

# THRIFTY OIL CO.

November 1, 1999

Mr. Scott O. Seery, CHMM  
Hazardous Material Specialist  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

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RE: **Thrifty Oil Co. #054**  
**2504 Castro Valley Boulevard**  
Castro Valley, CA 94541  
**3rd Quarter 1999, Status Report**

Dear Mr. Seery:

Presented herewith is the Third Quarter 1999, Status Report for Thrifty Oil Co. Station #054 located at 2504 Castro Valley Boulevard, Castro Valley, California.

If you have any questions or comments, regarding this report please contact Raymond C. Friedrichsen or me at (562) 921-3581.

Sincerely,



Chris Panaitescu  
General Manager  
Environmental Affairs

c: File



99 NOV -4 PM 4:28  
ENVIRONMENTAL  
PROTECTION

# THRIFTY OIL CO.

October 29, 1999

Mr. Scott O. Seery, CHMM  
Hazardous Material Specialist  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

RE: **Thrifty Oil Co. Station #054**  
2504 Castro Valley Boulevard  
Castro Valley, CA  
*3rd Quarter 1999, Status Report*

Dear Mr. Seery:

Presented herein is the Third Quarter 1999, Status Report prepared for Thrifty Oil Co. (Thrifty) Station #054 located at 2504 Castro Valley Boulevard, Castro Valley, California (**Figure 1**). ~~Presented in this report are the results of the quarterly groundwater monitoring program conducted on September 8, 1999.~~ Thrifty has retained the services of Earth Management Company (EMC) to conduct quarterly monitoring and sampling activities at this site.

## Groundwater Monitoring

Depth to groundwater is measured in each monitoring well on a quarterly basis. Historic gauging groundwater data obtained from April 11, 1988 through September , 1999 is presented in **Table 1**. In general, groundwater occurs under water table conditions beneath the station at depths ranging from 2.63 feet below ground surface (bgs) in monitoring wells RE-3 to 9.85 feet bgs in monitoring well RS-8, as measured on September 8, 1999. Field monitoring reports are included in **Appendix A**. Groundwater elevation contour map based on the September 8, 1999 data is presented in **Figure 1**. The general direction of groundwater flow beneath the site is to the east at a gradient ranging from 0.05 to 0.08 feet/foot, with localized water table mounding.

## Quarterly Groundwater Sampling

As part of the on-going groundwater monitoring program, groundwater samples were obtained from



monitoring wells PW-1, PW-2, RE-1 through RE-7, and RS-8 through RS-11 on September 8, 1999. Groundwater samples were obtained by EMC and delivered in a chilled state in an ice chest following strict Chain-of-Custody procedures to the state-certified American Analytics laboratory, Chatsworth, California. Water samples were analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tert-butyl ether (MTBE) by EPA method 8020; MTBE was verified by EPA method 8260. Total petroleum hydrocarbons (TPH-g) were analyzed by EPA method 8015 modified for gasoline. Copies of the EMC Field Status Reports are presented in **Appendix A**, and copies of the laboratory analytical reports are contained in **Appendix B**.

TPH-g, benzene, and MTBE concentrations appear in **Table 1** and **Appendix B**. The TPH-g, benzene, and MTBE isoconcentration maps are presented in **Figure 2, 3, and 4**. This quarter, monitoring wells PW-1, RE-6, RS-9, RS-10, and RS-11 met drinking water standards with respect to petroleum hydrocarbon concentrations.

### **Remediation System Operation Status**

The soil and groundwater remediation system was designed and installed by Remediation Services Int'l (RSI) and has been in operation at the site since January 1991. The treatment compound consists of a Ford internal combustion engine, spray aeration tower, two activated-carbon canisters and gauging instruments. The hydrocarbon laden vapors from the extraction wells are burned as fuel by the engine along with additional fuel provided by an existing propane tank. The extracted water is treated by the spray aerator and polished by carbon. The engine is equipped with a catalytic converter for the reduction of exhaust emission.

### **Water**

As of March 15, 1999, the last time the water treatment operated approximately 27,922 gallons of water had been processed by the unit and discharged to the local sanitary sewer. The system was non-operational during the 3rd quarter 1999, because the system's compressor needed repairs or replacement. A summary of the tabulation data for the water treatment system is presently being prepared.

### **Vapor**

Wells RE-1, RE-3, RE-6, and RE-7 are connected to the vapor remediation system. The system was non-operational at various times through the quarter due to system maintenance. The system was maintained by EMC, and the RSI-SAVE unit operated 225 hours, bringing the total of operation hours to 22,513. Field status reports for the vapor monitoring system are located in **Appendix A**. The system vapor analytical reports are presented in **Appendix C**. **Table 2** is a summary of the vapor extraction operating data. **Table 3** presents the laboratory analytical results of inlet vapor samples.

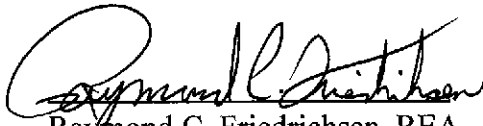
Starting 3rd Quarter 1999, Thrifty collected vapor sampling from the well head of each of the vapor wells connected to the system (RE-1, RE-3, RE-6, and RE-7). These vapor samples have been analyzed by a state certified laboratory for Total Petroleum Hydrocarbons (TPH-g) by EPA method 8015, volatile organic hydrocarbons (BTEX and MTBE) by EPA method 8020. The vapor analytical results for each well-head is presented in **Appendix D**.

**Other Activities**

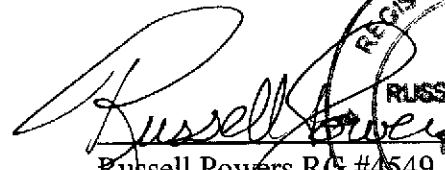
Groundwater monitoring, gauging, and sampling at this site will continue on a quarterly basis.

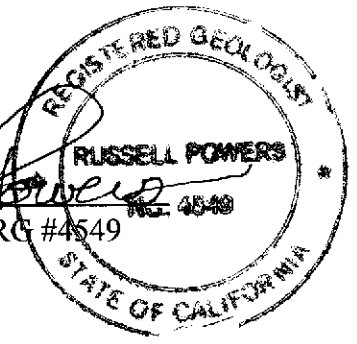
Thrifty will continue to monitoring and report the status of the vapor extraction and groundwater treatment system (SAVE-RSI).

Written by:

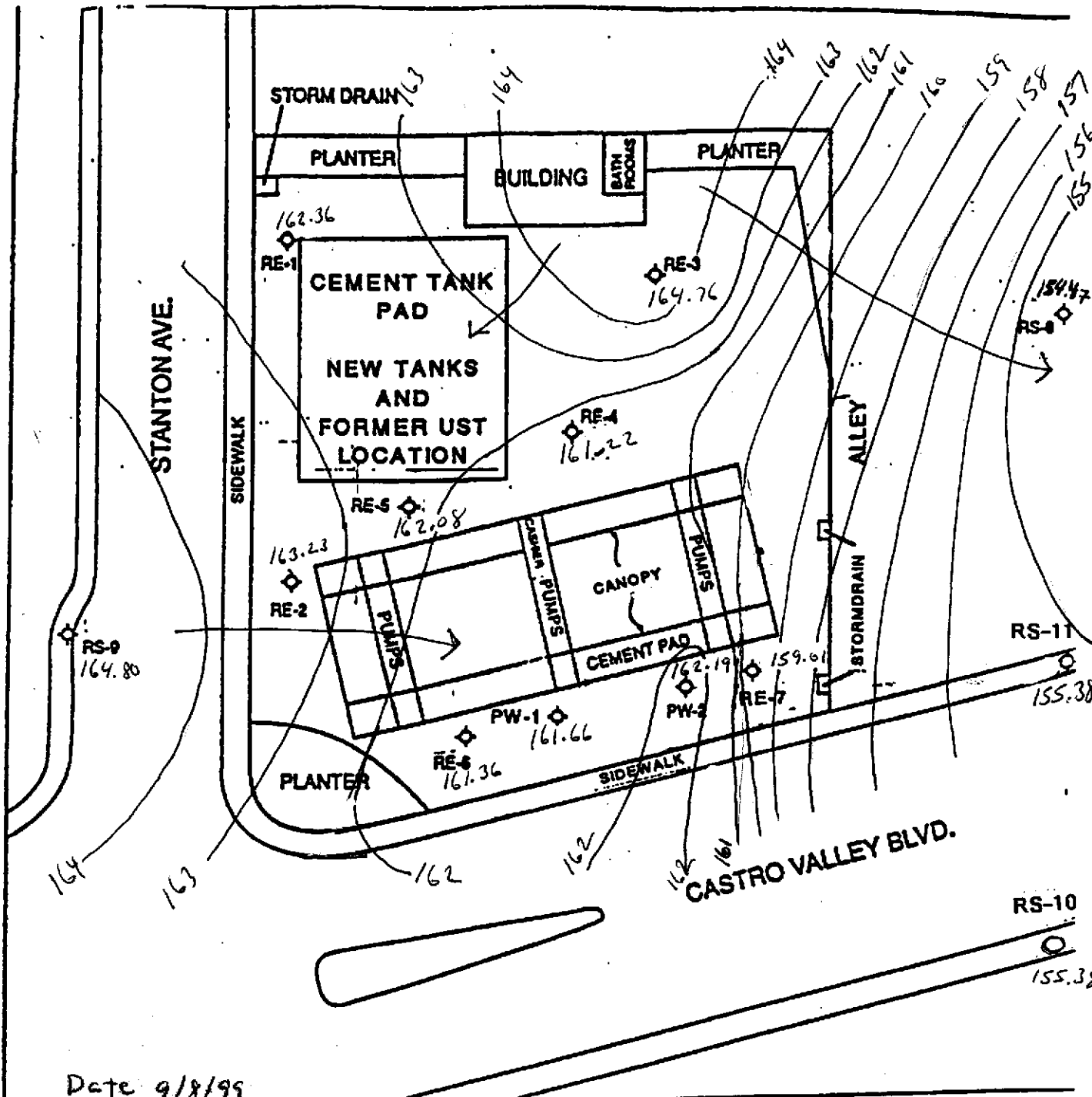
  
Raymond C. Friedrichsen, REA  
Project Manager  
Hydrogeologist

Reviewed by:

  
Russell Powers RG #4549  
Geologist



# FIGURES



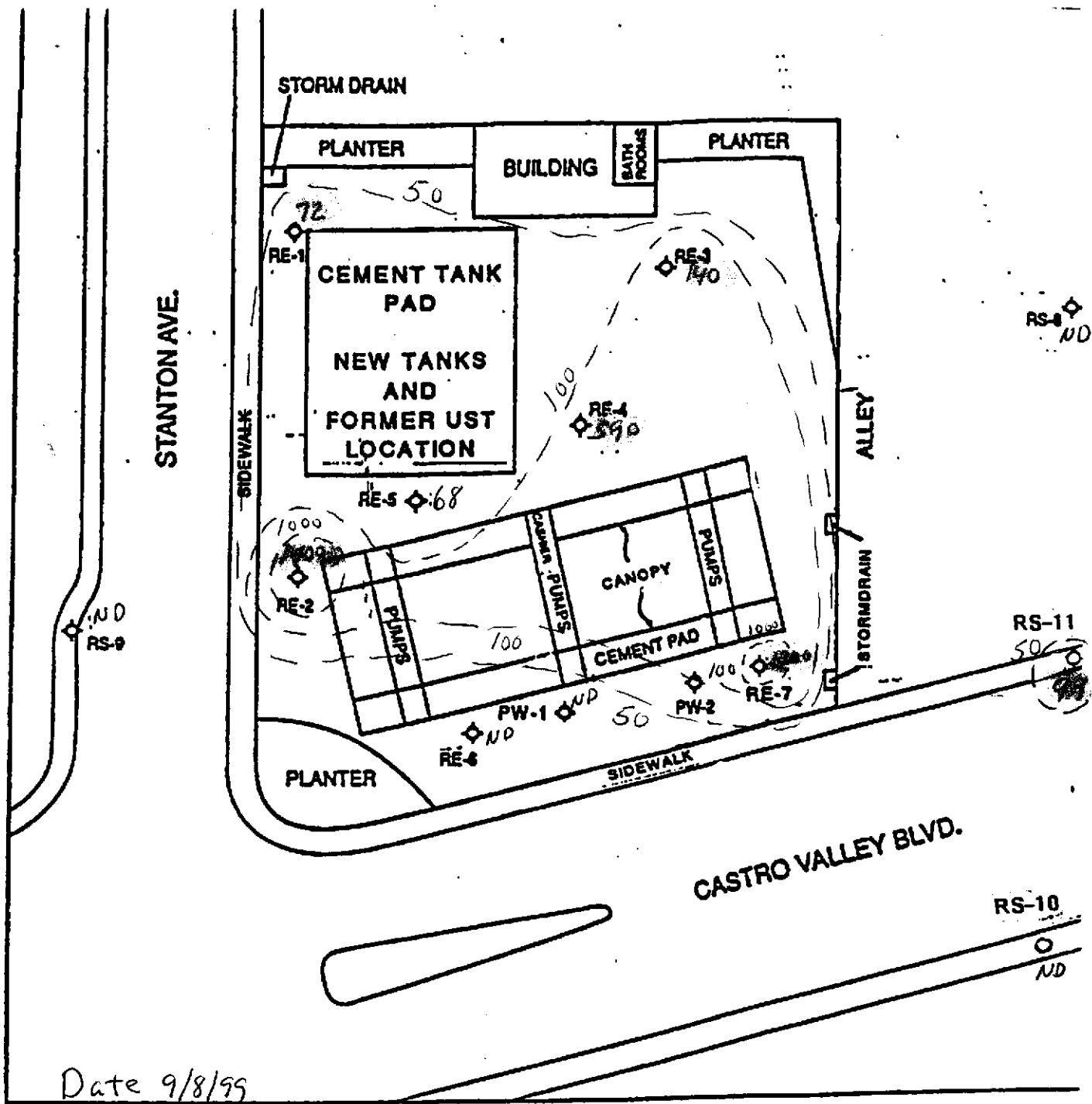
Date 9/8/99

**GROUNDWATER CONTOUR MAP**  
**THRIFTY OIL CO. #054**  
**CASTRO VALLEY, CALIFORNIA**  
 Prepared for  
**THRIFTY OIL CO.**  
**SANTA FE, SPRINGS**  
**CALIFORNIA**



