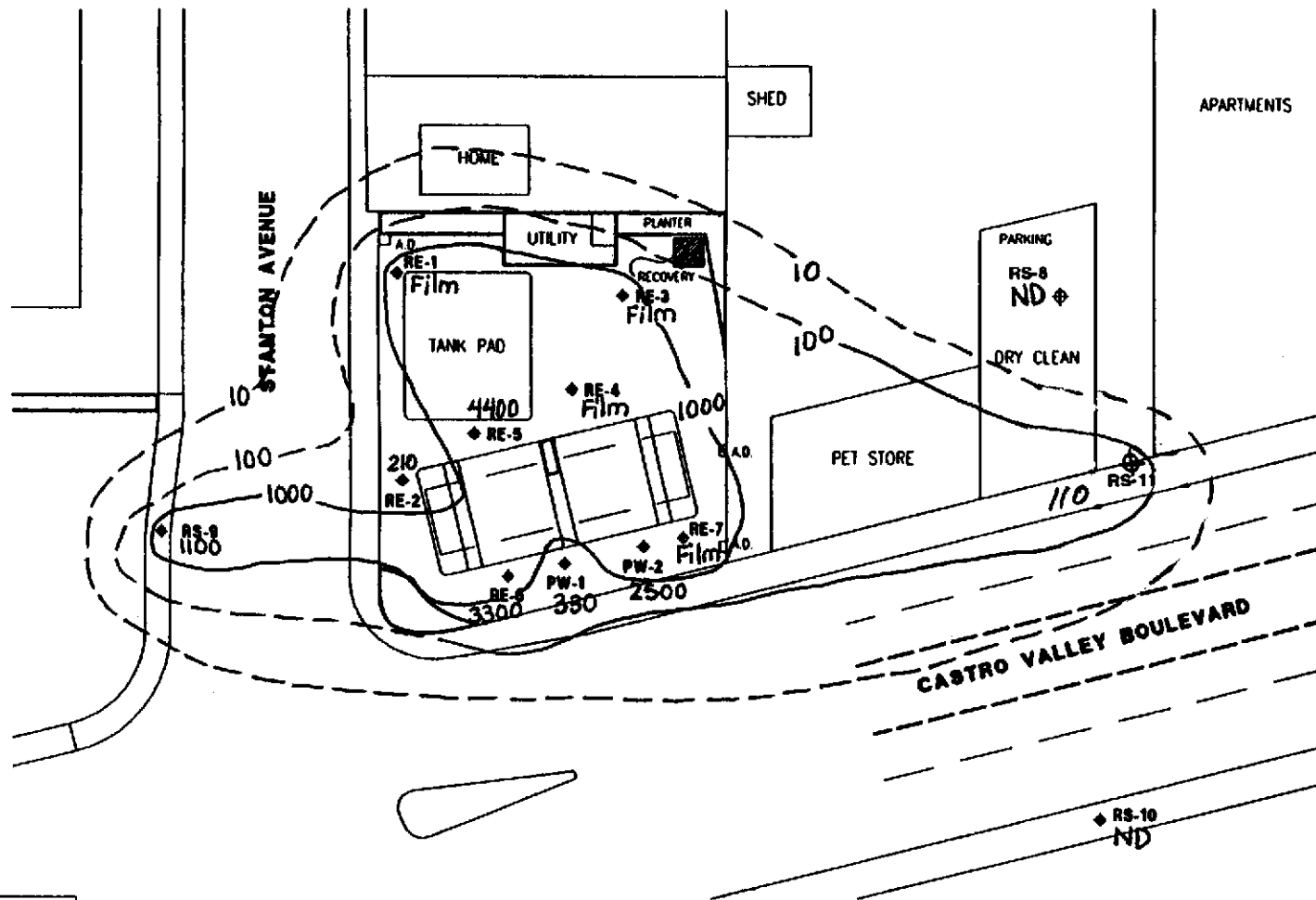
  
**STATION No. 054**  
**CASTRO VALLEY BLVD./STANTON AVE.**  
**CASTRO VALLEY, CA.**

TIMMY OIL COMPANY  
 24000 LAKEWOOD BLVD.  
 DOWNEY, CA 90240  
 (714) 933-3070

DRAWN BY: RC1
05-04-94
1" = 50'-0"

**LEGEND**


- ◆ RE-1 / MONITORING WELL
- A.D. AREA DRAIN
- ~ TPH Contour (9/05/95, ug/l)



SCALE: 1" = 50'

