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**THRIFTY OIL CO. ENVIRONMENTAL PROTECTION**

97 JAN 28 AM 8:39

January 20, 1997

Ms. Amy Leach  
Department of Environmental Health  
Hazardous Materials Program  
1131 Harbor Bay Parkway  
Suite 2501  
Alameda, California 94502

RE: THRIFTY OIL CO STATION #054  
2504 Castro Valley Boulevard  
Castro Valley, California  
Quarterly Monitoring Report  
3rd Quarter 1996

Dear Ms. Leech:

Enclosed, please find the 3rd Quarterly Monitoring Report for Thrifty Service Station #054, dated January 17 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*

PETER D'AMICO  
Manager  
Environmental Affairs

→ Analyses Missing for RS-11



# THRIFTY OIL CO.

January 17, 1997

Ms. Amy Leach  
Department of Environmental Health  
Hazardous Materials Program  
1131 Harbor Bay Parkway  
Suite 2501  
Alameda, California 94502

RE: Thrifty Oil Co. Station #054  
2504 Castro Valley Boulevard  
Castro Valley, California  
3rd QUARTER REPORT, 1996

Dear Ms. Leach,

*Sept. 1996*

This letter report presents the results of soil/groundwater treatment and site monitoring during the 3rd quarter of 1996 at the subject site. The approximate location of the on- and off-site monitoring wells are shown on Figure 1. All monitoring is conducted by Earth Management Co. (EMC) of Santa Fe Springs, California.

## Site Monitoring and Sample Collection

The site was visited on September 16, 1996, by an EMC technician to gauge the groundwater monitoring wells and collect groundwater samples. Water levels were measured in each well from the rim of the well cover using a Marine Moisture Interface Gauging Probe (nearest 0.01 feet) capable of also measuring the presence of free floating hydrocarbons. *Depth to water ranged from about 3.80 to 9.18 feet below grade which is consistent with previous data collected.* As of September 19, 1996, no wells 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.*

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 8 to 40 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 using a dedicated 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), volatile aromatic compounds (BTEX), and **Methyl Tert Butyl Ether (MTBE)** using EPA methods 8015 modified for gasoline, 8020, and 8020 modified for MTBE, respectively. Copies of the laboratory analysis reports are attached in **Appendix B**. A summary of the analytical 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 456 hours during the reporting period and 13,218 hours total (current meter reading 9770). As of September 19, 1996, a total of about 16,604.4 gallons of water (current meter reading 1397) had been processed by the unit and discharged to the local sanitary sewer. During the 3rd quarter reporting period, 184 gallons of water had been processed by the treatment unit and were discharged to the sanitary sewer. Effluent samples of the groundwater portion of the treatment unit were collected in July, August, and September of 1996. Laboratory analysis of effluent water samples collected in July and August did not detect TPH and BTEX at concentrations exceeding laboratory detection limits. TPH was detected at a concentration of 87 ug/L in the effluent sample collected in September. Effluent analytical results are included in the laboratory analytical reports presented in **Appendix B**.

To monitor the effects of soil vapor removal, field vapor measurements have been collected and recorded from each recovery well on a monthly basis. However, no well head vapor data was collected during this reporting period. Treatment unit effluent vapor samples were collected in July, August, and September. Laboratory analysis of effluent vapor samples did not detect benzene at concentrations exceeding laboratory detection limits. The historical well vapor data is included in **Table 2** and the effluent vapor laboratory analytical results are included in **Appendix B**.

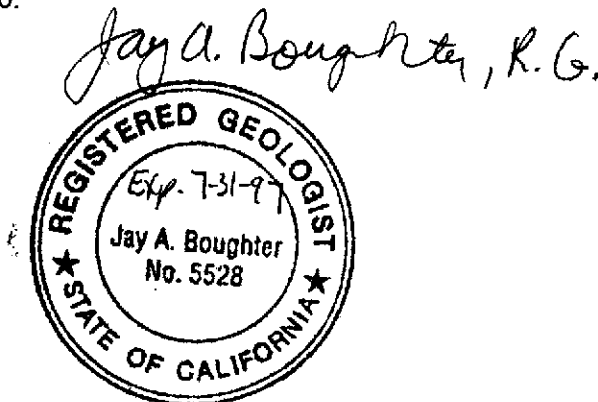
### **Closing**

Thrifty will continue to conduct quarterly groundwater monitoring at the site. The next quarterly report should be available in February of 1996. If you have any questions, please contact either the undersigned or Ray Friedrichsen at (310) 923-9876.

Very truly yours,



Peter D'Amico  
Manager Environmental Affairs



# FIGURES

PROJECT STATUS REPORT

CLIENT: T.O.C.

LOCATION: SS #54

DATE: 9-16-96

OBSERVATION WELLS

ID	SWE	DTW	DTP	PT	CDTW	ELEV-W	DTB
PW-1	166.46	5.10				161.36	14.10
PW-2	166.19	5.21				160.97	14.40
RE-1	166.82	4.68				162.14	19.85
RE-2	167.19	5.10				162.09	17.10
RE-3	167.39	4.50				162.89	17.60
RE-4	166.94	5.18				161.76	14.60
RE-5	166.51	5.20				161.31	18.25
RE-6	166.51	5.38				161.13	13.65
RE-7	166.04	6.20				159.84	13.20
RS-8	167.32	9.18				155.14	25.20
RS-9	167.51	3.80				163.71	15.00
RS-10	162.89	6.30				156.59	24.45
RS-11	163.28	—				—	—

EXPLANATION

- SWE - Surveyed Well Elevation
- DTW - Depth to Water from Surface
- DTP - Depth to Product
- PT - Product Thickness
- CDTW - Corrected Depth to Water =  $DTW - (.80 \times PT)$
- ELEV-W - Relative Elevation of Water
- DTB - Depth to Bottom


REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

DATA RECORDED BY: E.M.C.

**LEGEND**

- ⊕ RE-1 / MONITORING WELL
- A.D. AREA DRAIN
- ~ GROUNDWATER CONTOUR (09/16/96)

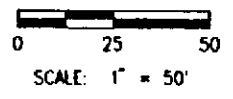
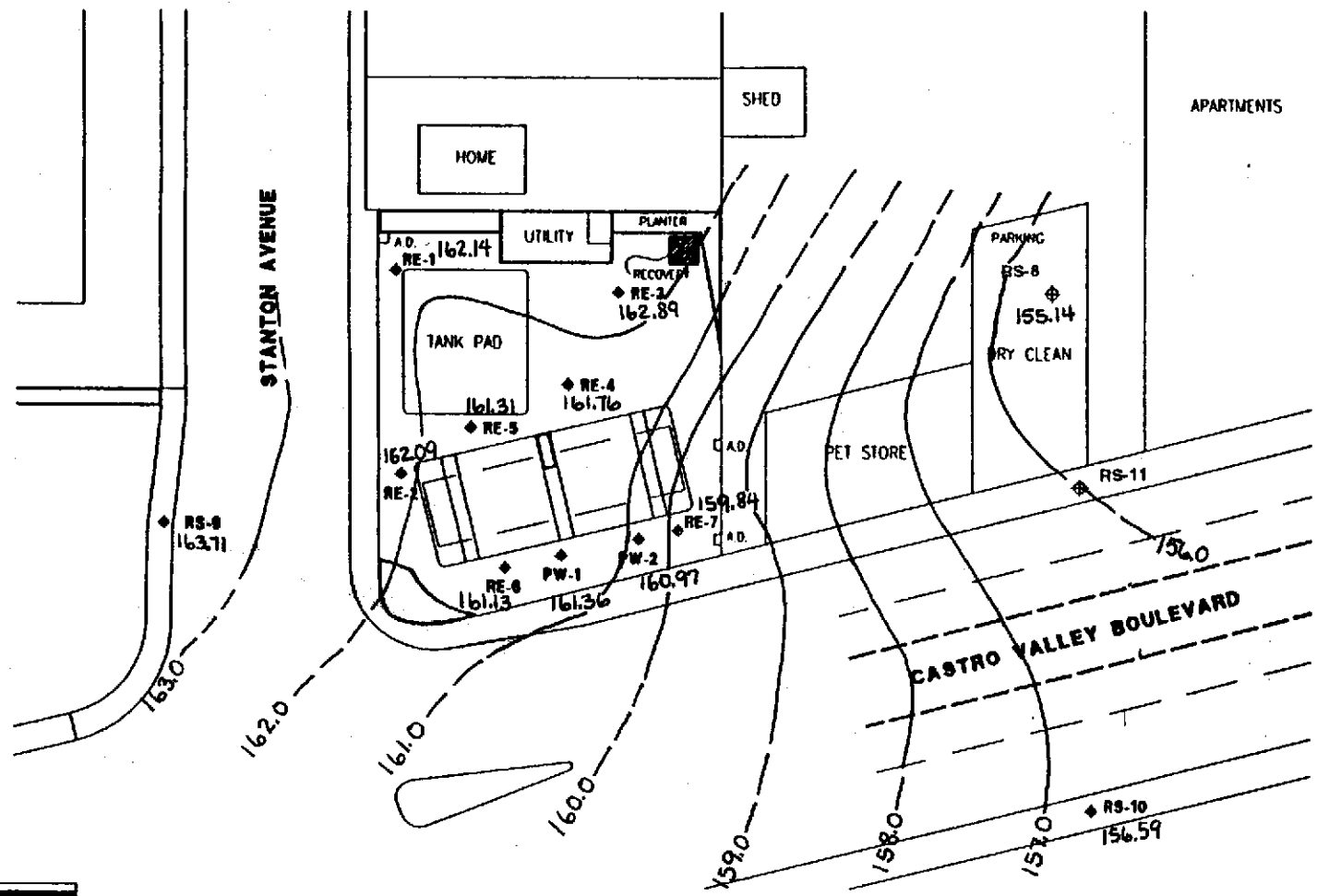
REVISIONS	BY