◊ EXISTING MONITORING WELL

**FIGURE 1**



Date 9/8/99

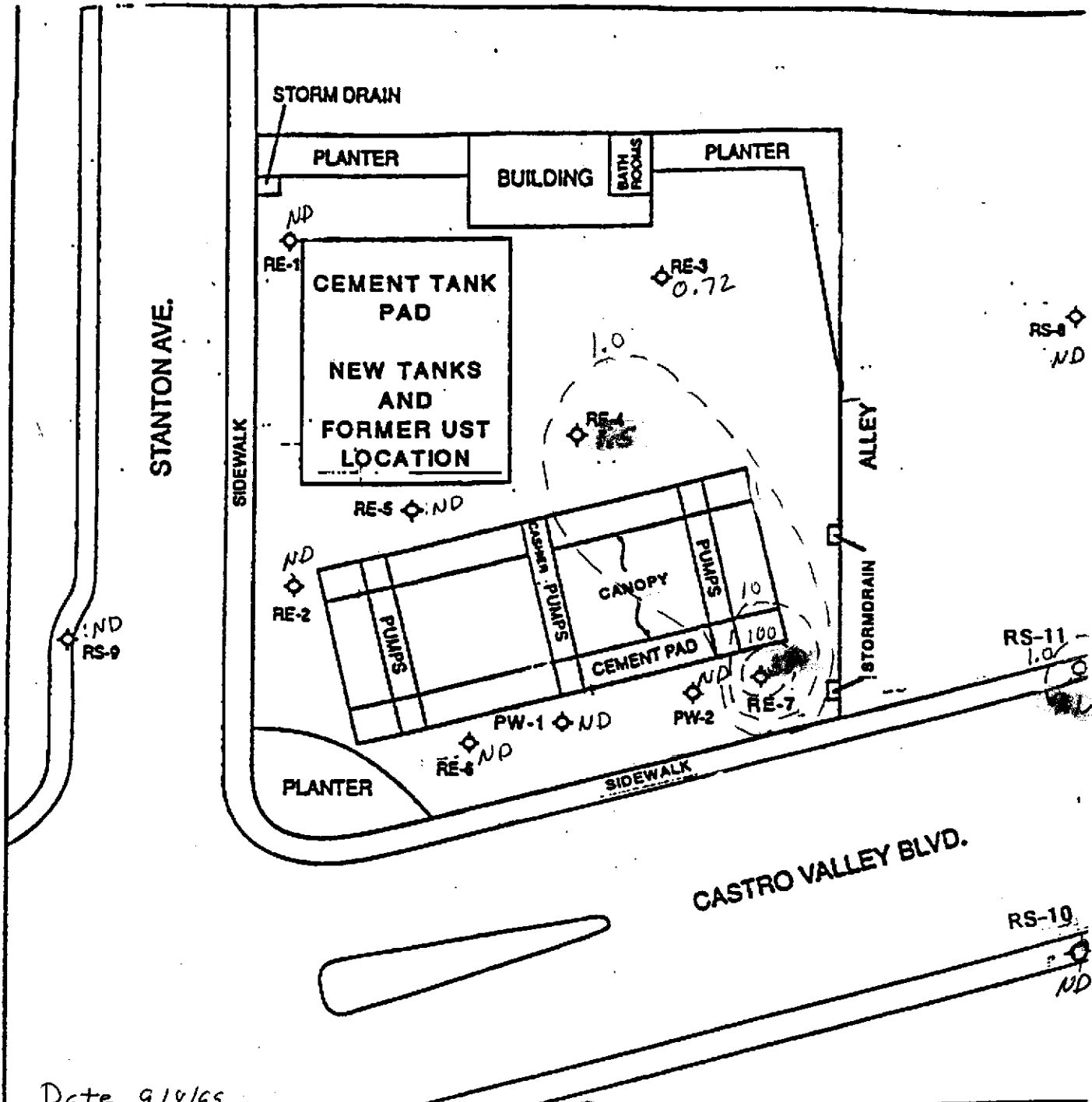
**GROUNDWATER ISOCONCENTRATION MAP**

THRIFTY OIL CO. #054  
 CASTRO VALLEY, CALIFORNIA  
 Prepared for  
 THRIFTY OIL CO.  
 SANTA FE, SPRINGS  
 CALIFORNIA



◊ EXISTING MONITORING WELL

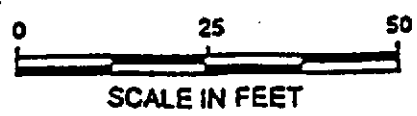
FIGURE 2



Date 9/8/99

**BENZENE ISOCONCENTRATION MAP PPB**

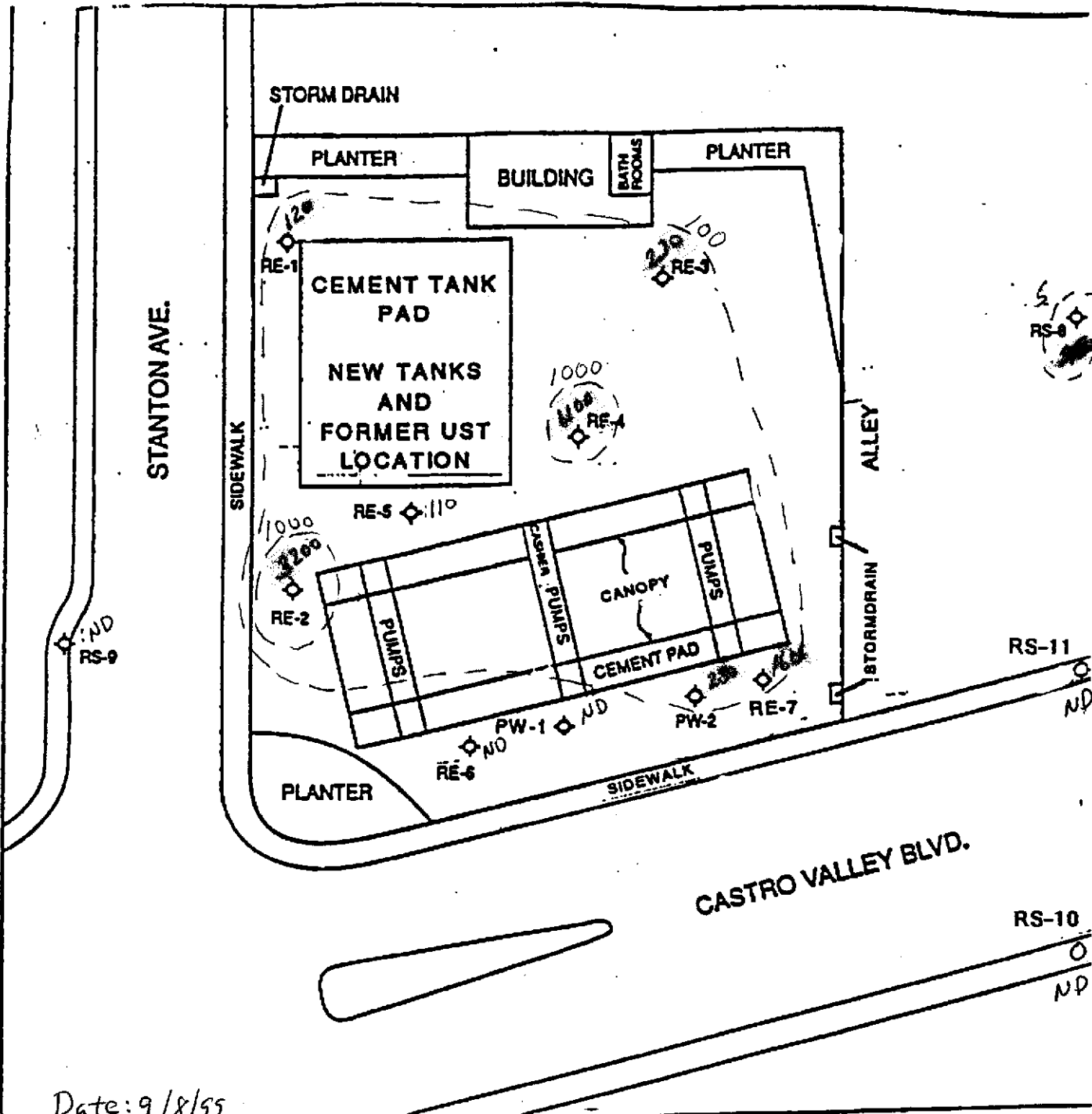
THRIFTY OIL CO. #054  
 CASTRO VALLEY, CALIFORNIA  
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◊ EXISTING MONITORING WELL

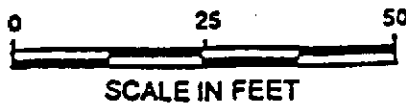
FIGURE 3





Date: 9/8/99

**MTBE ISOCONCENTRATION MAP ug/L**  
**THRIFTY OIL CO. #054**  
**CASTRO VALLEY, CALIFORNIA**  
 Prepared for  
**THRIFTY OIL CO.**  
**SANTA FE, SPRINGS**  
**CALIFORNIA**



◇ EXISTING MONITORING WELL

**FIGURE 4**

# TABLES

**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #054, CASTRO VALLEY, CA.**

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MTBE (ug/L)					
<b>MONITORING WELL #PW-1</b>											
04/11/88	-	-	-	-	-	-	-	-	-	-	-
04/09/90	230,000	600	2,700	1,000	16,000	-	5.10	NP	0.00	166.46	161.36
10/30/90	35,000	240	970	240	3,580	-	6.17	NP	0.00	166.46	160.29
01/18/91	37,000	43	140	42	1,600	-	6.28	NP	0.00	166.46	160.18
02/12/91	45,000	99	130	25	700	-	5.88	NP	0.00	166.46	160.58
03/20/91	1,900	0.43	ND	ND	2.8	-	4.75	NP	0.00	166.46	161.71
05/22/91	41,000	600	730	250	3,800	-	5.10	NP	0.00	166.46	161.36
06/19/91	-	-	-	-	-	-	5.61	NP	0.00	166.46	160.85
07/17/91	-	-	-	-	-	-	5.53	FILM	0.00	166.46	160.93
08/07/91	-	-	-	-	-	-	5.67	FILM	0.00	166.46	160.79
09/24/91	-	-	-	-	-	-	5.57	FILM	0.00	166.46	160.89
10/23/91	-	-	-	-	-	-	6.53	FILM	0.00	166.46	159.93
11/06/91	-	-	-	-	-	-	5.85	FILM	0.00	166.46	160.61
12/04/91	-	-	-	-	-	-	5.91	FILM	0.00	166.46	160.55
01/29/92	-	-	-	-	-	-	5.43	FILM	0.00	166.46	161.03
02/26/92	-	-	-	-	-	-	5.54	FILM	0.00	166.46	160.92
03/19/92	ND	ND	ND	ND	ND	-	5.47	NP	0.00	166.46	160.99
04/22/92	-	-	-	-	-	-	5.62	FILM	0.00	166.46	160.84
05/21/92	1,300	19	2.9	0.7	58	-	6.21	NP	0.00	166.46	160.25
06/25/92	-	-	-	-	-	-	6.94	NP	0.00	166.46	159.52
07/30/92	-	-	-	-	-	-	5.90	FILM	0.00	166.46	160.56
08/20/92	-	-	-	-	-	-	7.12	FILM	0.00	166.46	159.34
09/30/92	3,400	57	ND	26	240	-	6.42	NP	0.00	166.46	160.04
12/23/92	-	-	-	-	-	-	5.56	FILM	0.00	166.46	160.90
03/10/93	-	-	-	-	-	-	5.65	FILM	0.00	166.46	160.81
06/09/93	400	<0.5	1.1	<1.0	<1.0	-	5.30	NP	0.00	166.46	161.16
09/14/93	180	3.7	3.2	1.5	14	-	5.43	NP	0.00	166.46	161.03
12/14/93	<50	<0.3	<0.3	<0.3	<0.5	-	4.65	NP	0.00	166.46	161.81
03/02/94	<50	<0.3	<0.3	<0.3	<0.5	-	5.43	NP	0.00	166.46	161.03
06/06/94	330	1.3	<0.3	0.88	9.8	-	4.70	NP	0.00	166.46	161.76
09/06/94	1,100	67	<0.3	<0.3	24	-	6.48	NP	0.00	166.46	159.98
12/07/94	<50	<0.3	<0.3	<0.5	<0.5	-	5.22	NP	0.00	166.46	161.24
03/08/95	<100	<0.5	<0.5	<0.5	<1	-	6.94	NP	0.00	166.46	159.52
06/15/95	260	0.8	0.6	<0.5	3.2	-	5.72	NP	0.00	166.46	160.74



**TABLE 1**  
**GROUNDWATER DATA**  
**THRIFTY OIL STATION #054, CASTRO VALLEY, CA.**

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	API (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MIBK (ug/L)					
02/26/92	-	-	-	-	-	-	5.90	FILM	0.00	166.18	160.28
03/19/92	-	-	-	-	-	-	5.80	FILM	0.00	166.18	160.38
04/22/92	-	-	-	-	-	-	5.88	FILM	0.00	166.18	160.30
05/21/92	-	-	-	-	-	-	6.03	FILM	0.00	166.18	160.15
06/25/92	-	-	-	-	-	-	6.57	FILM	0.00	166.18	159.61
07/30/92	-	-	-	-	-	-	6.20	FILM	0.00	166.18	159.98
08/20/92	-	-	-	-	-	-	6.64	FILM	0.00	166.18	159.54
09/30/92	-	-	-	-	-	-	6.88	FILM	0.00	166.18	159.30
12/23/92	-	-	-	-	-	-	6.08	FILM	0.00	166.18	160.10
03/10/93	-	-	-	-	-	-	5.95	FILM	0.00	166.18	160.23
06/09/93	3,400	24	22	<0.5	240	-	5.38	NP	0.00	166.18	160.80
09/14/93	4,900	190	15	6.8	480	-	6.26	NP	0.00	166.18	159.92
12/14/93	1,700	4.2	<0.3	<0.3	<0.5	-	5.22	NP	0.00	166.18	160.96
03/02/94	-	-	-	-	-	-	5.75	FILM	0.00	166.18	160.43
06/06/94	980	25	1.2	<0.3	42	-	5.25	NP	0.00	166.18	160.93
09/06/94	3,200	95	3.0	<1.7	76	-	6.80	NP	0.00	166.18	159.38
12/07/94	510	1.8	<0.3	<0.5	1.7	-	5.57	NP	0.00	166.18	160.61
03/08/95	1,900	<0.5	<0.5	1.4	35	-	4.10	NP	0.00	166.18	162.08
06/15/95	1,700	5.6	<0.5	<0.5	1.6	-	5.44	NP	0.00	166.18	160.74
09/05/95	2,500	33	1.0	0.86	18	-	6.13	NP	0.00	166.18	160.05
11/21/95	2,800	130	59	18	190	-	6.23	NP	0.00	166.18	159.95
03/11/96	13,000	330	460	<15	3,800	-	4.48	NP	0.00	166.18	161.70
06/19/96	1,400	<0.3	<0.3	<0.3	<0.5	-	5.38	NP	0.00	166.18	160.80
09/16/96	3,500	<0.3	<0.3	<0.3	<0.5	5,900	5.21	NP	0.00	166.18	160.97
12/10/96	2,100	<0.3	<0.3	<0.3	<0.5	4,700	4.87	NP	0.00	166.18	161.31
03/12/97	600	1.6	<0.3	<0.3	5.8	1,100	4.43	NP	0.00	166.18	161.75
06/12/97	270	<0.3	<0.3	<0.3	<0.5	630	-	-	-	-	-
09/10/97	220	<0.3	<0.3	<0.3	<0.5	320	4.07	NP	0.00	166.18	162.11
12/09/97	120	<0.3	0.73	<0.3	<0.5	420	5.20	NP	0.00	166.18	160.98
03/03/98	<50	0.43	0.48	<0.3	<0.5	47	3.30	NP	0.00	166.18	162.88
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	-	-	-	-	-
09/10/98	<50	<0.3	<0.3	<0.3	<0.5	<5	5.15	NP	0.00	166.18	161.03
12/30/98	<50	1.1	<0.3	<0.3	<0.5	<5	4.75	NP	0.00	166.18	161.43

**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #054, CASTRO VALLEY, CA.**

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MTBE (ug/L)					
03/15/99	<50	<0.3	<0.3	<0.3	<0.5	<5	4.40	NP	0.00	166.18	161.78
06/22/99	-	-	-	-	-	-	4.50	NP	0.00	166.18	161.68
09/08/99	100	<0.3	<0.3	<0.3	<0.5	230	3.99	NP	0.00	166.18	162.19
<b>MONITORING WELL #RE-1</b>											
04/11/88	37,000	1,900	8,400	1,200	15,000	-	-	-	-	-	-
04/09/90	45,000	6,100	7,000	2,000	8,800	-	4.99	NP	0.00	166.82	161.83
10/30/90	72,000	7,700	5,300	1,800	8,900	-	5.95	NP	0.00	166.82	160.87
01/18/91	150,000	11,000	14,000	1,800	4,300	-	5.17	NP	0.00	166.82	161.65
02/12/91	140,000	11,000	12,000	1,600	13,000	-	4.16	NP	0.00	166.82	162.66
03/20/91	53,000	3,100	4,200	400	5,500	-	4.75	NP	0.00	166.82	162.07
05/22/91	85,000	8,700	10,000	1,800	12,000	-	4.42	NP	0.00	166.82	162.40
06/19/91	110,000	8,500	9,600	2,600	16,000	-	4.93	NP	0.00	166.82	161.89
07/17/91	5,500	950	ND	26	ND	-	5.19	NP	0.00	166.82	161.63
08/07/91	-	6,700	5,000	ND	7,100	-	5.12	NP	0.00	166.82	161.70
09/24/91	60,000	6,800	4,300	640	6,900	-	5.87	NP	0.00	166.82	160.95
10/23/91	79,000	7,900	8,300	450	7,100	-	5.81	NP	0.00	166.82	161.01
11/06/91	130,000	14,000	15,000	1,100	8,800	-	5.56	NP	0.00	166.82	161.26
12/04/91	50,000	8,000	4,700	520	4,100	-	5.35	NP	0.00	166.82	161.47
01/29/92	21,000	10,300	11,000	780	6,000	-	4.50	NP	0.00	166.82	162.32
02/26/92	38,000	8,400	10,500	720	7,100	-	5.27	NP	0.00	166.82	161.55
03/19/92	48,000	6,200	9,700	780	7,200	-	4.47	NP	0.00	166.82	162.35
04/22/92	-	-	-	-	-	-	4.62	NP	0.00	166.82	162.20
05/21/92	20,000	7,600	10,100	830	6,900	-	4.98	NP	0.00	166.82	161.84
06/25/92	-	-	-	-	-	-	5.14	FILM	0.00	166.82	161.68
07/30/92	-	-	-	-	-	-	5.30	FILM	0.00	166.82	161.52
08/20/92	-	-	-	-	-	-	5.28	FILM	0.00	166.82	161.54
09/30/92	-	-	-	-	-	-	5.66	FILM	0.00	166.82	161.16
12/23/92	-	-	-	-	-	-	4.81	FILM	0.00	166.82	162.01
03/10/93	-	-	-	-	-	-	4.13	FILM	0.00	166.82	162.69
06/09/93	-	-	-	-	-	-	4.48	FILM	0.00	166.82	162.34
09/14/93	19,000	3,600	1,100	740	4,300	-	5.35	NP	0.00	166.82	161.47
12/14/93	38,000	4,300	1,300	<6.6	11	-	4.38	NP	0.00	166.82	162.44
03/02/94	-	-	-	-	-	-	4.22	FILM	0.00	166.82	162.60

**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #054, CASTRO VALLEY, CA.**

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	Edy/Benzene (ug/L)	XYLENE (ug/L)	MTBE (ug/L)					
06/06/94	-	-	-	-	-	-	2.16	FILM	0.00	166.82	164.66
09/06/94	74,000	3,300	3,900	1,200	6,100	-	5.00	NP	0.00	166.82	161.82
12/07/94	30,000	3,200	2,900	1,200	4,600	-	4.10	NP	0.00	166.82	162.72
03/08/95	28,000	4,200	2,300	810	7,800	-	3.92	NP	0.00	166.82	162.90
06/15/95	-	-	-	-	-	-	-	-	-	-	-
09/05/95	-	-	-	-	-	-	4.78	FILM	0.00	166.82	162.04
11/21/95	-	-	-	-	-	-	4.82	NP	0.00	166.82	162.00
03/11/96	270	2.4	6.0	4.5	19	-	3.32	NP	0.00	166.82	163.50
06/19/96	3,000	570	63	<1.5	400	-	4.20	NP	0.00	166.82	162.62
09/16/96	7,700	440	69	<1.5	680	230	4.68	NP	0.00	166.82	162.14
12/10/96	52	<0.3	<0.3	<0.3	<0.5	120	4.93	NP	0.00	166.82	161.89
03/12/97	8,700	180	5.4	40	1,100	130	4.10	NP	0.00	166.82	162.72
06/12/97	<50	<0.3	<0.3	<0.3	<0.5	36	-	-	-	-	-
09/16/97	<50	<0.3	<0.3	<0.3	<0.5	<20	4.55	NP	0.00	166.82	162.27
12/09/97	<50	<0.3	0.44	<0.3	<0.5	<20	5.30	NP	0.00	166.82	161.52
03/03/98	1,100	13	0.51	<0.3	<0.5	220	4.55	NP	0.00	166.82	162.27
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	-	-	-	-	-
09/10/98	60	<0.3	<0.3	<0.3	<0.5	180	6.05	NP	0.00	166.82	160.77
12/30/98	<50	1.1	<0.3	<0.3	<0.5	<5	5.65	NP	0.00	166.82	161.17
03/15/99	<50	<0.3	<0.3	<0.3	<0.5	<5	5.68	NP	0.00	166.82	161.14
06/22/99	880	14	0.98	<0.3	8.1	260	4.95	NP	0.00	166.82	161.87
09/08/99	72	<0.3	<0.3	<0.3	<0.5	120	4.46	NP	0.00	166.82	162.36
<b>MONITORING WELL #RC-2</b>											
04/11/88	-	-	-	-	-	-	-	-	-	-	-
04/09/90	850	5.8	0.5	4.8	1.1	-	4.90	NP	0.00	167.19	162.29
10/30/90	440	2.8	0.91	13	3.14	-	5.34	NP	0.00	167.19	161.85
01/18/91	1,100	8.4	3.1	ND	10	-	4.90	NP	0.00	167.19	162.29
02/12/91	1,100	5.9	ND	1.77	ND	-	4.94	NP	0.00	167.19	162.25
03/20/91	550	4.3	ND	ND	ND	-	4.32	NP	0.00	167.19	162.87
05/22/91	1,000	5.3	3.6	4.4	8.9	-	4.43	NP	0.00	167.19	162.76
06/19/91	700	2.1	1.4	3.8	3.5	-	6.43	NP	0.00	167.19	160.76
07/17/91	880	12	8.0	4.3	28	-	4.75	NP	0.00	167.19	162.44
08/07/91	-	3.8	1.6	ND	ND	-	4.87	NP	0.00	167.19	162.32