**TPH Isoconcentration Map**

REVISIONS	BY

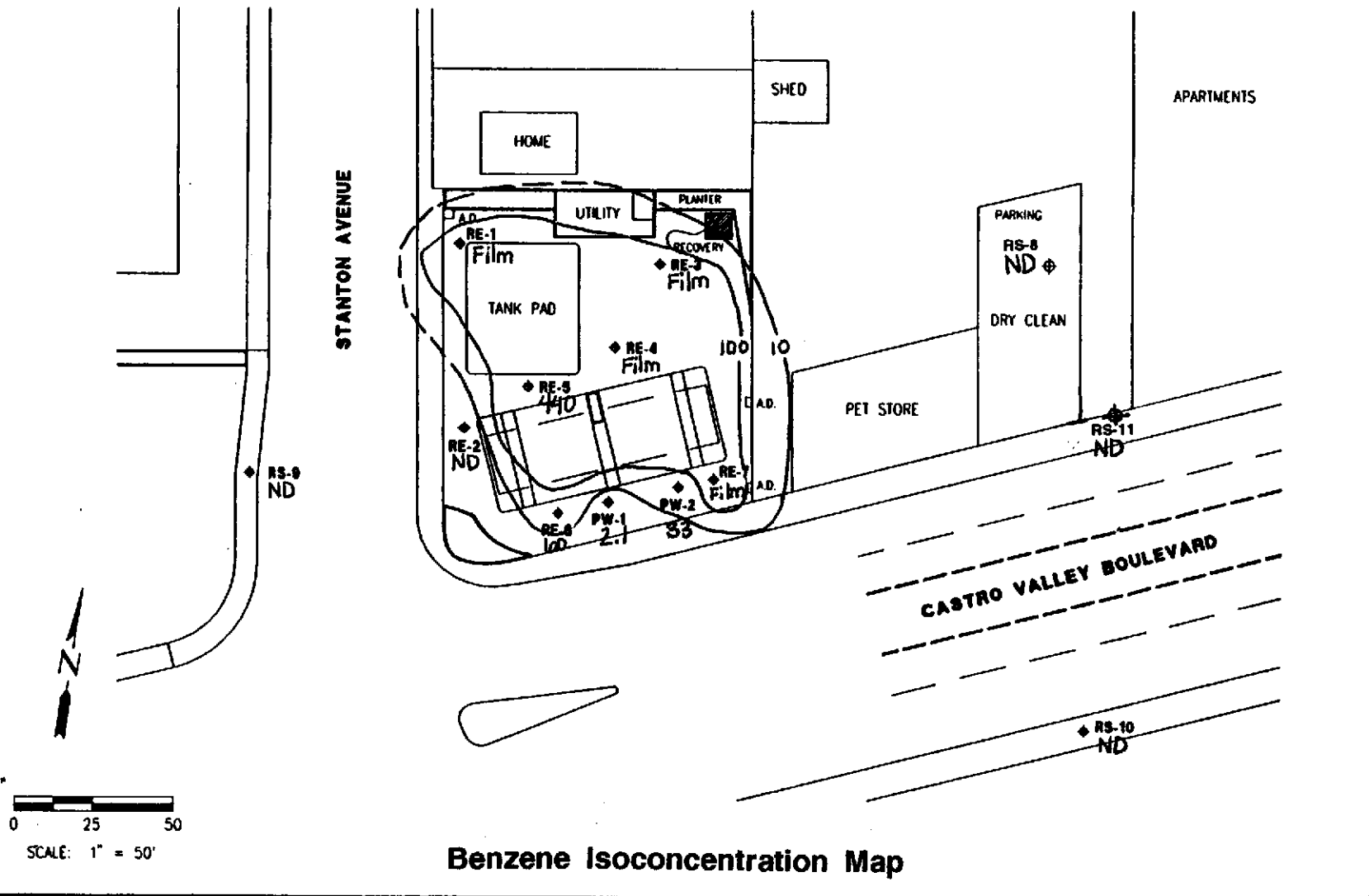
  
**TUFFT OIL COMPANY**  
 19000 LAUREWOOD BLVD.  
 DOWNEY, CA 90248  
 (714) 823-8878

**STATION No. 064**  
**CASTRO VALLEY BLVD/STANTON AVE.**  
**CASTRO VALLEY, CA.**

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


**LEGEND**

- ⊕ RE-1 / MONITORING WELL
- A.D. AREA DRAIN
- ~ Benzene Contour (09/05/95, ug/l)



**Benzene Isoconcentration Map**

REVISIONS	BY

  
**THRIFTY OIL COMPANY**  
 10000 LAKEWOOD BLVD.  
 CASTRO VALLEY, CA 94546  
 (916) 923-0878

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

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

# **TABLES**



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
Jun 15, 1995	NSC						-- (Film)
Sep 5, 1995	NSC						4.78 (Film)

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
Jun 15, 1995	130	<0.5	<0.5	<0.5	<1		4.52
Sep 5, 1995	210	<0.5	<0.5	<0.5	<1		4.76

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)
Jun 15, 1995	NSC						-- (Film)
Sep 5, 1995	NSC						6.84 (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)
Jun 15, 1995	NSC						-- (Film)
Sep 5, 1995	NSC						13.72 (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
Jun 15, 1995	3200	820	53	6.2	74		4.93
Sep 5, 1995	4400	440	22	<2.5	57		5.03

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
Jun 15, 1995	2300	91	1.1	0.7	97		5.72
Sep 5, 1995	3300	60	<10	<10	74		5.94

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)
Jun 15, 1995	NSC						-- (Film)
Sep 5, 1995	NSC						7.98 (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
Jun 15, 1995	<100	1.0	<0.5	<0.5	<1		9.12
Sep 5, 1995	<100	<0.5	<0.5	<0.5	<1		9.56



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
Jun 15, 1995	3200	2.2	5.3	4.3	3.1		5.08
Sep 5, 1995	1100	<0.5	<0.5	<0.5	<1		5.72

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
Jun 15, 1995	<100	<0.5	<0.5	<0.5	<1		6.97
Sep 5, 1995	<100	<0.5	<0.5	<0.5	<1		8.14
Monitoring Well RS-11							
Sep 21, 1995	110	<0.5	<0.5	<0.5	<1	163.28	9.37
Benzene, toluene, ethylbenzene, 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**

<b>Well LD.</b>	<b>Date</b>	<b>Vapor Conc., ppmv</b>
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)

Well I.D.	Date	Vapor Conc., ppmv
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							WELLS	VAPORS						
ON				RE 4			RE 7	ON	RE 1		RE 3		RE 6	RE 7	
OFF								OFF							

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	13:10	
					HOURS	#	8834	
					ENGINE RPM	RPM	1800	
					ENGINE VACUUM	IN HG	14	
					TK REC TEMP	F	100	
					AIR TEMP	F	80°F	
					AIR FLOW	CFM	18	
					VAPOR FLOW	CFM	16	
					FUEL FLOW	CFM/H	80	
					WELL VACUUM	IN H2O	30	
					GAS METER		80%	
					CATALIST IN	F		
					CATALIST 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	GAL	44:4	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS: *The water remediation system work flow*