  
 TRINITY REAL COMPANY  
 3900 LAKEWOOD BLVD.  
 DAINWY, CA 94540  
 (925) 834-8878

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

DRAWN BY	DATE

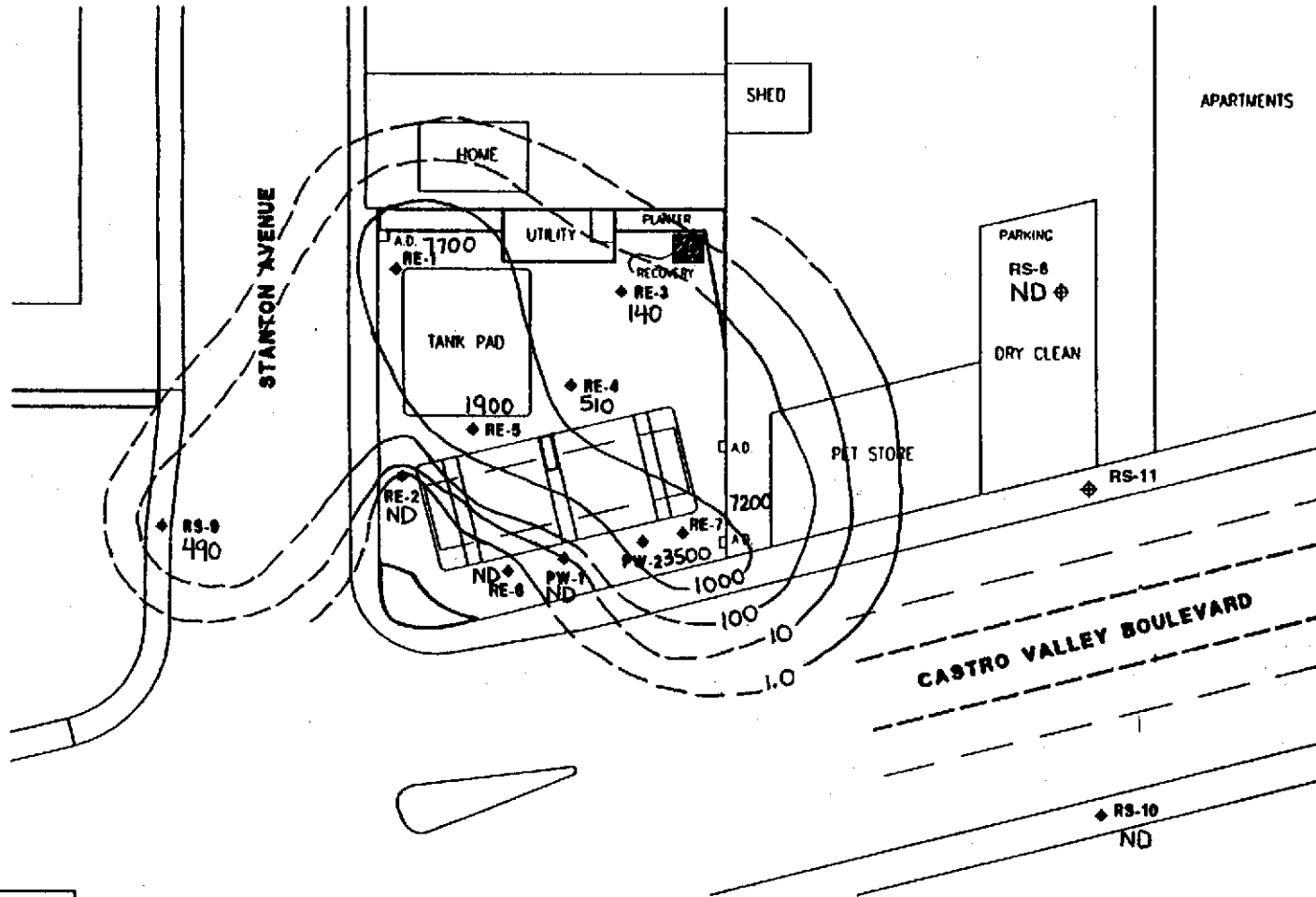
1




**GROUNDWATER CONTOUR MAP**

**LEGEND**

- ◆ RE-1 / MONITORING WELL
- A.D. AREA DRAIN
- ~ TPH CONTOUR ( 06/16/96, *exp/d* )