**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #054, CASTRO VALLEY, CA.**

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	LEAD (ppb)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MIBK (ug/L)					
09/24/91	670	7.2	7.1	ND	23	-	5.50	NP	0.00	167.19	161.69
10/23/91	2,700	52	60	22	130	-	5.63	NP	0.00	167.19	161.56
11/06/91	1,900	18	61	9.1	83	-	5.14	NP	0.00	167.19	162.05
12/04/91	1,100	26	47	4.3	42	-	5.26	NP	0.00	167.19	161.93
01/29/92	900	14	24	5.3	19	-	5.11	NP	0.00	167.19	162.08
02/26/92	500	3.4	3.5	2.7	2.7	-	4.31	NP	0.00	167.19	162.88
03/19/92	1,200	14	20	15	18	-	4.45	NP	0.00	167.19	162.74
04/22/92	200	ND	ND	ND	ND	-	4.78	NP	0.00	167.19	162.41
05/21/92	500	7.5	6.8	3.9	7.4	-	5.02	NP	0.00	167.19	162.17
06/25/92	ND	ND	0.9	0.7	ND	-	5.13	NP	0.00	167.19	162.06
07/30/92	500	7.7	8.6	3.2	1.7	-	5.19	NP	0.00	167.19	162.00
08/20/92	1,100	6.6	4.5	2.7	2.0	-	5.27	NP	0.00	167.19	161.92
09/30/92	500	5.4	2.4	1.8	4.5	-	5.45	NP	0.00	167.19	161.74
12/23/92	800	1.9	ND	ND	2.3	-	4.60	NP	0.00	167.19	162.59
03/10/93	1,200	ND	1.4	ND	2.1	-	4.18	NP	0.00	167.19	163.01
06/09/93	200	ND	ND	ND	ND	-	4.53	NP	0.00	167.19	162.66
09/17/93	360	1.6	1.1	3.2	8.9	-	5.26	NP	0.00	167.19	161.93
12/14/93	260	5.6	3.9	<0.3	21.0	-	2.75	NP	0.00	167.19	164.44
03/02/94	410	<0.3	<0.3	<0.3	<0.5	-	4.27	NP	0.00	167.19	162.92
06/06/94	760	4.6	<0.3	0.32	1.3	-	4.88	NP	0.00	167.19	162.31
09/06/94	1,300	43	45	8.9	69	-	5.16	NP	0.00	167.19	162.03
12/07/94	-	-	-	-	-	-	4.16	NP	0.00	167.19	163.03
03/08/95	<100	<0.5	<0.5	<0.5	<1	-	3.96	NP	0.00	167.19	163.23
06/15/95	130	<0.5	<0.5	<0.5	<1	-	4.52	NP	0.00	167.19	162.67
09/05/95	210	<0.5	<0.5	<0.5	<1	-	4.76	NP	0.00	167.19	162.43
11/21/95	160	0.65	<0.3	0.35	0.95	-	4.83	NP	0.00	167.19	162.36
03/11/96	<50	<0.3	<0.3	<0.3	<0.5	-	3.36	NP	0.00	167.19	163.83
06/19/96	<50	<0.3	<0.3	<0.3	<0.5	-	4.68	NP	0.00	167.19	162.51
09/16/96	<50	<0.3	<0.3	<0.3	<0.5	<20	5.10	NP	0.00	167.19	162.09
12/10/96	<50	<0.3	<0.3	<0.3	<0.5	<20	4.47	NP	0.00	167.19	162.72
03/12/97	<50	<0.3	<0.3	<0.3	<0.5	<20	4.05	NP	0.00	167.19	163.14
06/12/97	<50	<0.3	<0.3	<0.3	<0.5	<20	-	-	-	-	-
09/10/97	<50	<0.3	<0.3	<0.3	<0.5	<20	4.08	NP	0.00	167.19	163.11
12/09/97	<50	<0.3	<0.3	<0.3	<0.5	<20	4.40	NP	0.00	167.19	162.79
03/03/98	<50	<0.3	<0.3	<0.3	<0.5	<20	3.30	NP	0.00	167.19	163.89



**TABLE 1**  
**GROUNDWATER DATA**  
**THRIFTY OIL STATION #054, CASTRO VALLEY, CA.**

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYLBENZENE (ug/L)	XYLENE (ug/L)	HEXANE (ug/L)					
07/08/98	< 50	< 0.3	< 0.3	< 0.3	< 0.5	15	-	-	-	-	-
09/10/98	< 50	< 0.3	< 0.3	< 0.3	< 0.5	< 5	4.93	NP	0.00	167.19	162.26
12/30/98	460	0.92	< 0.3	< 0.3	< 0.5	ND	4.20	NP	0.00	167.19	162.99
03/15/99	< 50	< 0.3	< 0.3	< 0.3	< 0.5	< 5	4.20	NP	0.00	167.19	162.99
06/22/99	2,900	7.4	< 0.3	0.43	4.1	ND	3.70	NP	0.00	167.19	163.49
09/08/99	1,400	< 3	< 3	< 3	< 5	ND	3.96	NP	0.00	167.19	163.23
<b>MONITORING WELL #RE-3</b>											
04/11/88	70,000	6,600	5,300	800	13,000	-	-	-	-	-	-
04/09/90	370,000	2,300	4,900	3,200	31,000	-	7.15	NP	0.00	167.39	160.24
10/30/90	13,000	860	660	220	2,210	-	7.84	NP	0.00	167.39	159.55
01/18/91	42,000	4,700	4,500	21	7,700	-	6.90	NP	0.00	167.39	160.49
02/12/91	72,000	3,600	4,500	ND	7,600	-	6.62	NP	0.00	167.39	160.77
03/20/91	65,000	2,400	9,400	50	9,800	-	5.87	NP	0.00	167.39	161.52
05/22/91	-	-	-	-	-	-	5.98	FILM	0.00	167.39	161.41
06/19/91	-	-	-	-	-	-	6.84	FILM	0.00	167.39	160.55
07/17/91	-	-	-	-	-	-	7.10	FILM	0.00	167.39	160.29
08/07/91	-	-	-	-	-	-	7.30	FILM	0.00	167.39	160.09
09/24/91	-	-	-	-	-	-	7.84	FILM	0.00	167.39	159.55
10/23/91	-	-	-	-	-	-	8.07	FILM	0.00	167.39	159.32
11/06/91	-	-	-	-	-	-	7.63	FILM	0.00	167.39	159.76
12/04/91	-	-	-	-	-	-	7.83	FILM	0.00	167.39	159.56
01/29/92	-	-	-	-	-	-	7.17	FILM	0.00	167.39	160.22
02/26/92	-	-	-	-	-	-	5.56	FILM	0.00	167.39	161.83
03/19/92	-	-	-	-	-	-	5.44	FILM	0.00	167.39	161.95
04/22/92	-	-	-	-	-	-	6.56	FILM	0.00	167.39	160.83
05/21/92	-	-	-	-	-	-	6.90	FILM	0.00	167.39	160.49
06/25/92	-	-	-	-	-	-	7.18	FILM	0.00	167.39	160.21
07/30/92	-	-	-	-	-	-	6.80	FILM	0.00	167.39	160.59
08/20/92	-	-	-	-	-	-	7.25	FILM	0.00	167.39	160.14
09/30/92	-	-	-	-	-	-	7.68	FILM	0.00	167.39	159.71
12/23/92	-	-	-	-	-	-	6.07	FILM	0.00	167.39	161.32
03/10/93	-	-	-	-	-	-	5.66	FILM	0.00	167.39	161.73
06/09/93	-	-	-	-	-	-	6.66	FILM	0.00	167.39	160.73

**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #054, CASTRO VALLEY, CA.**

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	API (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	Other (ug/L)					
09/14/93	40,000	2,900	1,500	180	6,900	-	7.30	NP	0.00	167.39	160.09
12/14/93	-	-	-	-	-	-	5.95	NP	0.00	167.39	161.44
03/02/94	-	-	-	-	-	-	5.08	NP	0.00	167.39	162.31
06/06/94	-	-	-	-	-	-	6.35	FILM	0.00	167.39	161.04
09/06/94	11,000	260	26	<6.6	1,000	-	7.50	NP	0.00	167.39	159.89
12/07/94	-	-	-	-	-	-	5.48	FILM	0.00	167.39	161.91
03/08/95	-	-	-	-	-	-	5.18	FILM	0.00	167.39	162.21
06/15/95	-	-	-	-	-	-	-	-	-	-	-
09/05/95	-	-	-	-	-	-	6.84	FILM	0.00	167.39	160.55
11/21/95	10,000	210	<3	4.5	330	-	7.38	NP	0.00	167.39	160.01
03/11/96	1,600	640	15	10	46	-	4.85	NP	0.00	167.39	162.54
06/19/96	2,100	280	<3	<3	120	-	5.80	NP	0.00	167.39	161.59
09/16/96	140	<0.3	<0.3	<0.3	<0.5	110	4.50	NP	0.00	167.39	162.89
12/10/96	<50	<0.3	<0.3	<0.3	<0.5	<20	5.35	NP	0.00	167.39	162.04
03/12/97	<50	<0.3	<0.3	<0.3	<0.5	<20	3.48	NP	0.00	167.39	163.91
06/12/97	<50	<0.3	<0.3	<0.3	0.58	<20	-	-	-	-	-
09/10/97	<50	<0.3	<0.3	<0.3	<0.5	<20	3.10	NP	0.00	167.39	164.29
12/09/97	3,600	1,000	1,000	<6	570	260	4.55	NP	0.00	167.39	162.84
03/03/98	2,800	20	0.65	0.39	16	-	2.30	NP	0.00	167.39	165.09
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	-	-	-	-	-
09/10/98	<50	<0.3	<0.3	<0.3	<0.5	23	4.95	NP	0.00	167.39	162.44
12/30/98	<50	1.1	<0.3	<0.3	<0.5	<5	4.55	NP	0.00	167.39	162.84
03/15/99	<50	<0.3	<0.3	<0.3	<0.5	<5	4.15	NP	0.00	167.39	163.24
06/22/99	670	17	1.2	0.36	1.7	340	3.85	NP	0.00	167.39	163.54
09/08/99	140	0.72	<0.3	<0.3	<0.5	230	2.63	NP	0.00	167.39	164.76
<b>MONITORING WELL #054</b>											
04/11/88	15,000	12,000	8,000	1,000	2,700	-	-	-	-	-	-
04/09/90	-	-	-	-	-	-	-	-	-	-	-
10/30/90	87,000	7,200	10,000	1,600	12,900	-	7.04	NP	0.00	166.94	159.90
01/18/91	70,000	5,000	5,400	790	9,900	-	11.62	NP	0.00	166.94	155.32
02/12/91	87,000	5,200	2,800	240	11,000	-	11.63	NP	0.00	166.94	155.31
03/20/91	6,500	370	230	17	670	-	11.61	NP	0.00	166.94	155.33
05/22/91	-	-	-	-	-	-	10.30	FILM	0.00	166.94	156.64

**TABLE 1**  
**GROUNDWATER DATA**  
**THRIFTY OIL STATION #054, CASTRO VALLEY, CA.**

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	Ethylbenzene (ug/L)	XYLENE (ug/L)	MIBE (ug/L)					
06/19/91	-	-	-	-	-	-	11.10	FILM	0.00	166.94	155.84
07/17/91	-	-	-	-	-	-	6.20	FILM	0.00	166.94	160.74
08/17/91	-	-	-	-	-	-	8.15	FILM	0.00	166.94	158.79
09/24/91	-	-	-	-	-	-	10.40	FILM	0.00	166.94	156.54
10/23/91	-	-	-	-	-	-	11.20	FILM	0.00	166.94	155.74
11/06/91	-	-	-	-	-	-	6.62	FILM	0.00	166.94	160.32
12/04/91	-	-	-	-	-	-	11.20	ILM	0.00	166.94	155.74
01/29/92	-	-	-	-	-	-	7.72	FILM	0.00	166.94	159.22
02/26/92	-	-	-	-	-	-	5.13	FILM	0.00	166.94	161.81
03/19/92	-	-	-	-	-	-	5.00	FILM	0.00	166.94	161.94
04/22/92	-	-	-	-	-	-	5.94	FILM	0.00	166.94	161.00
05/21/92	-	-	-	-	-	-	5.40	FILM	0.00	166.94	161.54
06/25/92	-	-	-	-	-	-	5.71	FILM	0.00	166.94	161.23
07/30/92	-	-	-	-	-	-	6.33	FILM	0.00	166.94	160.61
08/20/92	-	-	-	-	-	-	5.80	FILM	0.00	166.94	161.14
09/30/92	-	-	-	-	-	-	6.34	FILM	0.00	166.94	160.60
12/23/92	-	-	-	-	-	-	5.50	FILM	0.00	166.94	161.44
03/10/93	-	-	-	-	-	-	4.67	FILM	0.00	166.94	162.27
06/09/93	-	-	-	-	-	-	5.12	FILM	0.00	166.94	161.82
09/14/93	-	-	-	-	-	-	10.44	NP	0.00	166.94	156.50
12/14/93	-	-	-	-	-	-	7.52	NP	0.00	166.94	159.42
03/02/94	-	-	-	-	-	-	4.85	NP	0.00	166.94	162.09
06/06/94	-	-	-	-	-	-	5.20	FILM	0.00	166.94	161.74
09/06/94	-	-	-	-	-	-	9.85	FILM	0.00	166.94	157.09
12/07/94	-	-	-	-	-	-	5.20	FILM	0.00	166.94	161.74
03/08/95	-	-	-	-	-	-	4.98	FILM	0.00	166.94	161.96
06/15/95	-	-	-	-	-	-	-	-	-	-	-
09/05/95	-	-	-	-	-	-	13.72	FILM	0.00	166.94	153.22
11/21/95	32,000	46	21	66	340	-	12.53	NP	0.00	166.94	154.41
03/11/96	1,700	130	15	2.0	120	-	4.72	NP	0.00	166.94	162.22
06/19/96	1,700	230	30	0.35	100	-	5.40	NP	0.00	166.94	161.54
09/16/96	510	<0.3	0.73	<0.3	<0.5	800	5.18	NP	0.00	166.94	161.76
12/10/96	520	<0.3	<0.3	<0.3	<0.5	1,600	4.65	NP	0.00	166.94	162.29
03/12/97	420	3.2	<0.3	<0.3	11	370	3.87	NP	0.00	166.94	163.07
06/12/97	510	0.66	<0.3	<0.3	<0.5	1,600	-	-	-	-	-

**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #054, CASTRO VALLEY, CA.**

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	[REDACTED] (ug/L)					
09/10/97	<50	<0.3	<0.3	<0.3	<0.5	<20	5.40	NP	0.00	166.94	161.54
12/09/97	1,400	330	2.3	<0.3	1.5	2,500	4.60	NP	0.00	166.94	162.34
03/03/98	3,000	400	0.61	0.5	97	3,800	5.05	NP	0.00	166.94	161.89
07/08/98	650	<0.3	<0.3	<0.3	<0.5	1,800	-	-	-	-	-
09/10/98	2,700	<0.3	<0.3	<0.3	1.4	1,800	4.60	NP	0.00	166.94	162.34
12/30/98	530	<0.3	<0.3	<0.3	<0.5	1,500	4.20	NP	0.00	166.94	162.74
03/15/99	<50	<0.3	<0.3	<0.3	<0.5	<5	3.85	NP	0.00	166.94	163.09
06/22/99	1,200	23	1.5	<0.3	2.4	1,400	3.90	NP	0.00	166.94	163.04
09/08/99	590	1.5	<0.6	<0.6	<1	1,100	5.72	NP	0.00	166.94	161.22
<b>MONITORING WELL #R-5</b>											
04/11/88	14,000	1,300	1,100	100	2,600	-	-	-	-	-	-
04/09/90	3,000	690	190	40	270	-	4.79	NP	0.00	166.51	161.72
10/30/90	3,400	910	48	87	249	-	5.86	NP	0.00	166.51	160.65
01/18/91	1,400	180	8.6	0.52	48	-	4.40	NP	0.00	166.51	162.11
02/12/91	1,000	ND	ND	0.65	ND	-	4.76	NP	0.00	166.51	161.75
03/20/91	3,000	250	53	ND	110	-	5.08	NP	0.00	166.51	161.43
05/22/91	2,500	330	7.8	5.6	200	-	4.52	NP	0.00	166.51	161.99
01/19/91	2,000	59	1.6	5.1	110	-	4.39	NP	0.00	166.51	162.12
07/17/91	-	-	-	-	-	-	5.05	FILM	0.00	166.51	161.46
08/07/91	-	-	-	-	-	-	5.02	FILM	0.00	166.51	161.49
09/24/91	-	-	-	-	-	-	5.86	FILM	0.00	166.51	160.65
10/23/91	-	-	-	-	-	-	5.84	FILM	0.00	166.51	160.67
11/06/91	9,900	2,300	37	260	160	-	5.48	NP	0.00	166.51	161.03
12/04/91	4,500	1,000	27	ND	180	-	5.43	NP	0.00	166.51	161.08
01/29/92	600	6.1	2.3	ND	47	-	5.12	NP	0.00	166.51	161.39
02/26/92	500	5.4	2.7	1.2	14	-	4.93	NP	0.00	166.51	161.58
03/19/92	ND	1.7	1.1	ND	5.5	-	4.45	NP	0.00	166.51	162.06
04/22/92	1,600	240	2.2	ND	160	-	4.63	NP	0.00	166.51	161.88
05/21/92	1,200	410	37	ND	118	-	4.90	NP	0.00	166.51	161.61
06/25/92	ND	1.0	0.8	0.8	0.4	-	5.15	NP	0.00	166.51	161.36
07/30/92	ND	2.0	1.8	1.9	6.4	-	5.30	NP	0.00	166.51	161.21
08/20/92	300	1.7	3.3	0.7	12	-	5.44	NP	0.00	166.51	161.07
09/30/92	1,900	140	ND	19	35	-	5.73	NP	0.00	166.51	160.78