SERVICE TECHNICIAN FLORIN SPECTU DATE 07/07/95 THRIFTY OIL CO # 056



# EARTH MANAGEMENT CO.

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

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

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	15:20	
					HOURS	#	8882	
					ENGINE RPM	RPM	1800	
					ENGINE VACUUM	IN HG	14	
					TK REC TEMP	F	95	
					AIR TEMP	F	68°F	
					AIR FLOW	CFM	20	
					VAPOR FLOW	CFM	16	
					FUEL FLOW	CFM/H	90	
					WELL VACUUM	IN H2O	30	
					GAS METER		40	
					CATALIST IN	F		
					CATALIST 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	GAL	452.2	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS: Monthly water sampling

SERVICE TECHNICAN FWRIN SPFCW DATE 7/12/95 THRIFTY OIL CO # 054



PROJECT STATUS REPORT  
 THRIFTY OIL CO. S.S. #054  
 2504 CASTRO VALLEY BLVD.  
 CASTRO VALLEY, CA 94546  
 DATE: 07/12/95

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	5.78				<			<	X	-						
M	PW-2	5.51				<			<	X	-						
M	RE-1	4.55	skin		X				<	X	-						
M	RE-2	4.58				<			<	X	-						
M	RE-3	4.83	skin		X				<	X	-						
M	RE-4	4.53	skin		X				<	X	-						
M	RE-5	4.97				X			<	X	-						
M	RE-6	5.78				<			<	X	-						
M	RE-7	5.54	skin		X				<	X	-						
M	RS-8	9.18				X			<	-	X						
M	RS-9	5.16				X			X	-	X						
M	RS-10	7.03				<			<	-	X						

SAVE SYSTEM WEEKLY

PARAMETER	U/M	DATA	PARAMETER	U/M	DATA
TIME	AM/PM		AIR FLOW	C F M	
WORKING	YES/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. \_\_\_\_\_ GALLONS

DATA RECORDED BY: FLORIN S FETCU INPUT BY: M.M. >\FF\054rbirt





# EARTH MANAGEMENT CO.

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

MAINFOLD															
WELLS		WATER						WELLS		VAPORS					
ON				RE 4			RE 7	ON	RE 1		RE 3		RE 6	RE 7	
OFF								OFF							

WELL MONITORING				
WELL NO	DTW	DTP	PT	DTB

RSI SYSTEM			
PARAMETER	U/M	DATA	OBS
TIME	AM/PM	16:10	
HOURS	#	8896	
ENGINE RPM	RPM	1800	
ENGINE VACUUM	IN HG	16	
TK REC TEMP	F	95	
AIR TEMP	F	64°F	
AIR FLOW	CFM	18	
VAPOR FLOW	CFM	16	
FUEL FLOW	CFM/H	80	
WELL VACUUM	IN H2O	30	
GAS METER		85%	
CATALIST IN	F		
CATALIST 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	GAL	455.1	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS: *Water remediation system work very slow*

SERVICE TECHNICAN FLOREN SPETCU DATE 7/19/85 THRIFTY OIL CO # 054



# EARTH MANAGEMENT CO.

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

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

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	1110	
					HOURS	#	8903	
					ENGINE RPM	RPM	1800	
					ENGINE VACUUM	IN HG	16	
					TK REC.TEMP	F	100	
					AIR TEMP	F	68°F	
					AIR FLOW	CFM	18	
					VAPOR FLOW	CFM	16	
					FUEL FLOW	CFM/H	80	
					WELL VACUUM	IN H2O	30	
					GAS METER		65	
					CATALIST IN	F		
					CATALIST 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	GAL	463.8	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS:

SERVICE TECHNICAN Florin J. Ferra DATE 07/26/95 THRIFTY OIL CO # 054

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

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	15:35	
					HOURS	#	8910	
					ENGINE RPM	RPM	1900	
					ENGINE VACUUM	IN HG	18	
					TK REC TEMP	F	130	
					AIR TEMP	F	82°F	
					AIR FLOW	CFM	18	
					VAPOR FLOW	CFM	16	
					FUEL FLOW	CFM/H	90	
					WELL VACUUM	IN H2O	30	
					GAS METER		80%	
					CATALIST IN	F		
					CATALIST OUT	F		
					EXHAUST HC	PPM/%		
					EXHAUST CO	%PPM		
					EXHAUST CO2	%		
					EXHAUST NOX	%PPM		
					CATALYST REPLACEMENT			
					EXHAUST O2	%		
					INLET	PPM	> 10000	
					OUTLET	PPM	280	
<b>HYDROCARBON STRIPPER &amp; VAPOR EXTRACTION SYSTEM W/ACU OR CAT</b>								
PARAMETER	U/M	LIMIT	DATA					
FLOWMETER	GAL	472.5						
ROTAMETER								
VPI FLOW								
VPI VACUUM								
AIR COMPRES								
VAPOR								
INLET VAPOR								
TEMPERATURE								
LEL								
COMMENTS: <i>Water Remediation system doesn't work continue work slow</i>								
SERVICE TECHNICAN <i>FLORIN SFETOU</i> DATE <i>8.03.95</i> THRIFTY OIL CO # <i>054</i>								



# EARTH MANAGEMENT CO.

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

MAINFOLD															
WELLS		WATER						WELLS		VAPORS					
ON				RE 4			RE 7		ON	RE 1		RE 3		RE 6	RE 7
OFF									OFF						

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	13:10	
					HOURS	#	8956	
					ENGINE RPM	RPM	1800	
					ENGINE VACUUM	IN HG	18	
					TK REC TEMP	F	100	
					AIR TEMP	F	83°F	
					AIR FLOW	CFM	18	
					VAPOR FLOW	CFM	16	
					FUEL FLOW	CFM/H	90	
					WELL VACUUM	IN H2O	30	
					GAS METER		50%	
					CATALIST IN	F		
					CATALIST 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	GAL	479.3	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS:

SERVICE TECHNICIAN FLORIN SPECTU DATE 8/11/95 THRIFTY OIL CO # 054

## FIELD STATUS REPORT

### GROUND WATER AND SOIL CLEAN-UP SYSTEM

MAINFOLD															
WELLS	WATER							WELLS	VAPORS						
	ON									ON	RE1		RE3		
OFF								OFF							

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	15:40	
					HOURS	#	8982	
					ENGINE RPM	RPM	1800	
					ENGINE VACUUM	IN HG	20	
					TK REC TEMP	F	95	
					AIR TEMP	F	84°F	
					AIR FLOW	CFM	18	
					VAPOR FLOW	CFM	16	
					FUEL FLOW	CFM/H	90	
					WELL VACUUM	IN H2O	30	
					GAS METER		85%	