REVISIONS	BY

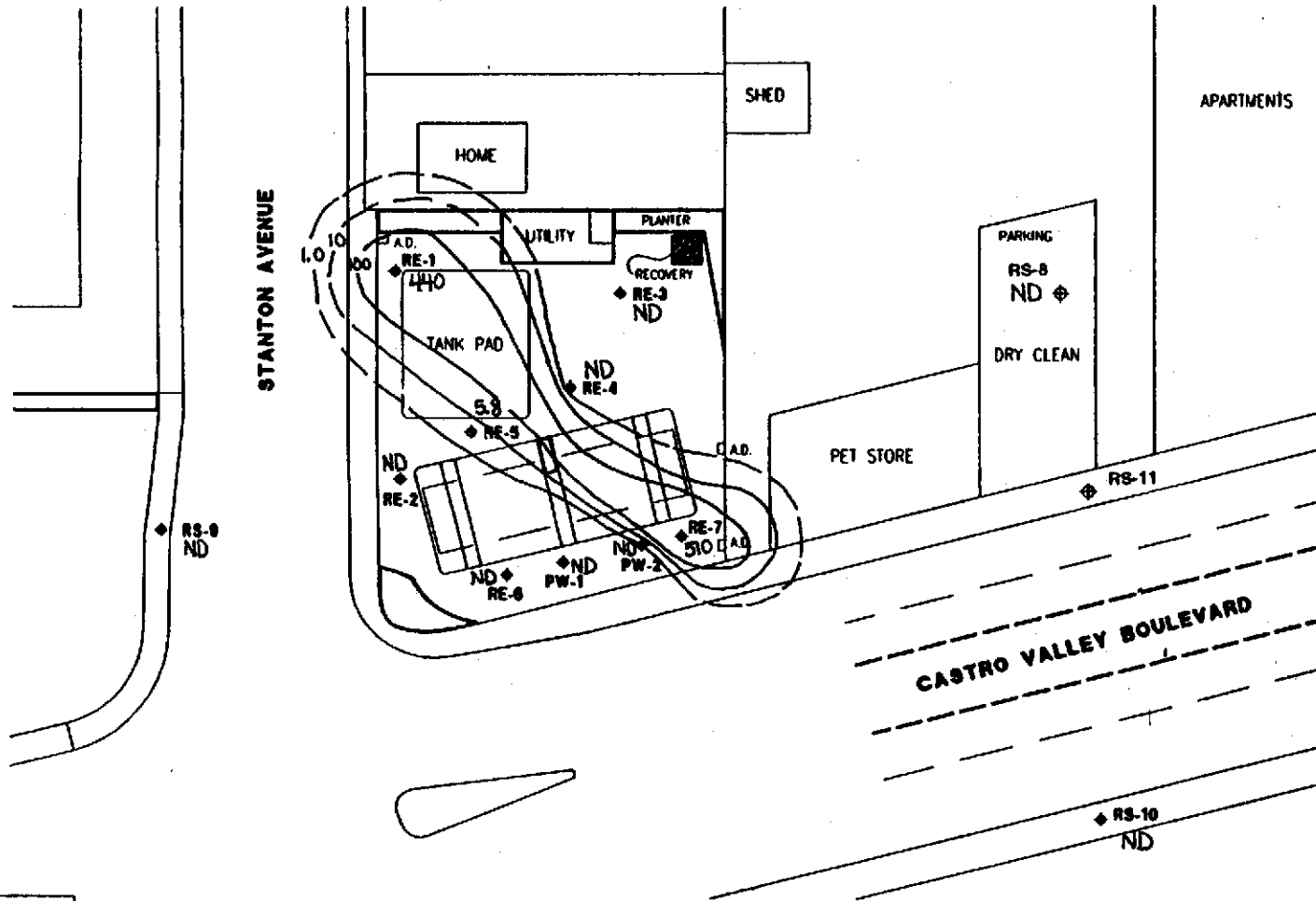
  
**THIRTY OIL COMPANY**  
 10000 LAZARUS BLVD.  
 DOWNEY, CA 90240  
 (714) 812-2878

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

Drawn by: RCJ
05-01-94
γ = 50'-0"


**LEGEND**

- ◆ RE-1 / MONITORING WELL
- A.D. AREA DRAIN
- ~ BENZENE CONTOUR (09/16/96, mg/l)



**BENZENE ISOCONCENTRATION MAP**

REVISIONS	BY

  
**TENTHREDINID INC.**  
 7000 LAKEWOOD BLVD.  
 DUBLIN, CA 94568  
 (925) 832-8878

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

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

3



# TABLES

TABLE 1

**GROUNDWATER DATA  
THRIFTY OIL STATION #54**

DATE SAMPLED	TPH	BENZENE	TOLUENE	ETHYL BENZENE	XYLENE	MTBE	TOP OF CASING	DEPTH TO GROUNDWTR
Monitoring Well FW-1								
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
Jun 15, 1995	260	0.8	0.6	<0.5	3.2			5.72
Sep 5, 1995	330	2.1	<0.5	2.1	9.6			5.96
Nov 21, 1995	660	13	1.3	<0.3	4.0			6.04
Mar 11, 1996	660	0.94	0.77	<0.3	8.1			3.60
Jun 19, 1996	120	0.53	<0.3	<0.3	2.3			4.80
Sep 16, 1996	<50	<0.3	<0.3	<0.3	<0.5	<20		5.10

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	60000	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
Jun 15, 1995	1700	5.6	<0.5	<0.5	1.6			5.44
Sep 5, 1995	2500	33	1.0	0.86	18			6.13
Nov 21, 1995	2800	130	59	18	190			6.23
Mar 11, 1996	13000	330	460	<15	3800			4.48
Jun 19, 1996	1400	<0.3	<0.3	<0.3	<0.5			5.38
Sep 16, 1996	3500	<0.3	<0.3	<0.3	<0.5	5900		5.21

MTBE (ppb)

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)
Nov 21, 1995	NA	NA	NA	NA	NA		4.82
Mar 11, 1996	270	2.4	6.0	4.5	19		3.32
Jun 19, 1996	3000	570	63	<1.5	400		4.20
Sep 16, 1996	7700	440	69	<1.5	680	230	4.68

MTBE

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
Nov 21, 1995	160	0.65	<0.3	0.35	0.95			4.83
Mar 11, 1996	<50	<0.3	<0.3	<0.3	<0.5			3.36
Jun 19, 1996	<50	<0.3	<0.3	<0.3	<0.5			4.68
Sep 16, 1996	<50	<0.3	<0.3	<0.3	<0.5	<20		5.10

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)
Nov 21, 1995	10,000	210	<3	4.5	330			7.38
Mar 11, 1996	1600	640	15	10	46			4.85
Jun 19, 1996	2100	280	<3	<3	120			5.80
Sep 16, 1996	140	<0.3	<0.3	<0.3	<0.5	110		4.50

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)
Nov 21, 1995	32,000	46	21	66	340			12.53
Mar 11, 1996	1700	130	15	2.0	120			4.72
Jun 19, 1996	1700	230	30	0.35	100			5.40
Sep 16, 1996	510	<0.3	0.73	<0.3	<0.5	800		5.18

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
Nov 21, 1995	660	3.4	<0.3	<0.3	0.6		5.23
Mar 11, 1996	1000	76	2.2	<0.3	130		4.16
Jun 19, 1996	90	<0.3	<0.3	<0.3	<0.5		5.42
Sep 16, 1996	1900	5.8	<0.3	<0.3	5.9	1100	5.20



TABLE I (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
Nov 21, 1995	2000	7.3	<0.3	0.56	8.7		6.24
Mar 11, 1996	840	43	0.96	5.7	14		5.16
Jun 19, 1996	1800	160	2.7	9.9	25		5.80
Sep 16, 1996	<50	<0.3	<0.3	<0.3	<0.5	<20	5.38

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)
Nov 21, 1995	20,000	8800	110	<30	310		7.32
Mar 11, 1996	4800	2200	38	26	120		5.62
Jun 19, 1996	4400	3300	49	5.8	70		6.40
Sep 16, 1996	7200	510	83	<0.3	710	130	6.20

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
Nov 21, 1995	<50	0.44	<0.3	<0.3	1.5		9.28
Mar 11, 1996	<50	1.3	<0.3	<0.3	0.6		7.52
Jun 19, 1996	640	72	20	34	150		7.80
Sep 16, 1996	<50	<0.3	<0.3	<0.3	<0.5	20	9.18

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
Nov 21, 1995	1100	1.1	2.9	3.5	3.0		2.46
Mar 11, 1996	440	0.7	0.34	<0.3	3.7		3.44
Jun 19, 1996	580	3.8	0.49	1.2	<0.5		3.80
Sep 16, 1996	490	<0.3	1.6	<0.3	<0.5	<20	3.80

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
Nov 21, 1995	<50	<0.3	<0.3	<0.3	<0.5			7.68
Mar 11, 1996	<50	<0.3	<0.3	<0.3	<0.5			6.76
Jun 19, 1996	<50	<0.3	<0.3	<0.3	<0.5			7.20
Sep 16, 1996	<50	<0.3	<0.3	<0.3	<0.5	<20		6.30
Monitoring Well RS-11								
Sep 21, 1995	110	<0.5	<0.5	<0.5	<1	163.28		9.37
Nov 21, 1995	NA	NA	NA	NA	NA			--
Mar 11, 1996	NA	NA	NA	NA	NA			--
Jun 19, 1996	NA	NA	NA	NA	NA			--
Sep 16, 1996	NA	NA	NA	NA	NA	NA		-
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.								
Methyl Tert Butyl Ether analyzed by EPA method 8020 modified for MTBE and concentrations reported in ug/L.								
NSC = Not sampled due to product film on groundwater.								
ND = Not Detected.								
NA = Not Analyzed.								

*Why!*

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

<b>Well I.D.</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				RE4			RE7							RE6	RE7
OFF															

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM		
					HOURS	#	9770	
					ENGINE RPM	RPM		
					ENGINE VACUUM	IN HG		
					TK REC TEMP	F		
					AIR TEMP	F		
					AIR FLOW	CFM		
					VAPOR FLOW	CFM		
					FUEL FLOW	CFM/H		
					WELL VACUUM	IN H2O		
					GAS METER			

HYDROCARBON STRIPPER & VAPOR EXTRACTION SYSTEM W/ACU OR CAT			
PARAMETER	U/M	LIMIT	DATA
FLOWMETER	Gals	397	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS: When I came to the system was running but the connection with water pump was R.S. to the pump. All pumps and the connection. The flow must shut down. Recheck system.