**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #054, CASTRO VALLEY, CA.**

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TOLUENE (ug/L)	BENZENE (ug/L)	ETHYL BENZENE (ug/L)	XYLENE (ug/L)	MIBP (ug/L)	STYRENE (ug/L)					
12/23/92	400	8.0	ND	ND	ND	-	4.75	NP	0.00	166.51	161.76
03/10/93	1,100	290	9.7	ND	75	-	4.14	NP	0.00	166.51	162.37
06/09/93	400	1.5	0.5	ND	12	-	5.42	NP	0.00	166.51	161.09
09/14/93	240	6.9	8.8	1.4	67	-	5.53	NP	0.00	166.51	160.98
12/14/93	3,300	510	5.4	4.1	55	-	478	NP	0.00	166.51	-311.49
03/02/94	2,400	270	4.5	<0.3	13	-	4.20	NP	0.00	166.51	162.31
06/06/94	730	<0.3	<0.3	0.70	22	-	5.13	NP	0.00	166.51	161.38
09/06/94	2,400	180	28	2.3	76	-	5.45	NP	0.00	166.51	161.06
12/07/94	540	5.6	<0.3	<0.5	6.9	-	4.13	NP	0.00	166.51	162.38
03/08/95	1,500	220	5.5	<0.5	83	-	5.20	NP	0.00	166.51	161.31
06/15/95	3,200	820	53	6.2	74	-	4.93	NP	0.00	166.51	161.58
09/05/95	4,400	440	22	<2.5	57	-	5.03	NP	0.00	166.51	161.48
11/21/95	660	3.4	<0.3	<0.3	0.6	-	5.23	NP	0.00	166.51	161.28
03/11/96	1,000	76	2.2	<0.3	130	-	4.16	NP	0.00	166.51	162.35
06/09/96	90	<0.3	<0.3	<0.3	<0.5	-	5.42	NP	0.00	166.51	161.09
09/16/96	1,900	5.8	<0.3	<0.3	5.9	1,100	5.20	NP	0.00	166.51	161.31
12/10/96	740	<0.3	<0.3	<0.3	<0.5	1,300	5.27	NP	0.00	166.51	161.24
03/12/97	2,000	600	59	5.1	54	1,300	3.85	NP	0.00	166.51	162.66
06/12/97	230	<0.3	<0.3	<0.3	<0.5	720	-	-	-	-	-
09/10/97	210	<0.3	<0.3	<0.3	<0.5	210	4.10	NP	0.00	166.51	162.41
12/09/97	11,000	2,500	2,700	<6	1,500	510	5.20	NP	0.00	166.51	161.31
03/03/98	<50	<0.3	<0.3	<0.3	<0.5	<20	3.70	NP	0.00	166.51	162.81
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	-	-	-	-	-
09/10/98	<50	<0.3	<0.3	<0.3	<0.5	<5	6.77	NP	0.00	166.51	159.74
12/30/98	<50	<0.3	<0.3	<0.3	<0.5	<5	5.95	NP	0.00	166.51	160.56
03/15/99	<50	<0.3	<0.3	<0.3	<0.5	<5	5.25	NP	0.00	166.51	161.26
06/22/99	110	<0.3	<0.3	<0.3	<0.5	200	4.50	NP	0.00	166.51	162.01
09/08/99	68	<0.3	<0.3	<0.3	<0.5	110	4.43	NP	0.00	166.51	162.08
<b>MONITORING WELL IRE-6</b>											
04/11/88	6,000	3,000	40	80	140	-	-	-	-	-	-
04/09/90	3,000	990	ND	70	ND	-	5.64	NP	0.00	166.51	160.87
10/30/90	3,400	1,000	28	ND	ND	-	6.68	NP	0.00	166.51	159.83
01/18/91	6,300	1,200	ND	3.0	15	-	6.61	NP	0.00	166.51	159.90

**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #054, CASTRO VALLEY, CA.**

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MXRE (ug/L)					
02/12/91	5,200	850	8.4	4.9	41	-	6.20	NP	0.00	166.51	160.31
03/20/91	5,800	680	12	8.0	16	-	5.62	NP	0.00	166.51	160.89
05/22/91	8,500	1,700	14	24	6.7	-	6.05	NP	0.00	166.51	160.46
06/19/91	-	-	-	-	-	-	6.12	FILM	0.00	166.51	160.39
07/17/91	120,000	9,300	13,000	2,400	16,000	-	6.20	NP	0.00	166.51	160.31
08/07/91	-	590	5.3	ND	14	-	6.27	NP	0.00	166.51	160.24
09/24/91	7,000	310	11	5.3	35	-	6.63	NP	0.00	166.51	159.88
10/23/91	-	-	-	-	-	-	6.36	FILM	0.00	166.51	160.15
11/06/91	4,000	710	18	29	49	-	6.15	NP	0.00	166.51	160.36
12/04/91	4,100	1,100	14	33	39	-	6.19	NP	0.00	166.51	160.32
01/29/92	2,600	790	14	ND	49	-	6.70	NP	0.00	166.51	159.81
02/26/92	3,100	950	21	30	33	-	5.44	NP	0.00	166.51	161.07
03/19/92	2,200	630	14	12	40	-	5.30	NP	0.00	166.51	161.21
04/22/92	-	730	2.2	ND	40	-	6.00	NP	0.00	166.51	160.51
05/21/92	1,500	840	7.8	7.1	34	-	6.25	NP	0.00	166.51	160.26
06/25/92	< 2000	740	8.0	27	28	-	6.38	NP	0.00	166.51	160.13
07/30/92	-	-	-	-	-	-	6.42	FILM	0.00	166.51	160.09
08/20/92	2,800	630	17	23	22	-	6.50	NP	0.00	166.51	160.01
09/30/92	7,800	540	ND	12	29	-	6.66	NP	0.00	166.51	159.85
12/23/92	1,800	350	ND	7.7	11	-	5.83	NP	0.00	166.51	160.68
03/10/93	3,000	830	5.6	19	16	-	5.63	NP	0.00	166.51	160.88
06/09/93	4,800	920	6.2	3.2	12	-	6.01	NP	0.00	166.51	160.50
09/14/93	3,600	660	7.5	11	27	-	6.53	NP	0.00	166.51	159.98
12/14/93	1,500	200	<0.3	<0.3	8.8	-	3.58	NP	0.00	166.51	162.93
03/02/94	-	-	-	-	-	-	5.12	NP	0.00	166.51	161.39
06/06/94	2,400	290	4.6	1.3	24	-	1.85	NP	0.00	166.51	164.66
09/06/94	4,300	230	21	<6.6	130	-	6.40	NP	0.00	166.51	160.11
12/07/94	1,500	17	2.5	3.2	22	-	5.68	NP	0.00	166.51	160.83
03/08/95	2,500	460	5.5	2.1	51	-	5.12	NP	0.00	166.51	161.39
06/15/95	2,300	91	1.1	0.7	97	-	5.72	NP	0.00	166.51	160.79
09/05/95	3,300	60	<10	<10	74	-	5.94	NP	0.00	166.51	160.57
11/21/95	2,000	7.3	<0.3	0.56	8.7	-	6.24	NP	0.00	166.51	160.27
03/11/96	840	43	0.96	5.7	14	-	5.16	NP	0.00	166.51	161.35
06/19/96	1,800	160	2.7	9.9	25	-	5.80	NP	0.00	166.51	160.71
09/16/96	<50	<0.3	<0.3	<0.3	<0.5	<20	5.38	NP	0.00	166.51	161.13

**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #054, CASTRO VALLEY, CA.**

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MIBK (ug/L)					
12/10/96	<50	<0.3	<0.3	<0.3	<0.5	<20	5.62	NP	0.00	166.51	160.89
03/12/97	<50	<0.3	<0.3	<0.3	<0.5	<20	5.20	NP	0.00	166.51	161.31
06/12/97	<50	<0.3	<0.3	<0.3	<0.5	<20	-	-	-	-	-
09/10/97	440	<0.3	<0.3	<0.3	<0.5	320	5.20	NP	0.00	166.51	161.31
12/09/97	<50	<0.3	<0.3	<0.3	<0.5	<20	5.97	NP	0.00	166.51	160.54
03/03/98	400	7.0	<0.3	<0.3	4.3	65	4.45	NP	0.00	166.51	162.06
07/08/98	300	<0.3	<0.3	<0.3	1.0	35	-	-	-	-	-
09/10/98	<50	<0.3	<0.3	<0.3	<0.5	<5	5.90	NP	0.00	166.51	160.61
12/30/98	<50	<0.3	<0.3	<0.3	<0.5	<5	5.20	NP	0.00	166.51	161.31
03/15/99	<50	<0.3	<0.3	<0.3	<0.5	8.4	4.82	NP	0.00	166.51	161.69
06/22/99	700	11	1.9	<0.3	3.9	140	6.00	NP	0.00	166.51	160.51
09/08/99	<50	<0.3	<0.3	<0.3	<0.5	<5	5.15	NP	0.00	166.51	161.36
<b>MONITORING WELL #R-7</b>											
04/11/88	<50,000	17,000	4,400	600	8,400	-	-	-	-	-	-
04/09/90	16,000	7,000	1,200	640	1,600	-	5.93	NP	0.00	166.04	160.11
10/30/90	31,000	14,000	ND	ND	ND	-	8.21	NP	0.00	166.04	157.83
01/18/91	-	-	-	-	-	-	11.80	NP	0.00	166.04	154.24
02/12/91	-	-	-	-	-	-	10.80	FILM	0.00	166.04	155.24
03/20/91	120,000	12,000	2,800	490	6,600	-	9.96	NP	0.00	166.04	156.08
05/22/91	-	-	-	-	-	-	11.70	FILM	0.00	166.04	154.34
06/19/91	-	-	-	-	-	-	11.50	FILM	0.00	166.04	154.54
07/17/91	-	-	-	-	-	-	7.80	FILM	0.00	166.04	158.24
08/07/91	-	-	-	-	-	-	9.88	0.03	9.85	166.04	163.60
09/24/91	-	-	-	-	-	-	9.85	0.03	9.82	166.04	163.60
10/23/91	-	-	-	-	-	-	9.96	FILM	0.00	166.04	156.08
11/06/91	-	-	-	-	-	-	6.77	FILM	0.00	166.04	159.27
12/04/91	-	-	-	-	-	-	10.80	FILM	0.00	166.04	155.24
01/29/92	-	-	-	-	-	-	8.64	FILM	0.00	166.04	157.40
02/26/92	-	-	-	-	-	-	6.00	FILM	0.00	166.04	160.04
03/19/92	-	-	-	-	-	-	5.55	FILM	0.00	166.04	160.49
04/22/92	-	-	-	-	-	-	6.12	FILM	0.00	166.04	159.92
05/21/92	-	-	-	-	-	-	6.40	FILM	0.00	166.04	159.64
06/25/92	-	-	-	-	-	-	6.73	0.02	6.71	166.04	164.38

**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #054, CASTRO VALLEY, CA.**

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	Ethyl Benzene (ug/L)	XYLENE (ug/L)	HEXANE (ug/L)					
07/30/92	-	-	-	-	-	-	6.73	FILM	0.00	166.04	159.31
08/20/92	-	-	-	-	-	-	6.82	FILM	0.00	166.04	159.22
09/30/92	-	-	-	-	-	-	7.26	FILM	0.00	166.04	158.78
12/23/92	-	-	-	-	-	-	6.22	FILM	0.00	166.04	159.82
03/10/93	-	-	-	-	-	-	5.82	FILM	0.00	166.04	160.22
06/09/93	-	-	-	-	-	-	6.17	FILM	0.00	166.04	159.87
09/14/93	-	-	-	-	-	-	11.33	NP	0.00	166.04	154.71
12/14/93	-	-	-	-	-	-	8.40	NP	0.00	166.04	157.64
03/02/94	-	-	-	-	-	-	6.82	NP	0.00	166.04	159.22
06/06/94	-	-	-	-	-	-	10.95	FILM	0.00	166.04	155.09
09/06/94	-	-	-	-	-	-	11.30	FILM	0.00	166.04	154.74
12/07/94	-	-	-	-	-	-	5.63	FILM	0.00	166.04	160.41
03/08/95	-	-	-	-	-	-	5.06	FILM	0.00	166.04	160.98
06/15/95	-	-	-	-	-	-	-	-	-	-	-
09/05/95	-	-	-	-	-	-	7.98	FILM	0.00	166.04	158.06
11/21/95	20,000	8,800	110	<30	310	-	7.32	NP	0.00	166.04	158.72
03/11/96	4,800	2,200	38	26	120	-	5.62	NP	0.00	166.04	160.42
06/19/96	4,400	3,300	49	5.8	70	-	6.40	NP	0.00	166.04	159.64
09/19/96	7,200	510	83	<0.3	710	130	6.20	NP	0.00	166.04	159.84
12/10/96	700	<0.3	<0.3	<0.3	<0.5	-	5.92	NP	0.00	166.04	160.12
03/12/97	660	0.31	<0.3	<0.3	<0.5	-	5.62	NP	0.00	166.04	160.42
06/12/97	320	<0.3	0.45	<0.3	<0.5	850	-	-	-	-	-
09/10/97	780	<0.3	<0.3	<0.3	<0.5	930	7.45	NP	0.00	166.04	158.59
12/09/97	14,000	3,500	3,700	<15	2,100	-	7.10	NP	0.00	166.04	158.94
03/03/98	6,100	2,500	18	<6	110	270	6.70	NP	0.00	166.04	159.34
07/08/98	1,300	8.7	<0.3	<0.3	<0.5	350	-	-	-	-	-
09/10/98	690	2.2	<0.3	<0.3	<0.5	350	7.04	NP	0.00	166.04	159.00
12/30/98	600	2.0	0.55	<0.3	<0.5	350	6.25	NP	0.00	166.04	159.79
03/15/99	350	0.71	<0.3	<0.3	<0.5	140	6.02	NP	0.00	166.04	160.02
06/22/99	5,900	2,100	16	4.6	48	170	6.35	NP	0.00	166.04	159.69
09/08/99	1,700	380	<3	<3	13	160	7.03	NP	0.00	166.04	159.01



**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #054, CASTRO VALLEY, CA.**

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TEH (ppb)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MTBE (ug/L)					
<b>MONITORING WELL RS-3</b>											
08/07/91	ND	ND	ND	ND	ND	-	9.68	NP	0.00	164.32	154.64
09/27/91	ND	ND	ND	ND	ND	-	9.89	NP	0.00	164.32	154.43
10/23/91	ND	ND	ND	ND	ND	-	10.05	NP	0.00	164.32	154.27
11/06/91	ND	ND	ND	ND	ND	-	9.71	NP	0.00	164.32	154.61
12/04/91	ND	ND	ND	ND	ND	-	10.00	NP	0.00	164.32	154.32
01/29/92	ND	2.1	1.0	2.5	3.6	-	9.28	NP	0.00	164.32	155.04
02/26/92	ND	ND	0.7	ND	0.7	-	7.05	NP	0.00	164.32	157.27
03/19/92	ND	0.5	1.0	1.5	2.7	-	7.30	NP	0.00	164.32	157.02
04/22/92	ND	ND	ND	ND	ND	-	8.60	NP	0.00	164.32	155.72
05/21/92	ND	ND	ND	ND	ND	-	9.22	NP	0.00	164.32	155.10
06/25/92	ND	ND	ND	ND	ND	-	9.49	NP	0.00	164.32	154.83
07/30/92	ND	1.1	4.2	ND	3.0	-	9.55	NP	0.00	164.32	154.77
08/20/92	ND	2.0	4.7	ND	5.7	-	9.63	NP	0.00	164.32	154.69
09/30/92	ND	ND	ND	ND	ND	-	9.90	NP	0.00	164.32	154.42
12/23/92	ND	ND	ND	ND	ND	-	9.96	NP	0.00	164.32	154.36
05/10/93	ND	ND	ND	ND	ND	-	8.95	NP	0.00	164.32	155.37
06/09/93	ND	ND	ND	ND	ND	-	9.00	NP	0.00	164.32	155.32
09/14/93	200	0.3	ND	ND	ND	-	9.50	NP	0.00	164.32	154.82
12/14/93	ND	ND	ND	ND	ND	-	8.75	NP	0.00	164.32	155.57
03/02/94	<50	<0.3	<0.3	<0.3	<0.5	-	7.52	NP	0.00	164.32	156.80
06/06/94	54	<0.3	<0.3	<0.3	2.4	-	9.00	NP	0.00	164.32	155.32
09/06/94	<50	<0.3	<0.3	<0.3	<0.5	-	9.26	NP	0.00	164.32	155.06
12/07/94	130	2.5	1.9	1.3	3.6	-	8.67	NP	0.00	164.32	155.65
03/08/95	<100	<0.5	<0.5	<0.5	<1	-	8.34	NP	0.00	164.32	155.98
06/15/95	<100	1.0	<0.5	<0.5	<1	-	9.12	NP	0.00	164.32	155.20
09/05/95	<100	<0.5	<0.5	<0.5	<1	-	9.56	NP	0.00	164.32	154.76
11/21/95	<50	0.44	<0.3	<0.3	1.5	-	9.28	NP	0.00	164.32	155.04
03/11/96	<50	1.3	<0.3	<0.3	0.6	-	7.52	NP	0.00	164.32	156.80
06/19/96	640	72	20	34	150	-	7.80	NP	0.00	164.32	156.52
09/16/96	<50	<0.3	<0.3	<0.3	<0.5	20	9.18	NP	0.00	164.32	155.14
12/10/96	<50	<0.3	<0.3	<0.3	<0.5	<20	6.08	NP	0.00	164.32	158.24
03/12/97	53	0.45	<0.3	<0.3	<0.5	140	8.65	NP	0.00	164.32	155.67
06/12/97	<50	<0.3	<0.3	<0.3	<0.5	68	-	-	-	-	-
09/10/97	<50	<0.3	<0.3	<0.3	<0.5	<20	8.30	NP	0.00	164.32	156.02