HYDROCARBON STRIPPER & VAPOR EXTRACTION SYSTEM W/ACU OR CAT			
PARAMETER	U/M	LIMIT	DATA
FLOWMETER	GAL	487.6	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

CATALIST IN	F	
CATALIST OUT	F	
EXHAUST HC	PPM/%	
EXHAUST CO	%PPM	
EXHAUST CO2	%	
EXHAUST NOX	%PPM	
CATALYST REPLACEMENT		
EXHAUST O2	%	
INLET	PPM	
OUTLET	PPM	

COMMENTS: *Water removal system work starts*

SERVICE TECHNICIAN FLORIN SPECTOR DATE 8/17/95 THRIFTY OIL CO # 054



# EARTH MANAGEMENT CO.

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

MAINFOLD															
WELLS		WATER						WELLS		VAPORS					
ON				RE-4			RE-7	ON	RE-1		RE-3			RE-6	RE-7
OFF								OFF							

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	9:10	
					HOURS	#	9013	
					ENGINE RPM	RPM	1900	
					ENGINE VACUUM	IN HG	19	
					TK REC TEMP	F	100	
					AIR TEMP	F	86°F	
					AIR FLOW	CFM	18	
					VAPOR FLOW	CFM	16	
					FUEL FLOW	CFM/H	90	
					WELL VACUUM	IN H2O	30	
					GAS METER		70%	

HYDROCARBON STRIPPER & VAPOR EXTRACTION SYSTEM W/ACU OR CAT			
PARAMETER	U/M	LIMIT	DATA
FLOWMETER	GAL	493.8	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

CATALIST IN	F		
CATALIST OUT	F		
EXHAUST HC	PPM/%		
EXHAUST CO	%PPM		
EXHAUST CO2	%		
EXHAUST NOX	%PPM		
CATALYST REPLACEMENT			
EXHAUST O2	%		
INLET	PPM		
OUTLET	PPM		

COMMENTS:

SERVICE TECHNICAN EARIN S FETW DATE 8/25/95 THRIFTY OIL CO # 054



# EARTH MANAGEMENT CO.

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

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

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	15:20	
					HOURS	#	9057	
					ENGINE RPM	RPM	1900	
					ENGINE VACUUM	IN HG	19	
					TK REC TEMP	F	05	
					AIR TEMP	F	78°F	
					AIR FLOW	CFM	18	
					VAPOR FLOW	CFM	16	
					FUEL FLOW	CFM/H	90	
					WELL VACUUM	IN H2O	30	
					GAS METER		60%	
					CATALIST IN	F		
					CATALIST 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	GAL	501.2	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS:

SERVICE TECHNICAN FLORIN SHEROU DATE 8/31/95 THRIFTY OIL CO # 054



# EARTH MANAGEMENT CO.

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

MAINFOLD															
WELLS		WATER						WELLS		VAPORS					
ON				RE 4			RE 7	ON	RE 1		RE 3		RE 6	RE 7	
OFF								OFF							

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	15:50	
					HOURS	#	9068	
					ENGINE RPM	RPM	1900	
					ENGINE VACUUM	IN HG	20	
					TK REC TEMP	F	100	
					AIR TEMP	F	74%	
					AIR FLOW	CFM	18	
					VAPOR FLOW	CFM	16	
					FUEL FLOW	CFM/H	90	
					WELL VACUUM	IN H2O	30	
					GAS METER		50%	
					CATALIST IN	F		
					CATALIST 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	GAL	504.8	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS: N/A QUANTIFY SAMPLING

SERVICE TECHNICAN FLORIN S FETOU DATE 9.05.95 THRIFTY OIL CO # 054





PROJECT STATUS REPORT  
 THRIFTY OIL CO. S.S. #054  
 2504 CASTRO VALLEY BLVD.  
 CASTRO VALLEY, CA 94546  
 DATE: 09/05/95

F R E 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	5.96				X					X	-					
M	PW-2	6.13				X					X	-					
M	RE-1	4.78	SHIN		X						X	-					
M	RE-2	4.76				X					X	-					
M	RE-3	6.84	SHIN		X						X	-					
M	RE-4	13.72	SHIN		X						X	-					
M	RE-5	5.03				X					X	-					
M	RE-6	5.94				X					X	-					
M	RE-7	7.98	SHIN		X						X	-					
M	RS-8	9.56									-	X					
M	RS-9	5.72									-	X					
M	RS-10	8.14									-	X					

SAVE SYSTEM WEEKLY

PARAMETER	U/M	DATA	PARAMETER	U/M	DATA
TIME	AM/PM		AIR FLOW	CFM	
WORKING	YES/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: QUARTERLY SAMPLING

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

DATA RECORDED BY: FORIN & SERBAN INPUT BY: M.M. >TF054rsirt

## FIELD DATA - GROUNDWATER SAMPLING PROGRAM

Site	<u>SS # 054</u>	Date	<u>09/05/95</u>
Address	_____		
Personnel	<u>FLORIN &amp; SERBAN</u>	Weather	<u>SUNNY</u>
Well No.	<u>RS-9</u>	Equip.	<u>BAICER</u>

<b>Before Purging</b>			
Total Well Depth	<u>15.00</u>	ft.	Well Diameter <u>2<sup>4</sup></u>
Depth to Water	_____	ft.	Est. Purge Vol. <u>6 GAL</u>