SERVICE TECHNICIAN Jim [unclear] DATE 11-17-76 THRIFTY OIL CO # 234



DATE: 9/19/96

START UP / SHUT DOWN REPORT  
STATION # 054  
SYSTEM TYPE : RSI (VE + GWT)

START UP REPORT:

SHUT DOWN REPORT:

System shut down for replace broken parts. I must send to office (parts) because here I can't find to buy —

SIGNATURE: \_\_\_\_\_

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

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
PW-1	5.10			14.10	TIME	AM/PM	2M	
PW-2	5.21			14.40	HOURS	#	3740	
RE-1	4.68			19.85	ENGINE RPM	RPM		
RE-2	5.10			17.10	ENGINE VACUUM	IN HG		
RE-3	4.50			17.60	TK REC TEMP	F		
RE-4	5.18			14.60	AIR TEMP	F		
RE-5	5.20			18.25	AIR FLOW	CFM		
RE-6	5.38			13.65	VAPOR FLOW	CFM		
RE-7	6.20			13.20	FUEL FLOW	CFM/H		
RS-8	9.18			25.20	WELL VACUUM	IN H2O		
RS-9	3.80			15.00	GAS METER			
RS-10	6.30			24.45	CATALIST IN	F		
<b>HYDROCARBON STRIPPER &amp; VAPOR EXTRACTION SYSTEM W/ACU OR CAT</b>					CATALIST OUT	F		
PARAMETER	U/M	LIMIT	DATA		EXHAUST HC	PPM/%		
FLOWMETER	Gall	389			EXHAUST CO	%PPM		
ROTAMETER					EXHAUST CO2	%		
VPI FLOW					EXHAUST NOX	%PPM		
VPI VACUUM					CATALYST REPLACEMENT			
AIR COMPRES					EXHAUST O2	%		
VAPOR					INLET	PPM		
INLET VAPOR					OUTLET	PPM		
TEMPERATURE								
LEL								

COMMENTS: Battery dead. I can't insert system

SERVICE TECHNICAN De. [Signature] DATE 9-16-96 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	AM	
					HOURS	#	9740	
					ENGINE RPM	RPM		
					ENGINE VACUUM	IN HG		
					TK REC TEMP	F		
					AIR TEMP	F		
					AIR FLOW	CFM		
					VAPOR FLOW	CFM		
					FUEL FLOW	CFM/H		
					WELL VACUUM	IN H2O		
					GAS METER			
					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	Gall	389	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS: Recheck system again. Delivery was a close but

SERVICE TECHNICAN [Signature] DATE 9-13-96 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			REGRE7
OFF							OFF						

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	AM	
					HOURS	#	9721	
					ENGINE RPM	RPM	1900	
					ENGINE VACUUM	IN HG	9	
					TK REC TEMP	F	100	
					AIR TEMP	F	78	
					AIR FLOW	CFM	14	
					VAPOR FLOW	CFM	17	
					FUEL FLOW	CFM/H	85	
					WELL VACUUM	IN H2O	13	
					GAS METER	%	42%	
					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	Gall	373	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS: Air sampling

SERVICE TECHNICIAN [Signature] DATE 9-05-96 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		
OFF							OFF							

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	AM	
					HOURS	#	9563	
					ENGINE RPM	RPM	1920	
					ENGINE VACUUM	IN HG	12	
					TK REC TEMP	F	90	
					AIR TEMP	F	76	
					AIR FLOW	CFM	11	
					VAPOR FLOW	CFM	8	
					FUEL FLOW	CFM/H	95	
					WELL VACUUM	IN H2O	73	
					GAS METER	%	42%	
					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	Gall	309	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS: *Air sampling*

SERVICE TECHNICAN *[Signature]* DATE *8-29-96* THRIFTY OIL CO # *054*

MAINFOLD													
WELLS	WATER						WELLS	VAPORS					
ON				RE4		RE7	ON	REF1		REF2		REF3	REF4
OFF							OFF						

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
RE-3	5.84			17.60	TIME	AM/PM	AM	
RE-4	5.41			14.60	HOURS	#	9412	
RE-7	13.16			16.40	ENGINE RPM	RPM	1800	
RE-6	5.82			13.62	ENGINE VACUUM	IN HG	10	
RE-2	4.71			17.10	TK REC TEMP	F	90	
RE-5	5.44			18.25	AIR TEMP	F	82	
RE-1	4.23			19.85	AIR FLOW	CFM	14	
RS-8	7.82			23.20	VAPOR FLOW	CFM	11	
RS-9	3.81			15.00	FUEL FLOW	CFM/H	90	
RS-10	7.21			24.45	WELL VACUUM	IN H2O	12	
PRG-2	5.41			14.40	GAS METER		%44	
HYDROCARBON STRIPPER & VAPOR EXTRACTION SYSTEM W/ACU OR CAT					CATALIST IN	F		
PARAMETER	U/M	LIMIT	DATA		CATALIST OUT	F		
FLOWMETER	Gall	292			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	340	
TEMPERATURE					OUTLET	PPM	180	
LEL								

COMMENTS: *Sampling water and air*

*8.15-96*

SERVICE TECHNICAN *[Signature]* DATE *8-15-96* 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				REC			REF		ON	RA1		RA2		RA3	RAF
OFF									OFF						

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	AM	
					HOURS	#	9391	
					ENGINE RPM	RPM	1700	
					ENGINE VACUUM	IN HG	12	
					TK REC TEMP	F	40	
					AIR TEMP	F	82	
					AIR FLOW	CFM	10	
					VAPOR FLOW	CFM		
					FUEL FLOW	CFM/H		
					WELL VACUUM	IN H2O		
					GAS METER			
					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	Gall	266	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS: air sampling

SERVICE TECHNICAN John [unclear] DATE 3/21/02 THRIFTY OIL CO # 0517





# EARTH MANAGEMENT CO.

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

MAINFOLD															
WELLS		WATER						WELLS		VAPORS					
ON				RF4			RF7	ON	RF1		RF3			RF6	RF7
OFF								OFF							

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM		
					HOURS	#	9378	
					ENGINE RPM	RPM		
					ENGINE VACUUM	IN HG		
					TK REC TEMP	F		
					AIR TEMP	F		
					AIR FLOW	CFM		
					VAPOR FLOW	CFM		
					FUEL FLOW	CFM/H		
					WELL VACUUM	IN H2O		

HYDROCARBON STRIPPER & VAPOR EXTRACTION SYSTEM W/ACU OR CAT			
PARAMETER	U/M	LIMIT	DATA
FLOWMETER	Gall	242	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

GAS METER			
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: *Restarted system*

SERVICE TECHNICIAN *[Signature]* DATE *11-21-06* 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				REM		RET	ON	REF		REB		RES	REF
OFF							OFF						

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM		
					HOURS	#	11:27	
					ENGINE RPM	RPM		
					ENGINE VACUUM	IN HG		
					TK REC TEMP	F		
					AIR TEMP	F		
					AIR FLOW	CFM		
					VAPOR FLOW	CFM		
					FUEL FLOW	CFM/H		
					WELL VACUUM	IN H2O	=	

HYDROCARBON STRIPPER & VAPOR EXTRACTION SYSTEM W/ACU OR CAT			
PARAMETER	U/M	LIMIT	DATA
FLOWMETER	Gall	242	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS: *Went down to the sampling well to see how the pump is working.*

SERVICE TECHNICAN \_\_\_\_\_ DATE 7/1/88 THRIFTY OIL CO # 2257



# EARTH MANAGEMENT CO.

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

MAINFOLD															
WELLS		WATER						WELLS		VAPORS					
ON					RE4			REF						REG	REF
OFF															

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM		
					HOURS	#	1:30	
					ENGINE RPM	RPM	1800	
					ENGINE VACUUM	IN HG		
					TK REC TEMP	F	40	
					AIR TEMP	F	76	
					AIR FLOW	CFM	10	
					VAPOR FLOW	CFM	19	
					FUEL FLOW	CFM/H	40	
					WELL VACUUM <sup>W</sup>	IN H2O	2	
					GAS METER		1145	
					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	2500	262	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS: *disrupted during 10 min test run*

SERVICE TECHNICAN R. S. [unclear] DATE 7.17.76 THRIFTY OIL CO # 1547



# EARTH MANAGEMENT CO.

Environmental Remediation

# FIELD STATUS REPORT

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

MAINFOLD													
WELLS	WATER						WELLS	VAPORS					
	ON				RM			RC7	ON	RC1		RC2	
OFF							OFF						

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM	AM	
					HOURS	#	7320	
					ENGINE RPM	RPM	1700	
					ENGINE VACUUM	IN HG	0	
					TK REC TEMP	F	70	
					AIR TEMP	F	70	
					AIR FLOW	CFM	13	
					VAPOR FLOW	CFM	15	
					FUEL FLOW	CFM/H	1.5	
					WELL VACUUM	IN H2O		
					GAS METER		96	
					CATALIST IN	F		
					CATALIST OUT	F		
					EXHAUST HC	PPM/%		
					EXHAUST CO	%PPM		
					EXHAUST CO2	%		
					EXHAUST NOX	%PPM		
					CATALYST REPLACEMENT			
					EXHAUST O2	%		
					INLET	PPM	> 10	
					OUTLET	PPM	270	