**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #054, CASTRO VALLEY, CA.**

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	THI (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MIBK (ug/L)					
06/15/95	3,200	2.2	5.3	4.3	3.1	-	5.08	NP	0.00	167.51	162.43
09/05/95	1,100	<0.5	<0.5	<0.5	<1	-	5.72	NP	0.00	167.51	161.79
11/21/95	1,100	1.1	2.9	3.5	3.0	-	2.46	NP	0.00	167.51	165.05
03/11/96	440	0.7	0.34	<0.3	3.7	-	3.44	NP	0.00	167.51	164.07
06/19/96	580	3.8	0.49	1.2	<0.5	-	3.80	NP	0.00	167.51	163.71
09/16/96	490	<0.3	1.6	<0.3	<0.5	<20	3.80	NP	0.00	167.51	163.71
12/10/96	<50	<0.3	<0.3	<0.3	<0.5	<20	2.76	NP	0.00	167.51	164.75
03/12/97	<50	<0.3	0.42	<0.3	1.5	<20	3.20	NP	0.00	167.51	164.31
06/12/97	<50	<0.3	<0.3	<0.3	0.51	<20	-	-	-	-	-
09/10/97	<50	<0.3	<0.3	<0.3	<0.5	<20	4.24	NP	0.00	167.51	163.27
12/09/97	<50	<0.3	0.48	<0.3	<0.5	<20	2.72	NP	0.00	167.51	164.79
03/03/98	190	<0.3	<0.3	0.38	<0.5	<20	1.90	NP	0.00	167.51	165.61
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	-	-	-	-	-
09/10/98	<50	<0.3	<0.3	<0.3	<0.5	<5	2.72	NP	0.00	167.51	164.79
12/30/98	<50	<0.3	<0.3	<0.3	<0.5	<5	1.20	NP	0.00	167.51	166.31
03/15/99	<50	<0.3	<0.3	<0.3	<0.5	<5	4.25	NP	0.00	167.51	163.26
06/22/99	1,300	4.2	1.2	0.69	0.74	<5	3.70	NP	0.00	167.51	163.81
09/08/99	<50	<0.3	<0.3	<0.3	<0.5	<5	2.71	NP	0.00	167.51	164.80
<b>MONITORING WELL IRS-10</b>											
08/07/91	ND	ND	ND	ND	ND	-	6.16	NP	0.00	162.89	156.73
09/27/91	ND	ND	ND	ND	ND	-	6.48	NP	0.00	162.89	156.41
10/23/91	ND	ND	ND	ND	ND	-	7.37	NP	0.00	162.89	155.52
11/06/91	ND	ND	ND	ND	ND	-	6.44	NP	0.00	162.89	156.45
12/04/91	ND	ND	ND	ND	ND	-	7.02	NP	0.00	162.89	155.87
01/29/92	ND	ND	ND	ND	ND	-	6.78	NP	0.00	162.89	156.11
02/26/92	ND	ND	ND	ND	ND	-	8.33	NP	0.00	162.89	154.56
03/19/92	ND	ND	ND	ND	0.6	-	8.02	NP	0.00	162.89	154.87
04/22/92	ND	ND	ND	ND	ND	-	7.78	NP	0.00	162.89	155.11
05/21/92	ND	ND	0.6	ND	1.2	-	6.21	NP	0.00	162.89	156.68
06/25/92	ND	ND	ND	ND	ND	-	7.73	NP	0.00	162.89	155.16
07/30/92	ND	ND	0.5	ND	1.0	-	7.84	NP	0.00	162.89	155.05
08/20/92	ND	ND	ND	ND	ND	-	7.50	NP	0.00	162.89	155.39
09/30/92	ND	ND	ND	ND	ND	-	7.63	NP	0.00	162.89	155.26

**TABLE 1**  
**GROUNDWATER DATA**  
**THRIFTY OIL STATION #054, CASTRO VALLEY, CA.**

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MIBP (ug/L)					
12/23/92	ND	ND	ND	ND	ND	-	7.24	NP	0.00	162.89	155.65
03/10/93	ND	ND	ND	ND	ND	-	6.38	NP	0.00	162.89	156.51
06/09/93	ND	ND	ND	ND	ND	-	7.98	NP	0.00	162.89	154.91
09/14/93	ND	ND	ND	ND	ND	-	7.35	NP	0.00	162.89	155.54
03/02/94	<50	<0.3	<0.3	<0.3	<0.3	-	7.00	NP	0.00	162.89	155.89
06/06/94	<50	<0.3	<0.3	<0.3	<0.5	-	6.55	NP	0.00	162.89	156.34
09/06/94	<50	<0.3	<0.3	<0.3	<0.5	-	7.63	NP	0.00	162.89	155.26
12/07/94	56	<0.3	<0.3	<0.5	2.1	-	5.92	NP	0.00	162.89	156.97
03/08/95	<100	<0.5	<0.5	<0.5	<1	-	7.84	NP	0.00	162.89	155.05
06/15/95	<100	<0.5	<0.5	<0.5	<1	-	6.97	NP	0.00	162.89	155.92
09/05/95	<100	<0.5	<0.5	<0.5	<1	-	8.14	NP	0.00	162.89	154.75
11/21/95	<50	<0.3	<0.3	<0.3	<0.5	-	7.68	NP	0.00	162.89	155.21
03/11/96	<50	<0.3	<0.3	<0.3	<0.5	-	6.76	NP	0.00	162.89	156.13
06/19/96	<50	<0.3	<0.3	<0.3	<0.5	-	7.20	NP	0.00	162.89	155.69
09/16/96	<50	<0.3	<0.3	<0.3	<0.5	<20	6.30	NP	0.00	162.89	156.59
12/10/96	<50	<0.3	<0.3	<0.3	<0.5	<20	6.05	NP	0.00	162.89	156.84
03/12/97	<50	<0.3	<0.3	<0.3	<0.5	<20	7.56	NP	0.00	162.89	155.33
06/12/97	<50	<0.3	<0.3	<0.3	<0.5	<20	-	-	-	-	-
09/10/97	<50	<0.3	<0.3	<0.3	<0.5	<20	7.55	NP	0.00	162.89	155.34
12/09/97	1,900	610	510	<6	290	<20	7.55	NP	0.00	162.89	155.34
03/03/98	<50	2.0	<0.3	<0.3	<0.5	27	6.03	NP	0.00	162.89	156.86
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	-	-	-	-	-
09/10/98	<50	<0.3	<0.3	<0.3	<0.5	72	7.55	NP	0.00	162.89	155.34
12/30/98	<50	1.1	<0.3	<0.3	<0.5	<5	4.45	NP	0.00	162.89	158.44
03/15/99	<50	<0.3	<0.3	<0.3	1.3	<5	4.50	NP	0.00	162.89	158.39
06/22/99	<50	<0.3	<0.3	<0.3	<0.5	<5	9.15	NP	0.00	162.89	153.74
09/08/99	<50	<0.3	<0.3	<0.3	<0.5	<5	7.51	NP	0.00	162.89	155.38
<b>MONITORING WELLS II</b>											
09/21/95	110	<0.5	<0.5	<0.5	<1	-	9.37	NP	0.00	163.28	153.91
11/21/95	-	-	-	-	-	-	-	-	-	-	-
03/11/96	-	-	-	-	-	-	-	-	-	-	-
06/19/96	-	-	-	-	-	-	-	-	-	-	-
09/16/96	-	-	-	-	-	-	-	-	-	-	-

**TABLE 1**  
**GROUNDWATER DATA**  
**THRIFTY OIL STATION #054, CASTRO VALLEY, CA.**

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MTBE (ug/L)					
03/12/97	74	9.5	<0.3	<0.3	0.57	<20	7.75	NP	0.00	163.28	155.53
06/12/97	<50	<0.3	<0.3	<0.3	<0.5	<20	-	-	-	-	-
09/10/97	<50	<0.3	<0.3	<0.3	<0.5	<20	9.50	NP	0.00	163.28	153.78
12/09/97	<50	0.79	1.2	<0.3	<0.5	<20	9.50	NP	0.00	163.28	153.78
03/03/98	140	22	0.63	<0.3	<0.5	<20	7.93	NP	0.00	163.28	155.35
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	-	-	-	-	-
09/10/98	<50	<0.3	<0.3	<0.3	<0.5	<5	9.48	NP	0.00	163.28	153.80
12/30/98	<50	1.3	0.87	<0.3	0.55	<5	7.95	NP	0.00	163.28	155.33
03/15/99	<50	<0.3	<0.3	<0.3	<0.5	<5	6.40	NP	0.00	163.28	156.88
06/22/99	350	89	2.9	3.3	0.91	6.8	11.00	NP	0.00	163.28	152.28
09/08/99	99	9.1	0.37	<0.3	<0.5	<5	7.90	NP	0.00	163.28	155.38

**NOTE:** ND = Nondetectable  
 " - " = Not Analyzed / Not Available  
 NP = No Free Product

Benzene, toluene, ethylbenzene, and xylene analyzed by EPA method 8020.  
 Total petroleum hydrocarbons (TPH) analyzed by EPA method 8015 modified for gasoline  
 Methyl-tert Butyl Ether (MTBE) analyzed by EPA method 8020

**TABLE 2**  
**Vapor Extraction Operating Data**  
**Thrifty Oil Station # 054, CASTRO VALLEY, CA**

Date	Duration (hrs)	Inlet		Period (hrs)	Gallons (gals)	Remarks
		Average Flow (gpm)	Average PID Conc. (ppmV)			
Jan-91	0	30	est. 10,000	0.0	0	
Feb-91	50	30	est. 10,000	204.2	204	
Mar-91	49	5	est. 10,000	33.4	238	System off 4/91 - 9/91
Oct-91	758	15	est. 10,000	1,548.0	1,786	
Nov-91	3	14	est. 10,000	5.7	1,791	
Dec-91	107	14	est. 10,000	203.9	1,995	
Jan-92	129	14	est. 10,000	245.9	2,241	
Feb-92	268	14	est. 10,000	510.8	2,752	System off 3/92 - 7/92
Aug-93	0	18	est. 10,000	0.0	2,752	
Sep-93	153	17	est. 10,000	354.1	3,106	
Oct-93	514	18	est. 10,000	1,259.6	4,366	
Nov-93	421	18	est. 10,000	1,031.7	5,397	
Dec-93	324	18	est. 10,000	794.0	6,191	
Jan-94	608	18	est. 10,000	1,490.0	7,881	
Feb-94	536	17	10,000	1,240.6	8,922	
Mar-94	347	20	10,000	944.9	9,867	
Apr-94	401	16	10,000	873.5	10,740	
May-94	406	17	est. 10,000	939.7	11,680	
Jun-94	511	16	10,000	1,113.1	12,793	
Jul-94	165	15	10,000	337.0	13,130	
Aug-94	56	16	est. 10,000	122.0	13,252	
Sep-94	605	16	est. 10,000	1,317.9	14,570	
Oct-94	214	15	est. 10,000	437.0	15,007	
Dec-94	102	15	est. 10,000	208.3	15,215	
Jan-95	86	12	est. 10,000	140.5	15,356	
Feb-95	130	13	est. 10,000	230.1	15,586	
Mar-95	104	15	est. 10,000	212.4	15,798	
Apr-95	33	8	est. 10,000	35.9	15,834	
May-95	396	16	est. 10,000	862.6	16,697	
Jun-95	31	16	est. 10,000	67.5	16,765	
Jul-95	398	16	est. 10,000	867.0	17,632	
Aug-95	76	16	10,000	165.6	17,797	
Sep-95	158	16	est. 10,000	344.2	18,141	
Oct-95	95	14	10,000	181.1	18,322	
Nov-95	31	16	est. 10,000	67.5	18,390	
Jan-96	47	9	est. 10,000	57.6	18,447	Replaced hour meter (8930)
Feb-96	14	8	est. 10,000	15.2	18,463	System off 2/96 - 4/96
Apr-96	93	8	210	2.1	18,465	
May-96	40	12	220	1.4	18,466	
Jun-96	155	9	1,000	19.0	18,485	
Jul-96	91	17	420	8.8	18,494	
Aug-96	21	9	340	0.9	18,495	
Sep-96	330	17	est. 340	26.0	18,521	
Oct-96	52	7	est. 340	1.7	18,523	
Dec-96	3	8	est. 340	0.1	18,523	System off 10/96 - 12/96
Apr-97	36	15	10,000	73.5	18,596	System off 1/97 - 4/97
May-97	220	15	9,800	440.3	19,037	
Jun-97	631	11	est. 9,000	850.5	19,887	~ 127 gals
Jul-97	49	12	est. 9,000	72.0	19,959	
Aug-97	238	12	est. 9,000	350.0	20,309	

**TABLE 2**  
**Vapor Extraction Operating Data**  
**Thrifty Oil Station # 054, CASTRO VALLEY, CA**

Date	Duration (hrs)	Inlet		Cumulative (lbs)	Remark
		Average Flow (gpm)	Average PID Conc. (ppm)		
Sep-97	186	16	est. 9,000	364.7	20,674
Oct-97	184	12	est. 9,000	270.6	20,944
Nov-97	132	17	est. 9,000	275.0	21,219
Dec-97	58	19	9,000	135.0	21,354
Jan-98	274	17	10,000	634.2	21,988
Feb-98	396	16	10,000	862.6	22,851
Mar-98	831	17	10,000	1,923.4	24,774
Apr-98	49	17	est. 10,000	113.4	24,888
May-98	251	16	10,000	546.8	25,435
Jun-98	347	17	10,000	803.1	26,238
Jul-98	682	16	est. 10,000	1,755.6	27,723 ~ 222 gals
Sep-98	202	12	est. 10,000	330.0	28,053
Nov-98	188	12	est. 10,000	307.1	28,361
Dec-98	394	11	est. 10,000	590.1	28,951
Feb-99	991	10	2,800	377.8	29,328
Mar-99	583	13	210	21.7	29,350
Apr-99	311	13	est. 210	11.6	29,362
May-99	89	10	est. 210	2.5	29,364
Jun-99	995	10	4,100	382.4	29,920 ~ 83 gals
Jul-99	70	10	est. 4,000	38.1	29,958
Aug-99	33	11	est. 4,000	19.8	29,978
Sep-99	122	12	est. 4,000	382.7	30,057 ~ 11.9 gals

4486 gals

**TABLE 3**  
**Laboratory Analytical Results of Inlet Vapor Samples**  
**Thrifty Oil Co. Station # 054, CASTRO VALLEY, CA**

Date	Analyses Results of Inlet Vapor Concentrations					
	TPH (ppmv)	Benzene (ppmv)	Toluene (ppmv)	Ethylbenzene (ppmv)	Total Xylenes (ppmv)	MIBK (ppmv)
5/15/97	-	0.36*	-	-	-	-
7/17/97	-	<0.1*	-	-	-	-
5/5/99	<5	<0.1	0.13	<0.1	<0.1	<1
8/24/99	53	1.4	8.1	2.5	14	<1
8/30/99	<5	<0.1	0.23	0.12	0.77	1.6
9/14/99	2,200	11	36	11	55	9.9

NOTE:                   \*Unit of measure = ug, by NIOSH 1501 (Benzene)  
                               "- " = not analyzed



# APPENDIX A



DATE: 09-27-99

START UP / SHUT DOWN REPORT  
STATION # 054  
SYSTEM TYPE :

START UP REPORT:

SHUT DOWN REPORT:

Shut down system because no fuel (propane)  
Call office for fill up and check for  
leaking -

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

*[Handwritten Signature]*

**FIELD STATUS REPORT**

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

MAINFOLD														
WELLS	WATER						WELLS	VAPORS						
ON							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	estimated 18:348	
					HOURS	#	<del>1200</del>	DON'T WORRY
					ENGINE RPM	RPM	1800	
					ENGINE VACUUM	IN HG	14	
					TK REC TEMP	F	91	
					AIR TEMP	F	72	
					AIR FLOW	CFM	16	
					VAPOR FLOW	CFM	13	
					FUEL FLOW	CFM/H	80	
					WELL VACUUM	IN H <sub>2</sub> O	13	
					GAS METER		% 60	

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

COMMENTS: Second time find the valve turn off from propane tank ??

SERVICE TECHNICAN DTW DATE 09-15-04 THRIFTY OIL CO # 014

**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		
					HOURS	#	estimated 18,318	
					ENGINE RPM	RPM	1900	
					ENGINE VACUUM	IN HG	14	
					TK REC TEMP	F	00	
					AIR TEMP	F	72	
					AIR FLOW	CFM	16	
					VAPOR FLOW	CFM	11	
					FUEL FLOW	CFM/H	20	
					WELL VACUUM	IN H2O	13	
					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			
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS: RESTART ENGINE. VALVE FROM 7 AND SPORING WAS TURN OFF??

SERVICE TECHNICAN S. S. S. DATE 04-20-04 THRIFTY OIL CO # 059



THRIFTY OIL CO. SS #054  
 2504 CASTRO VALLEY BLVD.  
 CASTRO VALLEY, CA 94546  
 DATE: 09-08-1999

PROJECT STATUS REPORT

FREQ.	MONITORING				ODORS			FREE		WELLS CONNECTED TO SYSTEM (W)							
	OBSERVATION WELLS				(S=SLIGHT)			PRODUCT		CONNECT		INTEGRITY		VAPOR		WATER	
	NO.	DTW	DTP	PT	YES	NO	S	YES	NO	YES	NO	OK	NO	ON	OFF	ON	OFF
M	PW-1	4.80				X			X		X	-					
M	PW-2	3.99				X			X		X	-					
M	RE-1	4.46				X			X		X	-		X			
M	RE-2	3.96				X			X		X	-					
M	RE-3	2.63				X			X		X	-		X			
M	RE-4	5.72				X			X		X	-					
M	RE-5	4.43				X			X		X	-					
M	RE-6	5.16				X			X		X	-					
M	RE-7	7.03				X			X		X	-		X			
M	RS-8	9.85				X			X		-	X					
M	RS-9	2.71				X			X		-	X					
M	RS-10	7.51				X			X			X					
M	RS-11	7.90				X			X			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. 300 GALLONS

DATA RECORDED BY: *J. Brown*      INPUT BY: AJB 02/05/97

**FIELD DATA -GROUNDWATER SAMPLING PROGRAM**

Site: <u>33 054</u>	Date: <u>9-08-99</u>
Address: _____	
Personnel: <u>SEBASTIAN</u>	Weather: <u>JUNNY DAY</u>
Well No: <u>RS-10</u>	Equip: <u>BAILER</u>

<b>Before Purging:</b>			
Total Well Depth: (ft.)	<u>24.38</u>	Well Diameter	<u>2"</u>
Depth to Water (ft)	<u>7.51</u>	Est. Purge Volume:	<u>11</u>

<b>Sampling Data:</b>							
<b>Initial Turbidity:</b>				<b>Final Turbidity:</b>			
Time	8:50	8:52	8:53	8:55	8:56	8:58	9:00
EC	1790	1770	1760	1710	1690	1670	1640
pH	6.11	6.09	6.07	6.09	6.06	6.01	5.98
Temp	71.1	70.9	70.7	70.5	70.3	70.1	69.8
Gal.	1	3	4	6	7	9	11
Time							
EC							
pH							
Temp							
Gal.							