<b>Sampling Data</b>					
Initial Turbidity			Final Turbidity		
Time	<u>10:27</u>	<u>10:30</u>	<u>10:33</u>	<u>10:36</u>	<u>10:40</u>
EC	<u>1980</u>	<u>2010</u>	<u>2010</u>	<u>1990</u>	<u>1990</u>
pH	<u>4.58</u>	<u>4.60</u>	<u>4.62</u>	<u>4.58</u>	<u>4.58</u>
Temp	<u>72.4</u>	<u>72.5</u>	<u>72.2</u>	<u>72.1</u>	<u>71.9</u>
Gal.	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
Time	_____	_____	_____	_____	_____
EC	_____	_____	_____	_____	_____
pH	_____	_____	_____	_____	_____
Temp	_____	_____	_____	_____	_____
Gal.	_____	_____	_____	_____	_____

<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>9/05/95</u>
Address	_____		
Personnel	<u>FLORIN &amp; SERBAN</u>	Weather	<u>SUNNY</u>
Well No.	<u>RE-2</u>	Equip.	<u>BAICER</u>

<b>Before Purging</b>			
Total Well Depth	<u>17.10</u>	ft.	Well Diameter <u>4"</u>
Depth to Water	<u>4.76</u>	ft.	Est. Purge Vol. <u>32 gal</u>

Sampling Data						
	Initial Turbidity			Final Turbidity		
Time	<u>10:50</u>	<u>10:59</u>	<u>11:00</u>	<u>11:07</u>	<u>11:14</u>	<u>11:20</u>
EC	<u>70</u>	<u>690</u>	<u>680</u>	<u>680</u>	<u>670</u>	<u>670</u>
pH	<u>5.03</u>	<u>5.04</u>	<u>5.06</u>	<u>5.07</u>	<u>5.07</u>	<u>5.08</u>
Temp	<u>72.3</u>	<u>72.1</u>	<u>71.9</u>	<u>71.9</u>	<u>71.8</u>	<u>71.6</u>
Gal.	<u>6</u>	<u>11</u>	<u>17</u>	<u>22</u>	<u>27</u>	<u>32</u>
Time	_____	_____	_____	_____	_____	_____
EC	_____	_____	_____	_____	_____	_____
pH	_____	_____	_____	_____	_____	_____
Temp	_____	_____	_____	_____	_____	_____
Gal.	_____	_____	_____	_____	_____	_____

<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>9/05/95</u>
Address _____	
Personnel <u>FLORIN &amp; SERBAN</u>	Weather <u>SUNNY</u>
Well No. <u>RES</u>	Equip. <u>BAILER</u>

Before Purging			
Total Well Depth	<u>18.25</u>	ft.	Well Diameter <u>4"</u>
Depth to Water	<u>5.03</u>	ft.	Est. Purge Vol. <u>34 gal.</u>

Sampling Data						
	Initial Turbidity			Final Turbidity		
Time	<u>11:38</u>	<u>11:46</u>	<u>11:51</u>	<u>11:56</u>	<u>12:00</u>	<u>12:05</u>
EC	<u>4.20</u>	<u>4.0</u>	<u>6.80</u>	<u>6.80</u>	<u>6.60</u>	<u>6.60</u>
pH	<u>4.61</u>	<u>4.61</u>	<u>4.58</u>	<u>4.58</u>	<u>4.58</u>	<u>4.58</u>
Temp	<u>71.9</u>	<u>71.7</u>	<u>71.3</u>	<u>70.8</u>	<u>70.6</u>	<u>70.5</u>
Gal.	<u>6</u>	<u>12</u>	<u>18</u>	<u>23</u>	<u>28</u>	<u>34</u>
Time	_____	_____	_____	_____	_____	_____
EC	_____	_____	_____	_____	_____	_____
pH	_____	_____	_____	_____	_____	_____
Temp	_____	_____	_____	_____	_____	_____
Gal.	_____	_____	_____	_____	_____	_____

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

## FIELD DATA - GROUNDWATER SAMPLING PROGRAM

Site <u>SS # 054</u>	Date <u>9/05/95</u>
Address _____	
Personnel <u>FLORIN &amp; SERBAN</u>	Weather <u>SUNNY</u>
Well No. <u>RS-8</u>	Equip. <u>BAILER</u>

<b>Before Purging</b>			
Total Well Depth	<u>25.20</u>	ft.	Well Diameter <u>2"</u>
Depth to Water	<u>9.56</u>	ft.	Est. Purge Vol. <u>10 Gal</u>

<b>Sampling Data</b>						
Initial Turbidity	Final Turbidity					
Time	<u>12:07</u>	<u>12:10</u>	<u>12:13</u>	<u>12:16</u>	<u>12:18</u>	<u>12:20</u>
EC	<u>2930</u>	<u>2870</u>	<u>2870</u>	<u>2860</u>	<u>2740</u>	<u>2740</u>
pH	<u>4.66</u>	<u>4.65</u>	<u>4.65</u>	<u>4.64</u>	<u>4.64</u>	<u>4.64</u>
Temp	<u>72.3</u>	<u>72.1</u>	<u>71.8</u>	<u>71.6</u>	<u>71.4</u>	<u>71.3</u>
Gal.	<u>2</u>	<u>3</u>	<u>5</u>	<u>7</u>	<u>9</u>	<u>10</u>
Time	_____	_____	_____	_____	_____	_____
EC	_____	_____	_____	_____	_____	_____
pH	_____	_____	_____	_____	_____	_____
Temp	_____	_____	_____	_____	_____	_____
Gal.	_____	_____	_____	_____	_____	_____

<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>9/05/95</u>
Address	_____		
Personnel	<u>FURIN &amp; SERBAN</u>	Weather	<u>SUNNY</u>
Well No.	<u>RS-10</u>	Equip.	<u>BALER</u>

<b>Before Purging</b>			
Total Well Depth	<u>24.45</u>	ft.	Well Diameter <u>2"</u>
Depth to Water	<u>8.14</u>	ft.	Est. Purge Vol. <u>11 gal</u>