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

PARAMETER	U/M	LIMIT	DATA
FLOWMETER	Gall	234	
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS:

SERVICE TECHNICAN Ken [signature] DATE 7-22-90 THRIFTY OIL CO # 057



**MAINTENANCE & REPAIR REPORT**

A) SS #: 054 SYSTEM TYPE: .  
B) DEFICIENCY DESCRIPTION :  
  
C) NAME OF REPORTING PARTY AND DATE:  
D) DATE SCHEDULED : 7-11-1996

1) NAME:	DATE/TIME
2) FINDINGS:	
3) HAS THE JOB BEEN COMPLETED? YES/NO IF "NO", PLEASE DESCRIBE WHY AND WHAT YOU NEED TO FINISH: <i>I needs order gasket for water pump -</i>	
4) POST REPAIR TEST RESULTS:	
5) THE CAUSE OF THE DEFICIENCY: <i>Belt from water pump remediation system was broken and gasket too. I must replace -</i>	
BRIEF INSTRUCTIONS FOR PREVENTIVE MAINTENANCE TO THE TECHNICIAN:	
6) OTHER:	

# **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.:** A135054-42  
**Date Received:** 09/17/96  
**Date Reported:** 10/02/96  
**Units:** ug/L

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
50119	RE-3	09/16/96	09/18/96	140	50
50120	RE-1	09/16/96	09/18/96	7700	50
50121	RS-9	09/16/96	09/18/96	490	50
50122	RE-2	09/16/96	09/18/96	<50	50
50123	RE-6	09/16/96	09/18/96	<50	50
50124	RE-5	09/16/96	09/18/96	1900	50
50125	RW-1	09/16/96	09/18/96	<50	50
50126	PW-2	09/16/96	09/18/96	3500	50
50127	RE-7	09/16/96	09/18/96	7200	50
50128	RE-4	09/16/96	09/18/96	510	50
50129	RS-8	09/16/96	09/18/96	<50	50
50130	RS-10	09/16/96	09/18/96	<50	50
50131	Influent	09/16/96	09/24/96	940	50
50132	Effluent	09/16/96	09/18/96	87	50
50133	Trip Blank	09/16/96	09/24/96	<50	50

MRL: Method Reporting Limit

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

  
George Havalias  
Laboratory Director



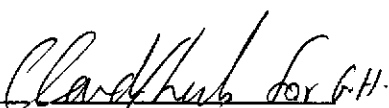
**LABORATORY QA/QC REPORT**

Page 1

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

**AA ID No.:** 50132  
**Project No.:** N/A  
**AA Project No.:** A135054-42  
**Date Analyzed:** 09/18/96  
**Date Reported:** 10/02/96

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept.Rec. Range (%)
Gasoline Range Organics	540	108	530	106	2	59 - 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.: 50358  
Project No.: N/A  
AA Project No.: A135054-42  
Date Analyzed: 09/24/96  
Date Reported: 10/02/96

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept. Rec. Range (%)
Gasoline Range Organics	483	97	343	69	34	59 - 149

  
George Hayaliaz  
Laboratory Director

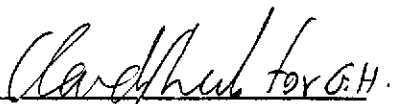


LABORATORY ANALYSIS RESULTS

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

AA Project No.: A135054-42  
Date Received: 09/17/96  
Date Reported: 10/02/96  
Units: ug/L

Date Sampled:	09/16/96	09/16/96	09/16/96	09/16/96	
Date Analyzed:	09/18/96	09/18/96	09/18/96	09/18/96	
AA ID No.:	50119	50120	50121	50122	
Client ID No.:	RE-3	RE-1	RS-9	RE-2	MRL
<b>Compounds:</b>					
Benzene	<0.3	440	<0.3	<0.3	0.3
Ethylbenzene	<0.3	<1.5	<0.3	<0.3	0.3
Toluene	<0.3	69	1.6	<0.3	0.3
Xylenes	<0.5	680	<0.5	<0.5	0.5

  
George Hayalias  
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.: A135054-42  
Date Received: 09/17/96  
Date Reported: 10/02/96  
Units: ug/L

Date Sampled:	09/16/96	09/16/96	09/16/96	09/16/96	
Date Analyzed:	09/18/96	09/18/96	09/18/96	09/18/96	
AA ID No.:	50123	50124	50125	50126	
Client ID No.:	RE-6	RE-5	RW-1	PW-2	MRL
<b>Compounds:</b>					
Benzene	<0.3	5.8	<0.3	<0.3	0.3
Ethylbenzene	<0.3	<0.3	<0.3	<0.3	0.3
Toluene	<0.3	<0.3	<0.3	<0.3	0.3
Xylenes	<0.5	5.9	<0.5	<0.5	0.5

*George Havalas for G.H.*  
George Havalas  
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.:** A135054-42  
**Date Received:** 09/17/96  
**Date Reported:** 10/02/96  
**Units:** ug/L

<b>Date Sampled:</b>	<b>09/16/96</b>	<b>09/16/96</b>	<b>09/16/96</b>	<b>09/16/96</b>	
<b>Date Analyzed:</b>	<b>09/18/96</b>	<b>09/18/96</b>	<b>09/18/96</b>	<b>09/18/96</b>	
<b>AA ID No.:</b>	50127	50128	50129	50130	
<b>Client ID No.:</b>	RE-7	RE-4	RS-8	RS-10	<b>MRL</b>
<b>Compounds:</b>					
Benzene	510	<0.3	<0.3	<0.3	0.3
Ethylbenzene	<0.3	<0.3	<0.3	<0.3	0.3
Toluene	83	0.73	<0.3	<0.3	0.3
Xylenes	710	<0.5	<0.5	<0.5	0.5

*George Hayalias*  
**George Hayalias**  
**Laboratory Director**



## LABORATORY ANALYSIS RESULTS

Page 4

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

**AA Project No.:** A135054-42  
**Date Received:** 09/17/96  
**Date Reported:** 10/02/96  
**Units:** ug/L

	09/16/96	09/16/96	09/16/96	
<b>Date Sampled:</b>	09/16/96	09/16/96	09/16/96	
<b>Date Analyzed:</b>	09/24/96	09/18/96	09/24/96	
<b>AA ID No.:</b>	50131	50132	50133	
<b>Client ID No.:</b>	Influent	Effluent	Trip Blank	<b>MRL</b>
<b>Compounds:</b>				
Benzene	<0.3	<0.3	<0.3	0.3
Ethylbenzene	0.52	<0.3	<0.3	0.3
Toluene	2.0	<0.3	<0.3	0.3
Xylenes	<0.5	<0.5	<0.5	0.5

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.:** 50132  
**Project No.:** N/A  
**AA Project No.:** A135054-42  
**Date Analyzed:** 09/18/96  
**Date Reported:** 10/02/96

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept. Rec. Range (%)
Benzene	20.2	101	19.9	100	1	65 - 135
Ethylbenzene	20.4	102	20.8	104	2	77 - 123
Toluene	20.1	101	19.9	100	1	66 - 134
Xylenes	20.1	101	20.2	101	0	73 - 127

*George Hayalias*

**George Hayalias**  
**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.:** 50358  
**Project No.:** N/A  
**AA Project No.:** A135054-42  
**Date Analyzed:** 09/24/96  
**Date Reported:** 10/02/96

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept. Rec. Range (%)
Benzene	17.8	89	15.5	78	13	65 - 135
Ethylbenzene	17.6	88	15.7	79	11	77 - 123
Toluene	17.5	88	15.8	79	11	66 - 134
Xylenes	18.1	91	16.0	80	13	73 - 127

*George Havalias*  
George Havalias  
Laboratory Director



## LABORATORY ANALYSIS RESULTS

Page 1

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

AA Project No.: A135054-42  
Date Received: 09/17/96  
Date Reported: 10/02/96  
Units: ug/L

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
50119	RE-3	09/16/96	09/19/96	110	20
50120	RE-1	09/16/96	09/19/96	230	20
50121	RS-9	09/16/96	09/19/96	<20	20
50122	RE-2	09/16/96	09/19/96	<20	20
50123	RE-6	09/16/96	09/19/96	<20	20
50124	RE-5	09/16/96	09/18/96	1100	20
50125	RW-1	09/16/96	09/19/96	<20	20
50126	PW-2	09/16/96	09/18/96	5900	20
50127	RE-7	09/16/96	09/18/96	130	20
50128	RE-4	09/16/96	09/18/96	800	20
50129	RS-8	09/16/96	09/19/96	20	20
50130	RS-10	09/16/96	09/19/96	<20	20