<b>After Purging/Before Sample Collection</b>	
Depth to Water (ft.)	<u>3.42</u>
Total Well Depth(ft.)	<u>24.38</u>

## FIELD DATA -GROUNDWATER SAMPLING PROGRAM

Site:	054	Date:	9-08-99
Address:			
Personnel:	SFB/MTA	Weather:	SUNNY DAY
Well No:	RS-M	Equip:	BAUER

<b>Before Purging:</b>			
Total Well Depth: (ft.)	24.77	Well Diameter	2"
Depth to Water (ft)	7.90	Est. Purge Volume:	11

<b>Sampling Data:</b>							
Initial Turbidity:				Final Turbidity:			
Time	9:05	9:07	9:08	9:10	9:11	9:13	9:15
EC	1850	1820	1810	1770	1760	1760	1740
pH	6.13	6.11	6.09	6.07	6.04	6.01	5.96
Temp	71.1	70.4	70.7	70.5	70.3	70.1	69.8
Gal.	1	3	4	6	7	9	11
Time							
EC							
pH							
Temp							
Gal.							

<b>After Purging/Before Sample Collection</b>	
Depth to Water (ft.)	4.10
Total Well Depth (ft.)	24.77

## FIELD DATA -GROUNDWATER SAMPLING PROGRAM

Site:	054	Date:	9-08-99
Address:			
Personnel:	SERBATA	Weather:	SUNNY DAY
Well No:	RS-8	Equip:	BAILER

<b>Before Purging:</b>			
Total Well Depth: (ft.)	25.17	Well Diameter	24
Depth to Water (ft)	9.85	Est. Purge Volume:	10

Sampling Data:							
Initial Turbidity:				Final Turbidity:			
Time	9:21	9:22	9:24	9:25	9:27	9:28	9:30
EC	1750	1730	1710	1670	1670	1660	1640
pH	6.16	6.14	6.11	6.09	6.11	6.07	6.03
Temp	71.2	70.8	70.7	70.4	70.5	70.3	70.1
Gal.	1	2	4	5	7	8	10
Time							
EC							
pH							
Temp							
Gal.							

<b>After Purging/Before Sample Collection</b>			
Depth to Water (ft.)	6.35	Total Well Depth(ft).	25.17



**FIELD DATA - GROUNDWATER SAMPLING PROGRAM**

Site: <u>2054</u>	Date: <u>9-08-99</u>
Address: _____	
Personnel: <u>SERDAN</u>	Weather: <u>SUNNY DAY</u>
Well No: <u>RE-7</u>	Equip: <u>BAILER</u>

<b>Before Purging:</b>			
Total Well Depth: (ft.)	<u>13.14</u>	Well Diameter	<u>4"</u>
Depth to Water (ft)	<u>7.03</u>	Est. Purge Volume:	<u>16</u>

<b>Sampling Data:</b>							
Initial Turbidity:				Final Turbidity:			
Time	<u>9:36</u>	<u>9:38</u>	<u>9:40</u>	<u>9:43</u>	<u>9:45</u>	<u>9:47</u>	<u>9:50</u>
EC	<u>1840</u>	<u>1870</u>	<u>1840</u>	<u>1860</u>	<u>1830</u>	<u>1810</u>	<u>1810</u>
pH	<u>6.14</u>	<u>6.11</u>	<u>6.09</u>	<u>6.07</u>	<u>6.04</u>	<u>6.01</u>	<u>6.03</u>
Temp	<u>21.1</u>	<u>20.9</u>	<u>20.9</u>	<u>20.7</u>	<u>20.4</u>	<u>20.1</u>	<u>69.8</u>
Gal.	<u>2</u>	<u>4</u>	<u>6</u>	<u>9</u>	<u>11</u>	<u>13</u>	<u>16</u>
Time							
EC							
pH							
Temp							
Gal.							

<b>After Purging/Before Sample Collection</b>	
Depth to Water (ft.)	<u>4.20</u> Total Well Depth(ft.) <u>13.14</u>

**FIELD DATA -GROUNDWATER SAMPLING PROGRAM**

Site:	33 054	Date:	9-08-99
Address:			
Personnel:	BERBY	Weather:	SUNNY DAY
Well No:	PW-2	Equip:	BAILER

<b>Before Purging:</b>			
Total Well Depth: (ft.)	14.32	Well Diameter	4"
Depth to Water (ft)	3.99	Est. Purge Volume:	27

<b>Sampling Data:</b>							
	<b>Initial Turbidity:</b>			<b>Final Turbidity:</b>			
Time	9:56	10:00	10:04	10:08	10:12	10:16	10:20
EC	1970	1930	1910	1920	1840	1870	1860
pH	6.18	6.14	6.11	6.09	6.07	6.08	6.05
Temp	71.1	70.9	70.7	70.6	70.3	70.3	70.1
Gal.	3	7	11	15	19	23	27
Time							
EC							
pH							
Temp							
Gal.							

<b>After Purging/Before Sample Collection</b>	
Depth to Water (ft.)	2.15
Total Well Depth(ft).	14.32

## FIELD DATA - GROUNDWATER SAMPLING PROGRAM

Site: <u>00 054</u>	Date: <u>9-08-99</u>
Address: _____	
Personnel: <u>BERBAY</u>	Weather: <u>SUNNY DAY</u>
Well No: <u>PW-1</u>	Equip: <u>BATLER</u>

<b>Before Purging:</b>			
Total Well Depth: (ft.)	<u>13.97</u>	Well Diameter	<u>4"</u>
Depth to Water (ft)	<u>4.80</u>	Est. Purge Volume:	<u>24</u>

<b>Sampling Data:</b>							
Initial Turbidity:				Final Turbidity:			
Time	10:29	10:32	10:36	10:39	10:43	10:46	10:50
EC	1970	1960	1960	1940	1920	1910	1890
pH	6.21	6.17	6.14	6.11	6.04	6.06	6.03
Temp	21.3	21.1	20.9	20.7	20.5	20.3	20.2
Gal.	3	6	10	13	17	20	24
Time							
EC							
pH							
Temp							
Gal.							

<b>After Purging/Before Sample Collection</b>	
Depth to Water (ft.)	<u>2.32</u>
Total Well Depth (ft.)	<u>13.97</u>

## FIELD DATA - GROUNDWATER SAMPLING PROGRAM

Site:	23 054	Date:	9-08-99
Address:			
Personnel:	SERBATH	Weather:	SUNNY DAY
Well No:	RE-6	Equip:	BAILER

<b>Before Purging:</b>			
Total Well Depth: (ft.)	13.58	Well Diameter	4"
Depth to Water (ft)	5.15	Est. Purge Volume:	22

<b>Sampling Data:</b>							
Initial Turbidity:				Final Turbidity:			
Time	10:56	10:59	11:02	11:05	11:08	11:11	11:15
EC	2110	1920	1960	1920	1910	1930	1960
pH	6.11	6.07	6.03	5.96	5.91	5.88	5.83
Temp	71.1	70.8	70.6	70.4	70.2	70.4	70.1
Gal.	3	6	9	12	15	18	22
Time							
EC							
pH							
Temp							
Gal.							

<b>After Purging/Before Sample Collection</b>	
Depth to Water (ft.)	3.43
Total Well Depth(ft).	13.58

### FIELD DATA -GROUNDWATER SAMPLING PROGRAM

Site: <u>054</u>	Date: <u>9-08-99</u>
Address: _____	
Personnel: <u>SERBAH</u>	Weather: <u>SUNNY DAY</u>
Well No: <u>RE-2</u>	Equip: <u>BAILER</u>

<b>Before Purging:</b>			
Total Well Depth: (ft.)	<u>16.96</u>	Well Diameter	<u>4"</u>
Depth to Water (ft)	<u>3.96</u>	Est. Purge Volume:	<u>34</u>

<b>Sampling Data:</b>							
Initial Turbidity:	Final Turbidity:						
Time	11:30	11:35	11:40	11:45	11:50	11:55	12:00
EC	<u>2240</u>	<u>2270</u>	<u>2250</u>	<u>2230</u>	<u>2260</u>	<u>2190</u>	<u>2170</u>
pH	<u>6.08</u>	<u>6.06</u>	<u>6.04</u>	<u>6.04</u>	<u>6.01</u>	<u>5.96</u>	<u>5.93</u>
Temp	<u>70.1</u>	<u>70.8</u>	<u>70.7</u>	<u>70.5</u>	<u>70.3</u>	<u>70.1</u>	<u>69.9</u>
Gal.	<u>4</u>	<u>9</u>	<u>14</u>	<u>19</u>	<u>24</u>	<u>29</u>	<u>34</u>
Time							
EC							
pH							
Temp							
Gal.							

<b>After Purging/Before Sample Collection</b>	
Depth to Water (ft.)	<u>2.15</u> Total Well Depth(ft.) <u>16.96</u>

## FIELD DATA -GROUNDWATER SAMPLING PROGRAM

Site: <u>0054</u>	Date: <u>9-08-99</u>
Address: _____	
Personnel: <u>SERBAH</u>	Weather: <u>SUNNY DAY</u>
Well No: <u>RE-5</u>	Equip: <u>BAILER</u>

<b>Before Purging:</b>			
Total Well Depth: (ft.)	<u>18.21</u>	Well Diameter	<u>44</u>
Depth to Water (ft)	<u>4.43</u>	Est. Purge Volume:	<u>36</u>

<b>Sampling Data:</b>							
	Initial Turbidity:			Final Turbidity:			
Time	12:09	12:14	12:19	12:24	12:29	12:34	12:40
EC	2330	2310	2310	2290	2280	2260	2240
pH	6.15	6.11	6.08	6.10	6.07	6.04	6.02
Temp	71.3	71.1	70.9	70.7	70.6	70.3	70.1
Gal.	5	10	15	20	25	30	36
Time							
EC							
pH							
Temp							
Gal.							

<b>After Purging/Before Sample Collection</b>	
Depth to Water (ft.)	Total Well Depth(ft). <u>18.21</u>

## FIELD DATA - GROUNDWATER SAMPLING PROGRAM

Site:	33054	Date:	9-08-99
Address:			
Personnel:	SERBOW	Weather:	JUNNY DAY
Well No:	RS-9	Equip:	BAILER

<b>Before Purging:</b>			
Total Well Depth: (ft.)	14.97	Well Diameter	2"
Depth to Water (ft)	2.71	Est. Purge Volume:	8

<b>Sampling Data:</b>							
Initial Turbidity:				Final Turbidity:			
Time	12:43	12:44	12:45	12:46	12:47	12:48	12:50
EC	2230	2210	2190	2170	2150	2150	2130
pH	6.13	6.11	6.08	6.05	6.03	6.01	5.96
Temp	71.1	70.9	70.7	70.5	70.3	70.1	69.9
Gal.	1	2	3	4	5	6	8
Time							
EC							
pH							
Temp							
Gal.							

<b>After Purging/Before Sample Collection</b>	
Depth to Water (ft.)	1.14      Total Well Depth(ft.) 14.97

## FIELD DATA - GROUNDWATER SAMPLING PROGRAM

Site: <u>33054</u>	Date: <u>9-08-99</u>
Address: _____	
Personnel: <u>DERBAU</u>	Weather: <u>SUNNY DAY</u>
Well No: <u>RE-1</u>	Equip: <u>BATLER</u>

### Before Purging:

Total Well Depth: (ft.) <u>19.00</u>	Well Diameter <u>4"</u>
Depth to Water (ft) <u>4.46</u>	Est. Purge Volume: <u>38</u>

### Sampling Data:

	Initial Turbidity:			Final Turbidity:			
Time	12:57	13:02	13:08	13:13	13:19	13:24	13:30
EC	2110	2020	2010	2020	2030	2010	2010
pH	6.14	6.11	6.09	6.07	6.09	6.06	6.04
Temp	71.3	71.1	70.9	70.7	70.5	70.3	70.1
Gal.	5	10	16	21	27	32	38

Time							
EC							
pH							
Temp							
Gal.							

### After Purging/Before Sample Collection

Depth to Water (ft.) <u>2.32</u>	Total Well Depth(ft.) <u>19.00</u>
----------------------------------	------------------------------------



## FIELD DATA - GROUNDWATER SAMPLING PROGRAM

Site:	→ 054	Date:	9-08-99
Address:			
Personnel:	SERBATH	Weather:	JUNNY DAY
Well No:	RE-4	Equip:	BAILER

<b>Before Purging:</b>			
Total Well Depth: (ft.)	14.52	Well Diameter	4"
Depth to Water (ft)	5.72	Est. Purge Volume:	23

Sampling Data:							
Initial Turbidity:				Final Turbidity:			
Time	13:39	13:42	13:45	13:49	13:52	13:55	14:00
EC	2300	2120	2110	1990	1970	1960	1930
pH	6.13	6.11	6.08	6.04	6.01	5.97	5.93
Temp	71.1	70.8	70.7	70.5	70.3	70.1	69.9
Gal.	3	6	9	13	16	19	23
Time							
EC							
pH							
Temp							
Gal.							

<b>After Purging/Before Sample Collection</b>	
Depth to Water (ft.)	3.18
Total Well Depth (ft.)	14.52

FIELD DATA -GROUNDWATER SAMPLING PROGRAM

Site:	0054	Date:	9-08-99
Address:			
Personnel:	JERBAN	Weather:	SUNNY DAY
Well No:	RE-3	Equip:	BAILER

<b>Before Purging:</b>			
Total Well Depth: (ft.)	17.55	Well Diameter	4"
Depth to Water (ft)	2.63	Est. Purge Volume:	39

<b>Sampling Data:</b>							
Initial Turbidity:				Final Turbidity:			
Time	14:06	14:11	14:16	14:22	14:27	14:33	14:40
EC	2460	2430	2430	2420	2400	1980	1960
pH	6.09	6.02	6.03	5.97	5.93	5.86	5.83
Temp	70.1	69.9	69.7	69.5	69.1	68.9	68.7
Gal.	5	11	16	22	27	33	39
Time							
EC							
pH							
Temp							
Gal.							

<b>After Purging/Before Sample Collection</b>	
Depth to Water (ft.)	1.32
Total Well Depth(ft).	17.55

MAINFOLD															
WELLS	WATER							WELLS	VAPORS						
ON								ON	REF1		REF3			REF6	REF7
OFF								OFF							

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM		
					HOURS	#	18128	CONTINUED
					ENGINE RPM	RPM	1800	
					ENGINE VACUUM	IN HG	14	
					TK REC TEMP	F	40	
					AIR TEMP	F	72	
					AIR FLOW	CFM	16	
					VAPOR FLOW	CFM	11	
					FUEL FLOW	CFM/H	70	
					WELL VACUUM	IN H2O	13	
					GAS METER		% 60	

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

COMMENTS: RESTART ENGINE. VALVE FROM TANK STOPPING WAS TURN OFF??

SERVICE TECHNICAN 8/15/04 DATE 04-20-04 THRIFTY OIL CO # 057



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

WELL MONITORING				
WELL NO	DTW	DTP	PT	DTB

RSI SYSTEM			
PARAMETER	U/M	DATA	OBS
TIME	AM/PM		
HOURS	#	1715	DON'T WORRY
ENGINE RPM	RPM	1800	
ENGINE VACUUM	IN HG	17	
TK REC TEMP	F	98	
AIR TEMP	F	72	
AIR FLOW	CFM	16	
VAPOR FLOW	CFM	13	
FUEL FLOW	CFM/H	80	
WELL VACUUM	IN H2O	13	
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			
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS: Second time I find the valve turn off from propane tank ??