Sampling Data						
Initial Turbidity	Final Turbidity					
Time	<u>12:26</u>	<u>12:32</u>	<u>12:38</u>	<u>12:43</u>	<u>12:46</u>	<u>12:50</u>
EC	<u>1660</u>	<u>1650</u>	<u>1640</u>	<u>1640</u>	<u>1690</u>	<u>1640</u>
pH	<u>4.68</u>	<u>4.65</u>	<u>4.65</u>	<u>4.65</u>	<u>4.64</u>	<u>4.64</u>
Temp	<u>71.6</u>	<u>71.5</u>	<u>71.2</u>	<u>71.2</u>	<u>70.6</u>	<u>70.5</u>
Gal.	<u>2</u>	<u>4</u>	<u>6</u>	<u>8</u>	<u>10</u>	<u>11</u>
Time	_____	_____	_____	_____	_____	_____
EC	_____	_____	_____	_____	_____	_____
pH	_____	_____	_____	_____	_____	_____
Temp	_____	_____	_____	_____	_____	_____
Gal.	_____	_____	_____	_____	_____	_____

<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>9/05/95</u>
Address	_____		
Personnel	<u>FLORIN &amp; SERBAN</u>	Weather	<u>SUNNY</u>
Well No.	<u>PW-1</u>	Equip.	<u>BAILER</u>

<b>Before Purging</b>			
Total Well Depth	<u>14.10</u>	ft.	Well Diameter <u>4"</u>
Depth to Water	<u>5.96</u>	ft.	Est. Purge Vol. <u>21 gal</u>

Sampling Data						
	Initial Turbidity			Final Turbidity		
Time	<u>13:28</u>	<u>13:39</u>	<u>13:40</u>	<u>13:46</u>	<u>13:53</u>	<u>19:00</u>
EC	<u>740</u>	<u>760</u>	<u>780</u>	<u>780</u>	<u>770</u>	<u>770</u>
pH	<u>4.78</u>	<u>4.80</u>	<u>4.76</u>	<u>4.76</u>	<u>4.76</u>	<u>4.75</u>
Temp	<u>74.1</u>	<u>73.2</u>	<u>72.7</u>	<u>72.7</u>	<u>72.4</u>	<u>71.5</u>
Gal.	<u>3</u>	<u>6</u>	<u>9</u>	<u>13</u>	<u>18</u>	<u>21</u>
Time	_____	_____	_____	_____	_____	_____
EC	_____	_____	_____	_____	_____	_____
pH	_____	_____	_____	_____	_____	_____
Temp	_____	_____	_____	_____	_____	_____
Gal.	_____	_____	_____	_____	_____	_____

<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>9/05/95</u>
Address	_____		
Personnel	<u>FLORIN &amp; SERBAN</u>		Weather <u>SUNNY</u>
Well No.	<u>PW-2</u>	Equip.	<u>BAILER</u>

<b>Before Purging</b>			
Total Well Depth	<u>14.40</u>	ft.	Well Diameter <u>4"</u>
Depth to Water	<u>6.13</u>	ft.	Est. Purge Vol. <u>22</u>

Sampling Data					
	Initial Turbidity			Final Turbidity	
Time	<u>14:13</u>	<u>14:18</u>	<u>14:24</u>	<u>14:30</u>	<u>14:35</u>
EC	<u>680</u>	<u>680</u>	<u>690</u>	<u>690</u>	<u>690</u>
pH	<u>4.86</u>	<u>4.88</u>	<u>4.84</u>	<u>4.84</u>	<u>4.84</u>
Temp	<u>72.3</u>	<u>72.1</u>	<u>71.6</u>	<u>71.4</u>	<u>71.3</u>
Gal.	<u>4</u>	<u>9</u>	<u>13</u>	<u>18</u>	<u>22</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 STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

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

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	15:45	
					HOURS	#	9083	
					ENGINE RPM	RPM	1800	
					ENGINE VACUUM	IN HG	16	
					TK REC TEMP	F	95	
					AIR TEMP	F	72%	
					AIR FLOW	CFM	18	
					VAPOR FLOW	CFM	16	
					FUEL FLOW	CFM/H	90	
					WELL VACUUM	IN H2O	20	
					GAS METER		45%	
					CATALIST IN	F		
					CATALIST 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	GAL	511.4	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS: Water Remediation system work very slow

SERVICE TECHNICIAN FORN J FETCO DATE 9.11.95 THRIFTY OIL CO # 054



# EARTH MANAGEMENT CO.

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

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

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	9.18.95	
					HOURS	#	9096	
					ENGINE RPM	RPM	1800	
					ENGINE VACUUM	IN HG	18	
					TK REC TEMP	F	95	
					AIR TEMP	F	68%	
					AIR FLOW	CFM	18	
					VAPOR FLOW	CFM	16	
					FUEL FLOW	CFM/H	80	
					WELL VACUUM	IN H2O	32%	
					GAS METER		517.3	
HYDROCARBON STRIPPER & VAPOR EXTRACTION SYSTEM W/ACU OR CAT					CATALIST IN	F		
PARAMETER	U/M	LIMIT	DATA		CATALIST OUT	F		
FLOWMETER	GAL	517.3			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: THE ENGINE BURN TO MUCH OIL and the WATER REMEDIATION SYSTEM WORK TO SLOW