MRL: Method Reporting Limit

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

George Havallas  
Laboratory Director





# AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311

(818) 998-5547

(818) 998-5548

1-800-533-TEST

1-800-533-8378

FAX (818) 998-7258

DATE: 9-16-96

PAGE 1 OF 4

AA Client <b>THRIFTY OIL CO.</b>						Phone <b>(310) 923-9876</b>		Sampler's Name <b>SERBAN P.</b>											
Project Manager <b>CHRIS PANAITESCU</b>						P.O. No.		Sampler's Signature											
Project Name <b>MONTHLY and Quarterly</b>						Project No.		Project Manager's Signature											
Job Name and Address <b>SS # 054</b> <b>2504 CASTRO VALLEY Blvd</b> <b>CASTRO VALLEY 94546</b>						<b>ANALYSIS REQUIRED</b>				Test Requirements									
						<table border="1" style="width:100%; height: 100px;"> <tr> <td style="text-align: center;">Detection Limits</td> <td colspan="4" style="text-align: center;">/ / / / /</td> </tr> <tr> <td style="text-align: center;">Test Name</td> <td style="text-align: center;">TPH</td> <td style="text-align: center;">BTEX</td> <td style="text-align: center;">NITRATES</td> <td style="text-align: center;">/ / / / /</td> </tr> </table>					Detection Limits	/ / / / /				Test Name	TPH	BTEX	NITRATES
Detection Limits	/ / / / /																		
Test Name	TPH	BTEX	NITRATES	/ / / / /															
AA ID.#	Client's ID.	Date	Time	Sample Type	Number of Containers	TPH	BTEX	NITRATES											
50119	RE-3	9-16-96	16:30	WATER	3	X	X	X											
50120	RE-1	↑	16:35	↑	3	X	X	X											
50121	RS-9	↑	16:45	↑	3	X	X	X											
50122	RE-2	↑	16:50	↑	3	X	X	X											
50123	RE-6	↑	17:00	↑	3	X	X	X											
50124	RE-5	↑	17:10	↑	3	X	X	X											
50125	RW-1	↑	17:15	↑	3	X	X	X											
50126	PW-2	↑	17:20	↑	3	X	X	X											
50127	RE-7	↑	17:25	↑	3	X	X	X											
50128	RE-4	↑	17:35	↑	3	X	X	X											
50129	RS-8	↑	17:50	↑	3	X	X	X											
50130	RS-10	↑	18:00	↑	3	X	X	X											
50131	INFLUENT	↓	9:00	↓	2	X	X												
50132	EFFLUENT	↓	9:10	↓	2	X	X												
50133	TRIP BLANK	↓	7:30	↓	2	X	X												
<b>SAMPLE INTEGRITY-TO BE FILLED IN BY RECEIVING LAB</b>						Relinquished by:		Date	Time	Received by:									
Samples Intact Yes _____ No _____						CA. OVERNIGHT		9-17-96	17:00	CA. OVERNIGHT									
Samples Properly Cooled Yes _____ No _____						CA. OVERNIGHT		9-17-96	17:30										
Samples Accepted Yes _____ No _____																			
If Not Why: _____																			
AA Project No. <b>A135054-42</b>																			



**LABORATORY ANALYSIS RESULTS**

Page 1

**Client:** Thrifty Oil Company  
**Project No.:** N/A  
**Project Name:** SS #054  
**Sample Matrix:** Vapor  
**Method:** NIOSH 1501 (Benzene)

**AA Project No.:** A135054-41  
**Date Received:** 09/06/96  
**Date Reported:** 09/24/96  
**Units:** ug

AA I.D. No.	Client I.D. No.	Date Sampled	Date Extracted	Date Analyzed	Results	MRL
49743	Effluent	09/06/96	09/11/96	09/11/96	<0.1	0.1
49744	Trip Blank	09/06/96	09/11/96	09/11/96	<0.1	0.1

MRL: Method Reporting Limit

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

George Havalias  
Laboratory Director



3700 Lakeville Highway, Petaluma, CA 94954  
P.O. Box 808024, Petaluma, CA 94975-8024  
Telephone: (707) 763-8245 Fax: (707) 763-4065

### SAMPLING DATA - ANALYSIS REQUEST

PO. NUMBER:
RELEASE NO:
SURVEY NO:

NAME OF COMPANY <b>THRIFTY OIL CO.</b>	SAMPLE COLLECTED BY <b>SERBATA</b>	DATE COLLECTED <b>9-06-1996</b>
MAILING ADDRESS <b>10000 LAKEWOOD Blvd DOWNEY CA 90240</b>	SPECIAL INSTRUCTIONS	
TELEPHONE NO: <b>(310) 923-9876</b>		

LAB USE ONLY	SAMPLE NUMBER	SAMPLE LOCATION OR DESCRIPTION	VOLUME OF AIR SAMPLED	ANALYZE FOR (GIVE SPECIFIC SUBSTANCES)
<b>49743</b>	<b>1</b>	<b>EFFLUENT S3054</b>	<b>11</b>	<b>BENZENE</b>
<b>49744</b>	<b>2</b>	<b>TRIP BLANK S3054</b>	<b>1</b>	<b>BENZENE</b>

AUTHORIZED SIGNATURE:

RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE/TIME <b>11:00 / 9-06-96</b>	RECEIVED BY LAB BY: (SIGNATURE) <i>[Signature]</i>
RELINQUISHED FROM LAB BY: (SIGNATURE) <b>A135054-41</b>	DATE/TIME	RECEIVED BY: (SIGNATURE)



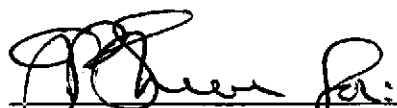
**LABORATORY ANALYSIS RESULTS**

**Client:** Thrifty Oil Company  
**Project No.:** SS# 54  
**Project Name:** N/A  
**Sample Matrix:** Vapor  
**Method:** NIOSH 1501 (Benzene)

**AA Project No.:** A135054-40  
**Date Received:** 08/30/96  
**Date Reported:** 09/11/96  
**Units:** ug

AA I.D. No.	Client I.D. No.	Date Sampled	Date Extracted	Date Analyzed	Results	MRL
49637	Effluent	08/29/96	09/11/96	09/11/96	<0.1	0.1
49638	Trip Blank	08/29/96	09/11/96	09/11/96	<0.1	0.1

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

  
George Havalias  
Laboratory Director



3700 Lakeville Highway, Petaluma, CA 94954  
P.O. Box 808024, Petaluma, CA 94975-8024  
Telephone: (707) 763-8245 Fax: (707) 763-4065

### SAMPLING DATA - ANALYSIS REQUEST

PO. NUMBER:
RELEASE NO:
SURVEY NO:

NAME OF COMPANY <b>THRIFTY OIL CO.</b>	SAMPLE COLLECTED BY <b>SERBAN</b>	DATE COLLECTED <b>8-29-1996</b>
MAILING ADDRESS  	SPECIAL INSTRUCTIONS  	
TELEPHONE NO: <b>(310) 923-9876</b>		

LAB USE ONLY	SAMPLE NUMBER	SAMPLE LOCATION OR DESCRIPTION	VOLUME OF AIR SAMPLED	ANALYZE FOR (GIVE SPECIFIC SUBSTANCES)
<b>49637</b>	<b>1</b>	<b>S3054 EFFLUENT</b>	<b>1L.</b>	<b>BENZENE</b>
<b>49638</b>	<b>2</b>	<b>S3#054 TRIP BLANK</b>	<b>1.</b>	<b>BENZENE</b>

AUTHORIZED SIGNATURE:

RELINQUISHED BY: (SIGNATURE) 	DATE/TIME <b>8-29-96</b> <b>AM 9:00</b>	RECEIVED BY LAB BY: (SIGNATURE)
RELINQUISHED FROM LAB BY: (SIGNATURE) <b>A35054-40</b>	DATE/TIME <b>8-30</b>	RECEIVED BY: (SIGNATURE) 



**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.:** A135054-39  
**Date Received:** 08/16/96  
**Date Reported:** 09/06/96  
**Units:** ug/L

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
48996	Influent	08/15/96	08/21/96	5300	50
48997	Intermediate	08/15/96	08/19/96	<50	50
48998	Effluent	08/15/96	08/19/96	<50	50
48999	Trip Blank	08/15/96	08/19/96	<50	50