SERVICE TECHNICAN STH DATE 09-15-99 THRIFTY OIL CO # 024

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		
					HOURS	#	1814	SOOT WORK
					ENGINE RPM	RPM	1100	
					ENGINE VACUUM	IN HG	14	
					TK REC TEMP	F	90	
					AIR TEMP	F	70	
					AIR FLOW	CFM	12	
					VAPOR FLOW	CFM	?	
					FUEL FLOW	CFM/H	20	
					WELL VACUUM	IN H2O	12	
					GAS METER		75%	

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

COMMENTS: RESTART ENGINE AGAIN. USED TOO MUCH

SERVICE TECHNICAN J. [Signature] DATE 08-30-99 THRIFTY OIL CO # 056

MAINEOLD														
WELLS	WATER						WELLS	VAPORS						
	ON								ON	RE-1		RE-3		
OFF							OFF							

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM		
					HOURS	#	18:14:8	30 MIN DUPE
					ENGINE RPM	RPM	1100	
					ENGINE VACUUM	IN HG	100/14	
					TK REC TEMP	F	100	
					AIR TEMP	F	70	
					AIR FLOW	CFM	16	
					VAPOR FLOW	CFM	13	
					FUEL FLOW	CFM/H	7.5	
					WELL VACUUM	IN H2O	12	#

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

GAS METER		% 70	
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 Silva DATE 07-24-99 THRIFTY OIL CO # 044

## GROUND WATER AND SOIL CLEAN-UP SYSTEM

MAINFOLD

WATER							VAPORS							
WELLS							WELLS							
ON							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		
					HOURS	#	18148	DON'T WORK
					ENGINE RPM	RPM	1740	
					ENGINE VACUUM	IN HG	14	
					TK REC TEMP	F	98	
					AIR TEMP	F	64	
					AIR FLOW	CFM	16	
					VAPOR FLOW	CFM	13	
					FUEL FLOW	CFM/H	20	
					WELL VACUUM	IN H2O	12	
					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		

COMMENTS: THE GAUGE TIME DON'T WORK - ENGINE USED TOO MUCH OIL ?? RUN O.K. BUT OIL MUST ADD 10. EVERY TIME -

SERVICE TECHNICIAN J. Van DATE 08-16-99 THRIFTY OIL CO # 054



**EARTH MANAGEMENT CO.**  
Environmental Remediation

RECEIVED 11/21/23

AUG 16 1999

054

**FIELD STATUS REPORT**  
**ENVIRONMENTAL**  
**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		
					HOURS	#	18198	DON'T WORK
					ENGINE RPM	RPM	1800	
					ENGINE VACUUM	IN HG	14	
					TK REC TEMP	F	100	
					AIR TEMP	F	76	
					AIR FLOW	CFM	12	
					VAPOR FLOW	CFM	9	
					FUEL FLOW	CFM/H	75	
					WELL VACUUM	IN H2O	13	
					GAS METER		% 90	

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

COMMENTS: *Engine was shut down, because battery fail - Restart again -*

SERVICE TECHNICAN *[Signature]* DATE *8-09-99* THRIFTY OIL CO # *054*



**MAINFOLD**

WELLS		WATER						WELLS		VAPORS					
ON								RE1		RE3				RE6	RE7
OFF															

WELL MONITORING				
WELL NO	DTW	DTP	PT	DTB

RSI SYSTEM			
PARAMETER	U/M	DATA	OBS
TIME	AM/PM		
HOURS	#	18196	
ENGINE RPM	RPM	1780	
ENGINE VACUUM	IN HG	12	
TK REC TEMP	F	100	
AIR TEMP	F	74	
AIR FLOW	CFM	10	
VAPOR FLOW	CFM	7	
FUEL FLOW	CFMH	75	
WELL VACUUM	IN H2O	13	
GAS METER		% 90	
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	UM	LIMIT	DATA
FLOWMETER			
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS: VR and OULET SAMPLING (BENZENE)

SERVICE TECHNICAN [Signature] DATE 8-02-99 THRIFTY OIL CO # 054

T.O.C. SS#

054

VAPOR EXTRACTION SYSTEM MODEL:

RS1 (VE + GWT)

VAPOR READING

DATE:

8-02-1999.

READING	PORT	FREQUENCY	R.O.C. READING (PPM)		PERMIT LIMITS	COMMENTS
			W/ CARBON	W/O CARBON		
TOTAL INLET BEFORE DILUTION.		W				
TOTAL INLET AFTER DILUTION &/OR MIXING.		W				
INTERMEDIATE 1 ( AFTER 1ST SECTION OF THE TREATMENT UNIT ) OR OUTLET FROM ENGINE BEFORE CATALYTIC.		W				
INTERMEDIATE 2.		W				
OUTLET FROM SYSTEM (EXHAUST).		W				
WELLS CONNECTED TO SYSTEM.		M				
WELL ID	ON	OFF				
RE-1	✓		10	30		
RE-3	✓		85	140		
RE-6	✓		25	50		
RE-7	✓		30	100		

THE INSTRUMENT USED: FIO

CALIBRATED AS :

TECHNICIAN NAME: JARBAH P.

MAINFOLD													
WELLS	WATER						WELLS	VAPORS					
	ON								ON	RE 1		RE 3	
OFF							OFF						

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM		
					HOURS	#	18/78	
					ENGINE RPM	RPM	1700	
					ENGINE VACUUM	IN HG	13	
					TK REC TEMP	F	98	
					AIR TEMP	F	82	
					AIR FLOW	CFM	12	
					VAPOR FLOW	CFM	7	
					FUEL FLOW	CFM/H	70	
					WELL VACUUM	IN H2O	13	

HYDROCARBON STRIPPER & VAPOR EXTRACTION SYSTEM W/ACU OR CAT				RSI SYSTEM			
PARAMETER	U/M	LIMIT	DATA	PARAMETER	U/M	DATA	OBS
FLOWMETER				GAS METER		% 10	
ROTAMETER				CATALIST IN	F		
VPI FLOW				CATALIST OUT	F		
VPI VACUUM				EXHAUST HC	PPM/%		
AIR COMPRES				EXHAUST CO	%PPM		
VAPOR				EXHAUST CO2	%		
INLET VAPOR				EXHAUST NOX	%PPM		
TEMPERATURE				CATALYST REPLACEMENT			
LEL				EXHAUST O2	%		
				INLET	PPM		
				OUTLET	PPM		

COMMENTS:

SERVICE TECHNICIAN J. [Signature] DATE 7-29-99 THRIFTY OIL CO # 054

054

MAINFOLD															
WELLS		WATER						WELLS		VAPORS					
ON									PE 1		PE 3			REC	PE 7
OFF															

WELL MONITORING					RSI SYSTEM			
WELL NO	DTW	DTP	PT	DTB	PARAMETER	U/M	DATA	OBS
					TIME	AM/PM		
					HOURS	#	18:63	
					ENGINE RPM	RPM	1800	
					ENGINE VACUUM	IN HG	14	
					TK REC TEMP	F	40	
					AIR TEMP	F	74	
					AIR FLOW	CFM	16	
					VAPOR FLOW	CFM	13	
					FUEL FLOW	CFM/H	70	
					WELL VACUUM	IN H2O	13	
					GAS METER		% 10	
					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			
ROTAMETER			
VPI FLOW			
VPI VACUUM			
AIR COMPRES			
VAPOR			
INLET VAPOR			
TEMPERATURE			
LEL			

COMMENTS: Engine was shut down, 1 restart again 2 run per hour only AIR SAMPLING -

SERVICE TECHNICAN [Signature] DATE 07-07-94 THRIFTY OIL CO # 054

**MAINFOLD**

WELLS	WATER						WELLS	VAPORS					
ON							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	PM	
					HOURS	#	18130	
					ENGINE RPM	RPM	1800	
					ENGINE VACUUM	IN HG	13	
					TK REC TEMP	F	100	
					AIR TEMP	F	68	
					AIR FLOW	CFM	16	
					VAPOR FLOW	CFM	12	
					FUEL FLOW	CFM/H	75	
					WELL VACUUM	IN H2O	13	
					GAS METER		% 20	
HYDROCARBON STRIPPER & VAPOR EXTRACTION SYSTEM W/ACU OR CAT					CATALIST IN	F		
PARAMETER	U/M	LIMIT	DATA		CATALIST OUT	F		
FLOWMETER					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: *System run only few hours ??*

SERVICE TECHNICIAN *P. [Signature]* DATE *06-28-94* THRIFTY OIL CO # *059*

# **APPENDIX B**



### 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.: A135054101 ✓  
Date Received: 09/10/99  
Date Reported: 09/21/99  
Units: ug/L

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
94036	RS-10	09/08/99	09/13/99	<50	50
94037	RS-11	09/08/99	09/13/99	99	50
94038	RS-8	09/08/99	09/13/99	<50	50
94039	RE-7	09/08/99	09/13/99	1700	50
94040	PW-2	09/08/99	09/13/99	100	50
94041	PW-1	09/08/99	09/13/99	<50	50
94042	RE-6	09/08/99	09/13/99	<50	50
94043	RE-2	09/08/99	09/13/99	1400	50
94044	RE-5	09/08/99	09/13/99	68	50
94045	RS-9	09/08/99	09/13/99	<50	50
94046	RE-1	09/08/99	09/13/99	72	50
94047	RE-4	09/08/99	09/13/99	590	50
94048	RE-3	09/08/99	09/13/99	140	50
94049	Trip Blank	09/08/99	09/13/99	<50	50

MRL: Method Reporting Limit

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

  
George Havallas  
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.:** A135054101  
**Date Received:** 09/10/99  
**Date Reported:** 09/21/99  
**Units:** ug/L

	09/08/99	09/08/99	09/08/99	09/08/99	
<b>Date Sampled:</b>	09/08/99	09/08/99	09/08/99	09/08/99	
<b>Date Analyzed:</b>	09/13/99	09/13/99	09/13/99	09/13/99	
<b>AA ID No.:</b>	94036	94037	94038	94039	
<b>Client ID No.:</b>	RS-10	RS-11	RS-8	RE-7	<b>MRL</b>
<b>Compounds:</b>					
Benzene	<0.3	9.1	<0.3	380	0.3
Ethylbenzene	<0.3	<0.3	<0.3	<3	0.3
Toluene	<0.3	0.37	<0.3	<3	0.3
Xylenes	<0.5	<0.5	<0.5	13	0.5

  
\_\_\_\_\_  
**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.: A135054101  
Date Received: 09/10/99  
Date Reported: 09/21/99  
Units: ug/L

Date Sampled:	09/08/99	09/08/99	09/08/99	09/08/99	
Date Analyzed:	09/13/99	09/13/99	09/13/99	09/13/99	
AA ID No.:	94040	94041	94042	94043	
Client ID No.:	PW-2	PW-1	RE-6	RE-2	MRL
<b>Compounds:</b>					
Benzene	<0.3	<0.3	<0.3	<3	0.3
Ethylbenzene	<0.3	<0.3	<0.3	<3	0.3
Toluene	<0.3	<0.3	<0.3	<3	0.3
Xylenes	<0.5	<0.5	<0.5	<5	0.5

  
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.: A135054101  
Date Received: 09/10/99  
Date Reported: 09/21/99  
Units: ug/L

Date Sampled:	09/08/99	09/08/99	09/08/99	09/08/99	
Date Analyzed:	09/13/99	09/13/99	09/13/99	09/13/99	
AA ID No.:	94044	94045	94046	94047	
Client ID No.:	RE-5	RS-9	RE-1	RE-4	MRL
<b>Compounds:</b>					
Benzene	<0.3	<0.3	<0.3	1.5	0.3
Ethylbenzene	<0.3	<0.3	<0.3	<0.6	0.3
Toluene	<0.3	<0.3	<0.3	<0.6	0.3
Xylenes	<0.5	<0.5	<0.5	<1	0.5

  
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.:** A135054101  
**Date Received:** 09/10/99  
**Date Reported:** 09/21/99  
**Units:** ug/L

Date Sampled:	09/08/99	09/08/99	
Date Analyzed:	09/13/99	09/13/99	
AA ID No.:	94048	94049	
Client ID No.:	RE-3	Trip Blank	MRL
<b>Compounds:</b>			
Benzene	0.72	<0.3	0.3
Ethylbenzene	<0.3	<0.3	0.3
Toluene	<0.3	<0.3	0.3
Xylenes	<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 ANALYSIS RESULTS**

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

AA Project No.: A135054101  
Date Received: 09/10/99  
Date Reported: 09/21/99  
Units: ug/L

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
94036	RS-10	09/08/99	09/13/99	<5	5
94037	RS-11	09/08/99	09/13/99	<5	5
94038	RS-8	09/08/99	09/13/99	25	5
94039	RE-7	09/08/99	09/13/99	160	5
94040	PW-2	09/08/99	09/13/99	230	5
94041	PW-1	09/08/99	09/13/99	<5	5
94042	RE-6	09/08/99	09/13/99	<5	5
94043	RE-2	09/08/99	09/13/99	3200	5
94044	RE-5	09/08/99	09/13/99	110	5
94045	RS-9	09/08/99	09/13/99	<5	5
94046	RE-1	09/08/99	09/13/99	120	5
94047	RE-4	09/08/99	09/13/99	1100	5
94048	RE-3	09/08/99	09/13/99	230	5
94049	Trip Blank	09/08/99	09/13/99	<5	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 #054  
**Method:** EPA 8020 (BTEX)  
**Sample ID:** Matrix Spike  
**Concentration:** 20 ug/L

**AA ID No.:** 94036  
**Project No.:** N/A  
**AA Project No.:** A135054101  
**Date Analyzed:** 09/13/99  
**Date Reported:** 09/21/99

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept.Rec. Range (%)
Benzene	21.07	105	21.61	108	3	65 - 135
Ethylbenzene	20.08	100	20.14	101	1	77 - 123
Toluene	20.09	100	20.51	103	3	66 - 134
Xylenes	20.04	100	20.31	102	2	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.: 94036  
Project No.: N/A  
AA Project No.: A135054101  
Date Analyzed: 09/13/99  
Date Reported: 09/21/99

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept. Rec. Range (%)
Gasoline Range Organics	450	90	450	90	0	59 - 149

  
George Havalias  
Laboratory Director



# AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311

DATE: 09-08-99

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(818) 998-5548

1-800-533-TEST

1-800-533-8378

FAX (818) 998-7258

PAGE 1 OF 1

AA Client <u>T.O.C.</u>						Phone <u>362/921-3581</u>		Sampler's Name <u>SERENA P.</u>										
Project Manager <u>JEFF SURYARUSUMITA</u>						P.O. No.		Sampler's Signature <u>[Signature]</u>										
Project Name <u>Q. 5.</u>						Project No.		Project Manager's Signature										
Job Name and Address <u>2504 CASTRO VALLEY Blvd.</u> <u>CASTRO VALLEY, CA. 94546</u>						<b>ANALYSIS REQUIRED</b>												
						Detection Limits												
						Test Name												
						TPH BTX MIBK												
						Test Requirements												
AA ID.#	Client's ID.	Date	Time	Sample Type	Number of Containers	TPH	BTX	MIBK										
94036	RS-10	9-08-99	16:50	WATER	3	X	X	X										
94037	RS-11	↑	17:00	↑	3	X	X	X										
94038	RS-8	↑	17:05	↑	3	X	X	X										
94039	RE-7	↑	17:10	↑	3	X	X	X										
94040	PW-2	↑	17:15	↑	3	X	X	X										
94041	PW-1	↑	17:20	↑	3	X	X	X										
94042	RE-6	↑	17:25	↑	3	X	X	X										
94043	RE-2	↑	17:30	↑	3	X	X	X										
94044	RE-5	↑	17:35	↑	3	X	X	X										
94045	RS-9	↑	17:45	↑	3	X	X	X										
94046	RE-1	↑	17:00	↑	3	X	X	X										
94047	RE-4	↑	17:55	↑	3	X	X	X										
94048	RE-3	↑	18:00	↑	3	X	X	X										
94049	TRIP BLANK	↓	7:30	↓	2	X	X											
<b>SAMPLE INTEGRITY-TO BE FILLED IN BY RECEIVING LAB</b>						Relinquished by: <u>[Signature]</u>		Date <u>09-08-99</u>	Time <u>17:00</u>	Received by: <u>CA. OVERNIGHT</u>								
Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						Relinquished by: <u>CA. OVERNIGHT</u>		Date <u>09-08-99</u>	Time <u>17:30</u>	Received by:								
Samples Properly Cooled Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						Relinquished by:		Date <u>9/10</u>	Time <u>10:00</u>	Received by: <u>[Signature]</u>								
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>A135054101</u>						Relinquished by:		Date	Time	Received by:								

# APPENDIX C





**LABORATORY ANALYSIS RESULTS**

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

AA Project No.: A135054102 ✓  
Date Received: 09/15/99  
Date Reported: 09/23/99  
Units: ppmV

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
94314	Inlet	09/14/99	09/15/99	2200	5
94315	Outlet	09/14/99	09/15/99	110	5
94316	RE-1	09/14/99	09/15/99	5400	5
94317	RE-3	09/14/99	09/15/99	2200	5
94318	RE-6	09/14/99	09/15/99	650	5
94319	RE-7	09/14/99	09/15/99	2800	5

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

  
George Havalias  
Laboratory Director



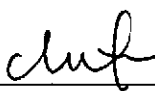
## LABORATORY ANALYSIS RESULTS

Page 1

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

AA Project No.: A135054102  
Date Received: 09/15/99  
Date Reported: 09/23/99  
Units: ppmV

Date Sampled:	09/14/99	09/14/99	09/14/99	09/14/99	
Date Analyzed:	09/15/99	09/15/99	09/15/99	09/15/99	
AA ID No.:	94314	94315	94316	94317	
Client ID No.:	Inlet	Outlet	RE-1	RE-3	MRL
<b>Compounds:</b>					
Benzene	11	0.39	24	8.4	0.1
Ethylbenzene	11	1.2	29	11	0.1
Toluene	36	2.8	120	41	0.1
Xylenes	55	7.4	140	57	0.1

  
George Havalias  
Laboratory Director



**LABORATORY ANALYSIS RESULTS**

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

**AA Project No.:** A135054102  
**Date Received:** 09/15/99  
**Date Reported:** 09/23/99  
**Units:** ppmV

Date Sampled:	09/14/99	09/14/99	
Date Analyzed:	09/15/99	09/15/99	
AA ID No.:	94318	94319	
Client ID No.:	RE-6	RE-7	MRL
<b>Compounds:</b>			
Benzene	1.2	9.6	0.1
Ethylbenzene	8.3	15	0.1
Toluene	16	50	0.1
Xylenes	51	82	0.1

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: Vapor  
Method: MTBE (EPA 8020)

AA Project No.: A135054102  
Date Received: 09/15/99  
Date Reported: 09/23/99  
Units: ppmv

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
94314	Inlet	09/14/99	09/15/99	9.9	1
94315	Outlet	09/14/99	09/15/99	<1	1
94316	RE-1	09/14/99	09/15/99	30	1
94317	RE-3	09/14/99	09/15/99	8.5	1
94318	RE-6	09/14/99	09/15/99	<4	1
94319	RE-7	09/14/99	09/15/99	9.3	1

MRL: Method Reporting Limit

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

George Havalias  
Laboratory Director



# AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

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(818) 998-5548

1-800-533-TEST

1-800-533-8378

FAX (818) 998-7258

DATE: 09-14-99

PAGE 1 OF 1

AA Client <u>THRIFTY OIL CO.</u>	Phone <u>(562) 921-3581</u>	Sampler's Name <u>SERBAH P.</u>
Project Manager <u>JEFF SURYARUSUMA</u>	P.O. No.	Sampler's Signature <u>[Signature]</u>
Project Name <u>VAPOR SAMPLING</u>	Project No.	Project Manager's Signature

						ANALYSIS REQUIRED										Test Requirements				
Job Name and Address <u>2504 CASTRO VALLEY Blvd. CASTRO VALLEY CA 94546</u>						Detection Limits														
AA ID.#	Client's ID.	Date	Time	Sample Type	Number of Containers	TPH	BTEX	MIBK												
94314	INLET	09-14-99	14:30	VAPOR	1 Bag	X	X	X												
94315	OUTLET	↓	15:00	↓	1 Bag	X	X	X												
94316	RE-1	↓	15:10	↓	1 Bag	X	X	X												
94317	RE-3	↓	15:15	↓	1 Bag	X	X	X												
94318	RE-6	↓	15:20	↓	1 Bag	X	X	X												
94319	RE-7	↓	15:25	↓	1 Bag	X	X	X												

<b>SAMPLE INTEGRITY-TO BE FILLED IN BY RECEIVING LAB</b>		Relinquished by: <u>[Signature]</u>	Date —	Time 17:00	Received by: <u>CA-OVERNIGHT</u>
Sample Intact	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Relinquished by: <u>CA-OVERNIGHT</u>	Date —	Time 17:30	Received by:
Sample Properly Cooled	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Relinquished by:	Date 9/15/99	Time 0900	Received by: <u>[Signature]</u>
Sample Accepted	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Relinquished by:	Date	Time	Received by:
If Not Why:					
AA Project No.	<u>A135054102</u>				



**LABORATORY ANALYSIS RESULTS**

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

**AA Project No.:** A135054100 ✓  
**Date Received:** 08/30/99  
**Date Reported:** 09/09/99  
**Units:** ppmV

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
93385	Inlet	08/30/99	08/31/99	<5	5
93386	Outlet	08/30/99	08/31/99	<5	5

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

A handwritten signature in cursive script, appearing to read 'G. Havallas'.