SERVICE TECHNICAN FLORIN SPECTU DATE 9.18.95 THRIFTY OIL CO # 054



# EARTH MANAGEMENT CO.

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

MAINFOLD													
WELLS	WATER						WELLS	VAPORS					
ON				RE 4		RE 7	ON	RE 1		RE 3		RE 6	RE 7
OFF							OFF						

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	15:35	
					HOURS	#	9:12	
					ENGINE RPM	RPM	1900	
					ENGINE VACUUM	IN HG	18	
					TK REC TEMP	F	100	
					AIR TEMP	F	65°F	
					AIR FLOW	CFM	18	
					VAPOR FLOW	CFM	16	
					FUEL FLOW	CFM/H	90	
					WELL VACUUM	IN H2O	30	
					GAS METER		20%	
					CATALIST IN	F		
					CATALIST OUT	F		
					EXHAUST HC	PPM/%		
					EXHAUST CO	%PPM		
					EXHAUST CO2	%		
					EXHAUST NOX	%PPM		
					CATALYST REPLACEMENT			
					EXHAUST O2	%		
					INLET	PPM		
					OUTLET	PPM		
<b>HYDROCARBON STRIPPER &amp; VAPOR EXTRACTION SYSTEM W/ACU OR CAT</b>								
PARAMETER	U/M	LIMIT	DATA					
FLOWMETER	GAL	523.4						
ROTAMETER								
VPI FLOW								
VPI VACUUM								
AIR COMPRES								
VAPOR								
INLET VAPOR								
TEMPERATURE								
LEL								
COMMENTS: WATER REMEDIATION SYSTEM WORK SLOW THE ENGINE USE TO MUCH OIL								
SERVICE TECHNICAN <u>FLORIN SPETCU</u> DATE <u>9.25.95</u> THRIFTY OIL CO # <u>054</u>								

## **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)

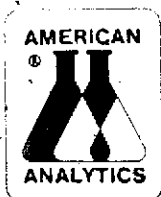
**AA Project No.:** A135054-16  
**Date Received:** 09/07/95  
**Date Reported:** 10/02/95  
**Units:** ug/L

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
37578	Trip Blank	09/05/95	09/08/95	<100	100
37579	RS-9	09/05/95	09/08/95	1100	100
37580	RE-2	09/05/95	09/08/95	210	100
37581	RE-5	09/05/95	09/08/95	4400	100
37582	RS-8	09/05/95	09/08/95	<100	100
37583	RS-10	09/05/95	09/08/95	<100	100
37584	RE-6	09/05/95	09/08/95	3300	100
37585	PW-1	09/05/95	09/08/95	330	100
37586	PW-2	09/05/95	09/11/95	2500	100

MRL: Method Reporting Limit

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

**George Havalias**  
Laboratory Director



**LABORATORY ANALYSIS RESULTS**

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

AA Project No.: A135054-16  
Date Received: 09/07/95  
Date Reported: 10/02/95  
Units: ug/L

Date Sampled:	09/05/95	09/05/95	09/05/95	09/05/95	
Date Analyzed:	09/08/95	09/08/95	09/08/95	09/08/95	
AA ID No.:	37578	37579	37580	37581	
Client ID No.:	Trip Blank	RS-9	RE-2	RE-5	MRL
<b>Compounds:</b>					
Benzene	<0.5	<0.5	<0.5	440	0.5
Ethylbenzene	<0.5	<0.5	<0.5	<2.5	0.5
Toluene	<0.5	<0.5	<0.5	22	0.5
Xylenes	<1	<1	<1	57	1

  
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George Havalias  
Laboratory Director

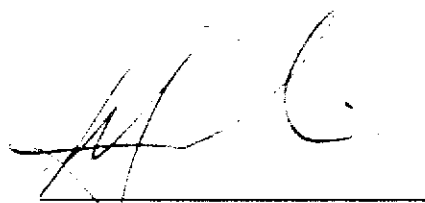


**LABORATORY ANALYSIS RESULTS**

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

**AA Project No.:** A135054-16  
**Date Received:** 09/07/95  
**Date Reported:** 10/02/95  
**Units:** ug/L

<b>Date Sampled:</b>	<b>09/05/95</b>	<b>09/05/95</b>	<b>09/05/95</b>	<b>09/05/95</b>	
<b>Date Analyzed:</b>	<b>09/08/95</b>	<b>09/08/95</b>	<b>09/08/95</b>	<b>09/08/95</b>	
<b>AA ID No.:</b>	37582	37583	37584	37585	
<b>Client ID No.:</b>	RS-8	RS-10	RE-6	PW-1	<b>MRL</b>
<b>Compounds:</b>					
Benzene	<0.5	<0.5	60	2.1	0.5
Ethylbenzene	<0.5	<0.5	<10	2.1	0.5
Toluene	<0.5	<0.5	<10	<0.5	0.5
Xylenes	<1	<1	74	9.6	1

  
\_\_\_\_\_  
**George Havalias**  
**Laboratory Director**





LABORATORY ANALYSIS RESULTS

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

AA Project No.: A135054-16  
Date Received: 09/07/95  
Date Reported: 10/02/95  
Units: ug/L

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Date Sampled:	09/05/95	
Date Analyzed:	09/11/95	
AA ID No.:	37586	
Client ID No.:	PW-2	MRL

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<u>Compounds:</u>		
Benzene	33	0.5
Ethylbenzene	0.86	0.5
Toluene	1.0	0.5
Xylenes	18	1

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MRL: Method Reporting Limit

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

George Havalias  
Laboratory Director



**LABORATORY QA/QC REPORT**

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

**AA ID No.:** 37576  
**Project No.:** N/A  
**AA Project No.:** A135054-16  
**Date Analyzed:** 09/08/95  
**Date Reported:** 10/02/95

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept. Rec. Range (%)
Benzene	21.849	109	21.858	109	0	65 - 135
Ethylbenzene	19.245	96	19.115	96	0	77 - 123
Toluene	19.489	97	19.661	98	1	66 - 134
Xylenes	19.621	98	19.852	99	1	73 - 127

**George Havalias**  
**Laboratory Director**

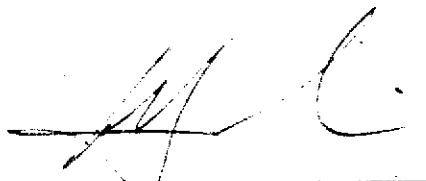


**LABORATORY QA/QC REPORT**

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

**AA ID No.:** 37636  
**Project No.:** N/A  
**AA Project No.:** A135054-16  
**Date Analyzed:** 09/11/95  
**Date Reported:** 10/02/95

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept.Rec. Range (%)
Benzene	21.143	106	19.124	96	10	65 - 135
Ethylbenzene	20.354	102	19.371	97	5	77 - 123
Toluene	20.534	103	19.554	98	5	66 - 134
Xylenes	20.630	103	19.554	98	5	73 - 127