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.:** A135054-39  
**Date Received:** 08/16/96  
**Date Reported:** 09/06/96  
**Units:** ug/L

Date Sampled:	08/15/96	08/15/96	08/15/96	08/15/96	
Date Analyzed:	08/21/96	08/19/96	08/19/96	08/19/96	
AA ID No.:	48996	48997	48998	48999	
Client ID No.:	Influent	Intermediate	Effluent	Trip Blank	MRL
<b>Compounds:</b>					
Benzene	190	<0.3	<0.3	<0.3	0.3
Ethylbenzene	<0.3	<0.3	<0.3	<0.3	0.3
Toluene	1.7	<0.3	<0.3	<0.3	0.3
Xylenes	330	<0.5	<0.5	<0.5	0.5

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.:** 49033  
**Project No.:** N/A  
**AA Project No.:** A135054-39  
**Date Analyzed:** 08/19/96  
**Date Reported:** 09/06/96

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept. Rec. Range (%)
Benzene	20.54	103	20.42	102	1	65 - 135
Ethylbenzene	21.00	105	20.10	101	4	77 - 123
Toluene	20.02	100	19.86	99	1	66 - 134
Xylenes	20.60	103	20.45	102	1	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.:** 49033  
**Project No.:** N/A  
**AA Project No.:** A135054-39  
**Date Analyzed:** 08/19/96  
**Date Reported:** 09/06/96

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept.Rec. Range (%)
Gasoline Range Organics	540	108	530	106	2	59 - 149

  
**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.:** 49011  
**Project No.:** N/A  
**AA Project No.:** A135054-39  
**Date Analyzed:** 08/21/96  
**Date Reported:** 09/06/96

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept. Rec. Range (%)
Benzene	20.291	101	21.176	106	5	65 - 135
Ethylbenzene	19.926	100	19.883	99	1	77 - 123
Toluene	20.591	103	20.483	102	1	66 - 134
Xylenes	19.411	97	20.086	100	3	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.: 49011  
Project No.: N/A  
AA Project No.: A135054-39  
Date Analyzed: 08/21/96  
Date Reported: 09/06/96

---

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept.Rec. Range (%)
Gasoline Range Organics	370	74	560	112	41	59 - 149

---

George Havalias  
Laboratory Director



# AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311

(818) 998-5547    (818) 998-5548    1-800-533-TEST    1-800-533-8378    FAX (818) 998-7258

DATE: 8-15-96  
PAGE 1 OF 4

AA Client <u>THRIFTY OIL CO.</u>	Phone <u>(310) 923-9876</u>	Sampler's Name <u>SERBAN A</u>
Project Manager <u>CHRIS PANAITESCU</u>	P.O. No.	Sampler's Signature <i>[Signature]</i>
Project Name <u>Monthly water sampling.</u>	Project No.	Project Manager's Signature

Job Name and Address <u>SS # 054</u> <u>2504 CASTRO VALLEY Blvd.</u> <u>CASTRO VALLEY 94546.</u>						<b>ANALYSIS REQUIRED</b>										Test Requirements		
						Detection Limits												
						Test Name												
AA ID.#	Client's ID.	Date	Time	Sample Type	Number of Containers	TPH	BTEX											
<u>4896</u>	<u>INFLUENT</u>	<u>8-15-96</u>	<u>10:30</u>	<u>WATER</u>	<u>2</u>	<u>X</u>	<u>X</u>											
<u>4897</u>	<u>INTERMED</u>	<u>↑</u>	<u>10:35</u>	<u>↑</u>	<u>2</u>	<u>X</u>	<u>X</u>											
<u>4898</u>	<u>EFFLUENT</u>	<u>↓</u>	<u>10:45</u>	<u>↓</u>	<u>2</u>	<u>X</u>	<u>X</u>											
<u>4899</u>	<u>TRIP BLANK</u>	<u>↓</u>	<u>7:30</u>	<u>↓</u>	<u>2</u>	<u>X</u>	<u>X</u>											
8																		

<b>SAMPLE INTEGRITY-TO BE FILLED IN BY RECEIVING LAB</b>				Relinquished by: <i>[Signature]</i>		Date <u>8-15-96</u>	Time <u>17:00</u>	Received by: <u>CA OVERNIGHT</u>
Sample Intact	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Relinquished by: <u>CA. OVERNIGHT</u>		Date <u>8-15-96</u>	Time <u>17:30</u>	Received by: <u>Michl Ryzak 8/16/96</u>
Samples Properly Cooled <u>4°C</u>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Relinquished by:		Date	Time	Received by:
Samples Accepted	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Relinquished by:		Date	Time	Received by:
If Not Why: _____				Relinquished by:		Date	Time	Received by:
AA Project No. <u>AIR5054-39</u>				Relinquished by:		Date	Time	Received by:



**LABORATORY ANALYSIS RESULTS**

**Client:** Thrifty Oil Company  
**Project No.:** N/A  
**Project Name:** SS# 54  
**Sample Matrix:** Vapor  
**Method:** NIOSH 1501 (Benzene)

**AA Project No.:** A135054-38  
**Date Received:** 08/16/96  
**Date Reported:** 09/06/96  
**Units:** ug

AA I.D. No.	Client I.D. No.	Date Sampled	Date Extracted	Date Analyzed	Results	MRL
49000	Effluent	08/15/96	08/19/96	08/19/96	<0.1	0.1
49001	Trip Blank	08/15/96	08/19/96	08/19/96	<0.1	0.1

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

  
George Havalias  
Laboratory Director



3700 Lakeville Highway, Petaluma, CA 94954  
P.O. Box 808024, Petaluma, CA 94975-8024  
Telephone: (707) 763-8245 Fax: (707) 763-4065

### SAMPLING DATA - ANALYSIS REQUEST

PO. NUMBER:
RELEASE NO:
SURVEY NO:

NAME OF COMPANY <b>THRIFTY OIL CO.</b>	SAMPLE COLLECTED BY <b>SERBATA</b>	DATE COLLECTED <b>8-15-1996</b>
MAILING ADDRESS <b>10000 LAKEWOOD Blvd. DOWNEY CA 90240</b>	SPECIAL INSTRUCTIONS	
TELEPHONE NO: <b>(310) 923-9876</b>		

LAB USE ONLY	SAMPLE NUMBER	SAMPLE LOCATION OR DESCRIPTION	VOLUME OF AIR SAMPLED	ANALYZE FOR (GIVE SPECIFIC SUBSTANCES)
49000	1	53054 EFFLUENT	1L	BENZENE
49001	2	53054 TRIP BLANK	1	BENZENE

AUTHORIZED SIGNATURE:

RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE/TIME <b>8-15-96</b> <b>10:30</b>	RECEIVED BY LAB BY: (SIGNATURE)
RELINQUISHED FROM LAB BY: (SIGNATURE) <b>A135074-38</b>	DATE/TIME	RECEIVED BY: (SIGNATURE)



**LABORATORY ANALYSIS RESULTS**

**Client:** Thrifty Oil Company  
**Project No.:** N/A  
**Project Name:** SS# 54  
**Sample Matrix:** Vapor  
**Method:** NIOSH 1501 (Benzene)

**AA Project No.:** A135054-37  
**Date Received:** 08/02/96  
**Date Reported:** 08/08/96  
**Units:** ug

AA I.D. No.	Client I.D. No.	Date Sampled	Date Extracted	Date Analyzed	Results	MRL
48662	Effluent	08/01/96	08/05/96	08/05/96	<0.1	0.1
48663	Trip Blank	08/01/96	08/05/96	08/05/96	<0.1	0.1

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

  
George Havalias  
Laboratory Director



3700 Lakeville Highway, Petaluma, CA 94954  
 P.O. Box 808024, Petaluma, CA 94975-8024  
 Telephone: (707) 763-8245 Fax: (707) 763-4065

**SAMPLING DATA - ANALYSIS REQUEST**

PO. NUMBER:
RELEASE NO:
SURVEY NO:

NAME OF COMPANY <b>THRIFTY OIL CO.</b>	SAMPLE COLLECTED BY <b>SERRANO</b>	DATE COLLECTED <b>8-01-1996</b>
MAILING ADDRESS <b>10000 LAKEWOOD Blvd.          DOWNEY, CA. 90240</b>		SPECIAL INSTRUCTIONS
TELEPHONE NO: <b>(310) 923-9876</b>		