**George Havalias**  
Laboratory Director



**LABORATORY QA/QC REPORT**

**Client:** Thrifty Oil Company  
**Project Name:** SS# 054  
**Method:** EPA 8015M (Gasoline)  
**Sample ID:** Matrix Spike  
**Concentration:** 500 ug/L

**AA ID No.:** 37576  
**Project No.:** N/A  
**AA Project No.:** A135054-16  
**Date Analyzed:** 09/08/95  
**Date Reported:** 10/02/95

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept. Rec. Range (%)
Gasoline Range Organics	620	124	588	118	5	51 - 149

**George Havalias**  
Laboratory Director

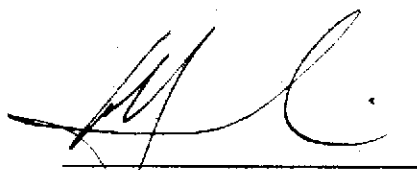


**LABORATORY QA/QC REPORT**

**Client:** Thrifty Oil Company  
**Project Name:** SS# 054  
**Method:** EPA 8015M (Gasoline)  
**Sample ID:** Matrix Spike  
**Concentration:** 500 ug/L

**AA ID No.:** 37586  
**Project No.:** N/A  
**AA Project No.:** A135054-16  
**Date Analyzed:** 09/11/95  
**Date Reported:** 10/02/95

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept.Rec. Range (%)
Gasoline Range Organics	500	100	485	97	3	51 - 149



George Havalias  
Laboratory Director





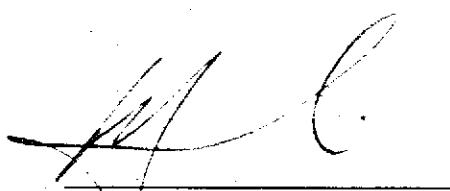
**LABORATORY ANALYSIS RESULTS**

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

**AA Project No.:** A135054-18  
**Date Received:** 09/25/95  
**Date Reported:** 10/06/95  
**Units:** ug/L

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
38245	RS-11-92195	09/21/95	09/29/95	110	100

MRL: Method Reporting Limit  
<: Not detected at or above the value of the concentration indicated.

  
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**George Havalias**  
**Laboratory Director**



**LABORATORY QA/QC REPORT**

Client: Thrifty Oil Company  
Project Name: SS# 054  
Method: EPA 8015M (Gasoline)  
Sample ID: Matrix Spike  
Concentration: 500 ug/L

AA ID No.: 38245  
Project No.: N/A  
AA Project No.: A135054-18  
Date Analyzed: 09/29/95  
Date Reported: 10/06/95

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept.Rec. Range (%)
Gasoline Range Organics	500	100	520	104	4	51 - 149

George Havalias  
Laboratory Director





**LABORATORY ANALYSIS RESULTS**

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

**AA Project No.:** A135054-18  
**Date Received:** 09/25/95  
**Date Reported:** 10/06/95  
**Units:** ug/L

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<b>Date Sampled:</b>	<b>09/21/95</b>	
<b>Date Analyzed:</b>	<b>09/29/95</b>	
<b>AA ID No.:</b>	<b>38245</b>	
<b>Client ID No.:</b>	<b>RS-11-92195</b>	<b>MRL</b>
<b>Compounds:</b>		
Benzene	<0.5	0.5
Ethylbenzene	<0.5	0.5
Toluene	<0.5	0.5
Xylenes	<1	1

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MRL: Method Reporting Limit

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



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**George Havalias**  
**Laboratory Director**



**LABORATORY QA/QC REPORT**

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

AA ID No.: 38245  
Project No.: N/A  
AA Project No.: A135054-18  
Date Analyzed: 09/29/95  
Date Reported: 10/06/95

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept.Rec. Range (%)
Benzene	24.918	125	19.612	98	24	65 - 135
Ethylbenzene	19.626	98	21.229	106	8	77 - 123
Toluene	20.151	101	25.138	126	22	66 - 134
Xylenes	20.183	101	25.239	126	22	73 - 127

George Havallas  
Laboratory Director

## CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: <i>TOC # 54</i>	Field Logbook No.:	Date: <i>9-21-95</i>	Serial No.: <b>Nº N- 5302</b>
Project Name: <i>Thrifty #54</i>	Project Location: <i>Castro Valley</i>		

SAMPLES					ANALYSES					SAMPLERS: <i>RAW</i>				
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE						HOLD	RUSH	REMARKS	
						EPA 601	EPA 624	TPH (gas)	BTEX (gas)					
<i>RS-11-5</i>	<i>9-21-95</i>		<i>38239</i>	<i>1</i>	<i>soil</i>			<i>X</i>	<i>X</i>					
<i>RS-11-10</i>			<i>38240</i>	<i>1</i>	<i>"</i>			<i>X</i>	<i>X</i>					
<i>RS-11-15</i>			<i>38241</i>	<i>1</i>	<i>"</i>			<i>X</i>	<i>X</i>					
<i>RS-11-20</i>			<i>38242</i>	<i>1</i>	<i>"</i>			<i>X</i>	<i>X</i>					
<i>RS-11-24</i>			<i>38243</i>	<i>1</i>	<i>"</i>			<i>X</i>	<i>X</i>					
<i>RS-11-28</i>			<i>38244</i>	<i>1</i>	<i>"</i>			<i>X</i>	<i>X</i>					
<i>RS-11-92195</i>			<i>38245</i>	<i>3</i>	<i>Water</i>			<i>X</i>	<i>X</i>					

RELINQUISHED BY: (Signature) <i>Swid A Vyl</i>	DATE	TIME	RECEIVED BY: (Signature) <i>Michael Raczka</i>	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		
Sample Collector: <i>Thrifty Oil</i>			Analytical Laboratory:		

~~1999 Main Street, Suite 750~~  
~~Irving, California 92744~~  
~~(714) 955-8888 FAX (714) 955-0083~~

A135054-18