LAB USE ONLY	SAMPLE NUMBER	SAMPLE LOCATION OR DESCRIPTION	VOLUME OF AIR SAMPLED	ANALYZE FOR (GIVE SPECIFIC SUBSTANCES)
48662	1	EFFLUENT #054 13:05	1L	BENZENE
48663	2	TRIP BLANK 30 054	1L	- - -

AUTHORIZED SIGNATURE:

RELINQUISHED BY: (SIGNATURE) 	DATE/TIME <b>8-01-96          PM 13:05</b>	RECEIVED BY LAB BY: (SIGNATURE) 
RELINQUISHED FROM LAB BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)





**LABORATORY ANALYSIS RESULTS**

**Client:** Thrifty Oil Company  
**Project No.:** N/A  
**Project Name:** SS# 54  
**Sample Matrix:** Vapor  
**Method:** NIOSH 1501 (Benzene)

**AA Project No.:** A135054-36  
**Date Received:** 07/19/96  
**Date Reported:** 08/05/96  
**Units:** ug

AA I.D. No.	Client I.D. No.	Date Sampled	Date Extracted	Date Analyzed	Results	MRL
48412	Effluent	07/18/96	07/30/96	07/30/96	<0.1	0.1
48413	Trip Blank	07/18/96	07/30/96	07/30/96	<0.1	0.1

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

  
George Havalias  
Laboratory Director



3700 Lakeville Highway, Petaluma, CA 94954  
 P.O. Box 808024, Petaluma, CA 94975-8024  
 Telephone: (707) 763-8245 Fax: (707) 763-4065

### SAMPLING DATA - ANALYSIS REQUEST

PO. NUMBER:
RELEASE NO:
SURVEY NO:

NAME OF COMPANY <b>THRIFTY OIL CO.</b>	SAMPLE COLLECTED BY <b>SERBAN P.</b>	DATE COLLECTED <b>7-18-1996</b>
MAILING ADDRESS <b>10000 LAKEWOOD Blvd DOWNEY, CA 90240</b>		SPECIAL INSTRUCTIONS
TELEPHONE NO: <b>(360) 923-9876</b>		

LAB USE ONLY	SAMPLE NUMBER	SAMPLE LOCATION OR DESCRIPTION	VOLUME OF AIR SAMPLED	ANALYZE FOR (GIVE SPECIFIC SUBSTANCES)
<b>48412</b>	<b>1</b>	<b>EFFLUENT SS#054</b>	<b>1L</b>	<b>BENZENE</b>
<b>48413</b>	<b>2</b>	<b>TRIP BLANK SS#054</b>	<b>1</b>	<b>BENZENE</b>

AUTHORIZED SIGNATURE:

RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE/TIME <b>7-18-96/9:00</b>	RECEIVED BY LAB BY: (SIGNATURE) <i>[Signature]</i> <b>7-19-96/9:00</b>
RELINQUISHED FROM LAB BY: (SIGNATURE) <b>A135054-36</b>	DATE/TIME	RECEIVED BY: (SIGNATURE)



**LABORATORY ANALYSIS RESULTS**

**Client:** Thrifty Oil Company  
**Project No.:** N/A  
**Project Name:** SS# 54  
**Sample Matrix:** Water  
**Method:** EPA 8015M (Gasoline)

**AA Project No.:** A135054-35  
**Date Received:** 07/19/96  
**Date Reported:** 07/29/96  
**Units:** ug/L

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
48414	Effluent	07/18/96	07/24/96	<50	50
48415	Intermediate	07/18/96	07/24/96	450	50
48416	Influent	07/18/96	07/24/96	2100	50
48417	Trip Blank	07/18/96	07/24/96	<50	50

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# 54  
**Method:** EPA 8015M (Gasoline)  
**Sample ID:** Matrix Spike  
**Concentration:** 500 ug/L

**AA ID No.:** 48414  
**Project No.:** N/A  
**AA Project No.:** A135054-35  
**Date Analyzed:** 07/24/96  
**Date Reported:** 07/29/96

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept.Rec. Range (%)
Gasoline Range Organics	490	98	490	98	0	59 - 149

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



**LABORATORY ANALYSIS RESULTS**

**Client:** Thrifty Oil Company  
**Project No.:** N/A  
**Project Name:** SS# 54  
**Sample Matrix:** Water  
**Method:** EPA 8020 (BTEX)

**AA Project No.:** A135054-35  
**Date Received:** 07/19/96  
**Date Reported:** 07/29/96  
**Units:** ug/L

	07/18/96	07/18/96	07/18/96	07/18/96	
<b>Date Sampled:</b>	07/18/96	07/18/96	07/18/96	07/18/96	
<b>Date Analyzed:</b>	07/24/00	07/24/96	07/24/96	07/24/96	
<b>AA ID No.:</b>	48414	48415	48416	48417	
<b>Client ID No.:</b>	Effluent	Intermediate	Influent	Trip Blank	MRL
<b><u>Compounds:</u></b>					
Benzene	<0.3	<0.3	90	<0.3	0.3
Ethylbenzene	<0.3	<0.3	21	<0.3	0.3
Toluene	<0.3	<0.3	7.3	<0.3	0.3
Xylenes	<0.5	<0.5	46	<0.5	0.5

MRL: Method Reporting Limit

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

**George Havallas**  
**Laboratory Director**



**LABORATORY QA/QC REPORT**

**Client:** Thrifty Oil Company  
**Project Name:** SS# 54  
**Method:** EPA 8020 (BTEX)  
**Sample ID:** Matrix Spike  
**Concentration:** 20 ug/L

**AA ID No.:** 48414  
**Project No.:** N/A  
**AA Project No.:** A135054-35  
**Date Analyzed:** 07/24/96  
**Date Reported:** 07/29/96

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept.Rec. Range (%)
Benzene	22.1	111	22.2	111	0	65 - 135
Ethylbenzene	22.5	113	20.9	105	7	77 - 123
Toluene	22.6	113	22.6	113	0	66 - 134
Xylenes	22.5	113	21.5	108	5	73 - 127

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



# AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311

(818) 998-5547 (818) 998-5548 1-800-533-TEST 1-800-533-8378 FAX (818) 998-7258

DATE: 7-18-96  
PAGE 1 OF 4

AA Client <u>THRIFTY OIL CO.</u>						Phone <u>(310) 923-9876</u>		Sampler's Name <u>SERBAN P</u>		
Project Manager <u>CHRIS PANAITESCU</u>						P.O. No.		Sampler's Signature <u>[Signature]</u>		
Project Name <u>MONTHLY WATER SAMPLING</u>						Project No.		Project Manager's Signature		
Job Name and Address <u>SS # 054</u> <u>2504 CASTRO VALLEY Blvd.</u> <u>CASTRO VALLEY 94546</u>						<b>ANALYSIS REQUIRED</b>				Test Requirements
						Detection Limits				
						Test Name				
						<u>TPH</u> <u>BTEX</u>				
AA ID.#	Client's ID.	Date	Time	Sample Type	Number of Containers					
48414	EFFLUENT	7-18-96	9:30	WATER	2	X	X			
48415	INTERMEDI	↑	9:35	↑	2	X	X			
48416	INFLUENT	↓	9:45	↓	2	X	X			
48417	TRIP BLANK	↓	7:30	↓	2	X	X			
<b>SAMPLE INTEGRITY-TO BE FILLED IN BY RECEIVING LAB</b>						Relinquished by: <u>[Signature]</u>		Date	Time	Received by:
Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						Relinquished by: <u>CA OVERNIGHT</u>		7-18-96	17:00	<u>CA OVERNIGHT</u>
Samples Properly Cooled Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						Relinquished by:		7-18-96	17:00	<u>[Signature]</u> 7/19/96
Samples Accepted Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						Relinquished by:		Date	Time	Received by:
If Not Why: _____						Relinquished by:		Date	Time	Received by:
AA Project No. <u>A135054-35</u>						Relinquished by:		Date	Time	Received by:



LABORATORY ANALYSIS RESULTS

Client: Thrifty Oil Company  
Project No.: N/A  
Project Name: SS# 54  
Sample Matrix: Vapor  
Method: NIOSH 1501 (Benzene)

AA Project No.: A135054-34  
Date Received: 07/03/96  
Date Reported: 07/17/96  
Units: ug

AA I.D. No.	Client I.D. No.	Date Sampled	Date Extracted	Date Analyzed	Results	MRL
47995	Effluent	07/02/96	07/03/96	07/03/96	<0.1	0.1
47996	Trip Blank	07/02/96	07/03/96	07/03/96	<0.1	0.1

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

George Havalias  
Laboratory Director