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



**LABORATORY ANALYSIS RESULTS**

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

**AA Project No.:** A135054100  
**Date Received:** 08/30/99  
**Date Reported:** 09/09/99  
**Units:** ppmV

---

<b>Date Sampled:</b>	<b>08/30/99</b>	<b>08/30/99</b>	
<b>Date Analyzed:</b>	<b>08/31/99</b>	<b>08/31/99</b>	
<b>AA ID No.:</b>	<b>93385</b>	<b>93386</b>	
<b>Client ID No.:</b>	<b>Inlet</b>	<b>Outlet</b>	<b>MRL</b>
<b><u>Compounds:</u></b>			
Benzene	<0.1	<0.1	0.1
Ethylbenzene	0.12	<0.1	0.1
Toluene	0.23	<0.1	0.1
Xylenes	0.77	<0.1	0.1

---

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

George Havallas  
Laboratory Director



**LABORATORY ANALYSIS RESULTS**

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

**AA Project No.:** A135054100  
**Date Received:** 08/30/99  
**Date Reported:** 09/09/99  
**Units:** ppmv

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
93385	Inlet	08/30/99	08/31/99	1.6	1
93386	Outlet	08/30/99	08/31/99	<1	1

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

**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: 08-20-99

PAGE 1 OF 1

AA Client <b>THRIFTY OIL CO.</b>				Phone <b>(662) 921-3581</b>		Sampler's Name <b>SERBATH P -</b>		
Project Manager <b>JEFF SURYAKUSUMA</b>				P.O. No.		Sampler's Signature <i>[Signature]</i>		
Project Name <b>AIR SAMPLING</b>				Project No.		Project Manager's Signature		
Job Name and Address <b>2504 CASTRO VALLEY Blvd - CASTRO VALLEY, CA. 94546</b>				<b>ANALYSIS REQUIRED</b>				
				Detection Limits		Test Requirements		
				Test Name				
AA ID.#	Client's ID.	Date	Time	Sample Type	Number of Containers	TPH	BTEX	
93385	INLET	08-20-99	10:30 <del>00</del>	AIR	1 Bag.	X	X	
93386	OUTLET	08-20-99	10:20 <del>00</del>	AIR	1 BAG.	X	X	
<b>SAMPLE INTEGRITY-TO BE FILLED IN BY RECEIVING LAB</b>				Relinquished by: <i>[Signature]</i>		Date	Time	Received by:
Samples Intact Yes _____ No _____				CH. OVERNIGHT		8-20-99	17:00	CH. OVERNIGHT
Samples Properly Cooled Yes _____ No _____				CH. OVERNIGHT		8-20-99	17:30	Mark Baklawa
Samples Accepted Yes _____ No _____				Relinquished by:		Date	Time	Received by:
If Not Why: _____						8/31/99		
AA Project No. <b>A135054-100</b>				Relinquished by:		Date	Time	Received by:



**LABORATORY ANALYSIS RESULTS**

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

AA Project No.: A135054-99 ✓  
Date Received: 08/25/99  
Date Reported: 08/31/99  
Units: ppmV

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
93041	In	08/24/99	05/26/99	53	5
93042	Out	08/24/99	08/26/99	<5	5

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: Vapor  
Method: EPA 8020 (BTEX)

AA Project No.: A135054-99  
Date Received: 08/25/99  
Date Reported: 08/31/99  
Units: ppmV

Date Sampled:	08/24/99	08/24/99	
Date Analyzed:	08/26/99	08/26/99	
AA ID No.:	93041	93042	
Client ID No.:	In	Out	MRL
<b>Compounds:</b>			
Benzene	1.4	<0.1	0.1
Ethylbenzene	2.5	<0.1	0.1
Toluene	8.1	<0.1	0.1
Xylenes	14	<0.1	0.1

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: Vapor  
Method: MTBE (EPA 8020)

AA Project No.: A135054-99  
Date Received: 08/25/99  
Date Reported: 08/31/99  
Units: ppmv

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
93041	In	08/24/99	08/26/99	<1	1
93042	Out	08/24/99	08/26/99	<1	1

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

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(818) 998-5547

(818) 998-5548

1-800-533-TEST

1-800-533-8378

FAX (818) 998-7258

DATE: 08-24-99

PAGE 1 OF 1

AA Client <b>THRIFTY OIL CO.</b>						Phone		Sampler's Name <b>SEBASTIAN P.</b>		
Project Manager <b>JEFF SURYARUSUMA</b>						P.O. No.		Sampler's Signature <i>[Signature]</i>		
Project Name <b>AIR SAMPLING</b>						Project No.		Project Manager's Signature		
Job Name and Address <b>054</b>						<b>ANALYSIS REQUIRED</b>				
						Detection Limits		Test Requirements		
						Test Name				
AA ID.#	Client's ID.	Date	Time	Sample Type	Number of Containers	TDH	RTEV	MTBE		
X 93041	IN	8-24-99	8:10	AIR	1 Bag	X	X	X		
93042	OUT	8-24-99	8:20	AIR	1 Bag	X	X	X		
SAMPLE INTEGRITY-TO BE FILLED IN BY RECEIVING LAB						Relinquished by: <i>[Signature]</i>		Date: 8-24-99	Time: 12:00	Received by: CH. OVERNIGHT
Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						Relinquished by: CH. OVERNIGHT		Date: 8-24-99	Time: 12:30	Received by: _____
Samples Properly Cooled Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						Relinquished by: _____		Date: 8-24-99	Time: 0900	Received by: <i>[Signature]</i>
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. <b>A135054-99</b>						Relinquished by: _____		Date: _____	Time: _____	Received by: _____



**LABORATORY ANALYSIS RESULTS**

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

**AA Project No.:** A135054-98  
**Date Received:** 08/04/99  
**Date Reported:** 08/09/99  
**Units:** ug

AA I.D. No.	Client I.D. No.	Date Sampled	Date Extracted	Date Analyzed	Results	MRL
91927	Effluent	08/02/99	08/04/99	08/04/99	<0.1	0.1
91928	Trip Blank	08/02/99	08/04/99	08/04/99	<0.1	0.1

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

  
George Havalias  
Laboratory Director



AUG 13 1999  
ENVIRONMENTAL

**LABORATORY ANALYSIS RESULTS**

Page 1

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

AA Project No.: A135054-97  
Date Received: 07/23/99  
Date Reported: 08/11/99  
Units: ppmV

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
91249	Outlet	07/22/99	07/23/99	<5	5

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

George Havaffas  
Laboratory Director



# LABORATORY ANALYSIS RESULTS

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

AA Project No.: A135054-97  
Date Received: 07/23/99  
Date Reported: 08/11/99  
Units: ppmv

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
91249	Outlet	07/22/99	07/23/99	<1	1

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

  
George Havalias  
Laboratory Director





# LABORATORY ANALYSIS RESULTS

Page 1

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

AA Project No.: A135054-97  
Date Received: 07/23/99  
Date Reported: 08/11/99  
Units: ppmV

Date Sampled:	07/22/99	
Date Analyzed:	07/23/99	
AA ID No.:	91249	
Client ID No.:	Outlet	
<b>Compounds:</b>		<b>MRL</b>
Benzene	<0.1	0.1
Ethylbenzene	<0.1	0.1
Toluene	<0.1	0.1
Xylenes	<0.1	0.1

MRL: Method Reporting Limit

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

George Havallas  
Laboratory Director





**LABORATORY ANALYSIS RESULTS**

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

AA Project No.: A135054-96 ✓  
Date Received: 07/14/99  
Date Reported: 07/19/99  
Units: ppmV

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
90796	Outlet	07/12/99	07/14/99	<5	5

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

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



## LABORATORY ANALYSIS RESULTS

Page 1

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

AA Project No.: A135054-96  
Date Received: 07/14/99  
Date Reported: 07/19/99  
Units: ppmV

---

Date Sampled:	07/12/99	
Date Analyzed:	07/14/99	
AA ID No.:	90796	
Client ID No.:	Outlet	MRL

---

<u>Compounds:</u>		
Benzene	0.11	0.1
Ethylbenzene	0.11	0.1
Toluene	0.63	0.1
Xylenes	0.70	0.1

---

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: Vapor  
Method: MTBE (EPA 8020)

AA Project No.: A135054-96  
Date Received: 07/14/99  
Date Reported: 07/19/99  
Units: ppmv

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
90796	Outlet	07/12/99	07/14/99	1.1	1

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

George Havallas  
Laboratory Director



**LABORATORY ANALYSIS RESULTS**

Client: Thrifty Oil Company  
Project No.: N/A  
Project Name: SS# 054  
Sample Matrix: Vapor  
Method: MTBE (EPA 8260)

AA Project No.: A135054-96  
Date Received: 07/14/99  
Date Reported: 07/19/99  
Units: ppmv

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
90796	Outlet	07/12/99	07/14/99	1.5	1

MRL: Method Reporting Limit

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

George Havailas  
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: 7-12-99  
PAGE: 1 OF 1

AA Client <u>THRIFTY OIL CO.</u>	Phone <u>(562) 921-3581</u>	Sampler's Name <u>SERBATA P.</u>
Project Manager <u>JEFF JURYAKUSUMA</u>	P.O. No.	Sampler's Signature <u>[Signature]</u>
Project Name <u>TOTAL OUTLET</u>	Project No.	Project Manager's Signature

						ANALYSIS REQUIRED										Test Requirements		
						Detection Limits												
						Test Name												
						T DET	B BENE	M TBE										
AA ID.#	Client's ID.	Date	Time	Sample Type	Number of Containers													
<u>90796</u>	<u>OUTLET</u>	<u>11205</u>	<u>7-12-99</u>	<u>VAPOR</u>	<u>1 BAO</u>	X	X	X										<u>confirm 5260 detection</u>
<u>A135054-96</u>																		

<b>SAMPLE INTEGRITY TO BE FILLED IN BY RECEIVING LAB</b>				Relinquished by: <u>[Signature]</u>		Date <u>7/12/99</u>	Time <u>17:00</u>	Received by: <u>CA OVERHIOTET</u>
Sample Intact	Yes _____ No _____			Relinquished by: <u>CA. OVERHIOTET</u>		Date <u>7-12-99</u>	Time <u>17:30</u>	Received by: <u>Mark Baklaya</u>
Sample Property Cooled	Yes _____ No _____			Relinquished by:		Date <u>7/14/99</u>	Time <u>8:30 AM</u>	Received by:
Sample Accepted	Yes _____ No _____			Relinquished by:		Date	Time	Received by:
If Not Why:	_____			Relinquished by:		Date	Time	Received by:
AA Project No.	<u>A135054-96</u>			Relinquished by:		Date	Time	Received by:



**LABORATORY ANALYSIS RESULTS**

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

AA Project No.: A135054-94 ✓  
Date Received: 05/06/99  
Date Reported: 05/12/99  
Units: ppmV

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
87346	Inlet	05/05/99	05/06/99	<5	5

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

George Havallas  
Laboratory Director





## LABORATORY ANALYSIS RESULTS

Page 1

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

AA Project No.: A135054-94  
Date Received: 05/06/99  
Date Reported: 05/12/99  
Units: ppmV

---

Date Sampled:	05/05/99	
Date Analyzed:	05/06/99	
AA ID No.:	87346	
Client ID No.:	Inlet	

---

<u>Compounds:</u>		MRL
Benzene	<0.1	0.1
Ethylbenzene	<0.1	0.1
Toluene	0.13	0.1
Xylenes	<0.1	0.1

---

MRL: Method Reporting Limit

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

George Havallas  
Laboratory Director




**LABORATORY ANALYSIS RESULTS**

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

AA Project No.: A135054-94  
Date Received: 05/06/99  
Date Reported: 05/12/99  
Units: ppmv

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
87346	Inlet	05/05/99	05/06/99	<1	1

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: Vapor  
Method: EPA 8015M(Gasoline)

AA Project No.: A135054-94 ✓  
Date Received: 05/06/99  
Date Reported: 05/12/99  
Units: ppmV

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
87346	Inlet	05/05/99	05/06/99	<5	5

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

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



# AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

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(818) 998-5547

(818) 998-5548

1-800-533-TEST

1-800-533-8378

FAX (818) 998-7258

DATE: 05.05-99

PAGE 1 OF 4

AA Client <b>THRIFTY OIL CO.</b>	Phone <b>562/971-3181</b>	Sampler's Name <b>SURBUT P.</b>
Project Manager <b>JEFF SURYAKUSUMA</b>	P.O. No.	Sampler's Signature <b>[Signature]</b>
Project Name	Project No.	Project Manager's Signature

Job Name and Address <b>33 R054</b>	<b>ANALYSIS REQUIRED</b>		Test Requirements
	Detection Limits		

AA ID.#	Client's ID.	Date	Time	Sample Type	Number of Containers	TPH	BTEX	MTBE					Test Requirements	
87346	INLET	05.05.99	7:30	AIR	1 BAG	X	X	X						IF MTBE DETECTION CONFORM WITH 8260 -
<i>(Large diagonal line across the table)</i>														

<b>SAMPLE INTEGRITY-TO BE FILLED IN BY RECEIVING LAB</b>				Relinquished by: <b>[Signature]</b>	Date —	Time —	Received by: <b>CA. OVERMIGHTY</b>
Sample Intact	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Relinquished by: <b>CA. OVERMIGHTY</b>	Date 5/6/99	Time 10/2	Received by: <b>[Signature]</b>
Sample Properly Cooled	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Relinquished by:	Date	Time	Received by:
Sample 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.	<b>A135054-94</b>			Relinquished by:	Date	Time	Received by:

# APPENDIX D



**LABORATORY ANALYSIS RESULTS**

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

AA Project No.: A135054102 ✓  
Date Received: 09/15/99  
Date Reported: 09/23/99  
Units: ppmV

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
94314	Inlet	09/14/99	09/15/99	2200	5
94315	Outlet	09/14/99	09/15/99	110	5
94316	RE-1	09/14/99	09/15/99	5400	5
94317	RE-3	09/14/99	09/15/99	2200	5
94318	RE-6	09/14/99	09/15/99	650	5
94319	RE-7	09/14/99	09/15/99	2800	5

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: Vapor  
Method: EPA 8020 (BTEX)

AA Project No.: A135054102  
Date Received: 09/15/99  
Date Reported: 09/23/99  
Units: ppmV

Date Sampled:	09/14/99	09/14/99	09/14/99	09/14/99	
Date Analyzed:	09/15/99	09/15/99	09/15/99	09/15/99	
AA ID No.:	94314	94315	94316	94317	
Client ID No.:	Inlet	Outlet	RE-1	RE-3	MRL
<b>Compounds:</b>					
Benzene	11	0.39	24	8.4	0.1
Ethylbenzene	11	1.2	29	11	0.1
Toluene	36	2.8	120	41	0.1
Xylenes	55	7.4	140	57	0.1

  
George Havallas  
Laboratory Director



**LABORATORY ANALYSIS RESULTS**

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

**AA Project No.:** A135054102  
**Date Received:** 09/15/99  
**Date Reported:** 09/23/99  
**Units:** ppmV

Date Sampled:	09/14/99	09/14/99	
Date Analyzed:	09/15/99	09/15/99	
AA ID No.:	94318	94319	
Client ID No.:	RE-6	RE-7	MRL
<b>Compounds:</b>			
Benzene	1.2	9.6	0.1
Ethylbenzene	8.3	15	0.1
Toluene	16	50	0.1
Xylenes	51	82	0.1

MRL: Method Reporting Limit

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

  
\_\_\_\_\_  
**George Havallas**  
Laboratory Director





**LABORATORY ANALYSIS RESULTS**

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

**AA Project No.:** A135054102  
**Date Received:** 09/15/99  
**Date Reported:** 09/23/99  
**Units:** ppmv

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
94314	Inlet	09/14/99	09/15/99	9.9	1
94315	Outlet	09/14/99	09/15/99	<1	1
94316	RE-1	09/14/99	09/15/99	30	1
94317	RE-3	09/14/99	09/15/99	8.5	1
94318	RE-6	09/14/99	09/15/99	<4	1
94319	RE-7	09/14/99	09/15/99	9.3	1

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 09-14-99

PAGE 1 OF 1

AA Client <u>THRIFTY OIL CO.</u>						Phone <u>(562) 921-3581</u>		Sampler's Name <u>SERBAY P.</u>							
Project Manager <u>JEFF SURYAKUSUMA</u>						P.O. No.		Sampler's Signature <u>[Signature]</u>							
Project Name <u>VAPOR SAMPLING</u>						Project No.		Project Manager's Signature							
Job Name and Address <u>2504 CASTRO VALLEY Blvd. CASTRO VALLEY CA 94546</u>						<b>ANALYSIS REQUIRED</b>				Test Requirements					
						Detection Limits		Test Name				<table border="1" style="width:100%; height: 100px;"> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">MTRB</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		TPH	BTEX
TPH	BTEX	MTRB													
AA ID.#	Client's ID.	Date	Time	Sample Type	Number of Containers										
94314	INLET	09-14-99	14:30	VAPOR	1 Bag	X	X	X							
94315	OUTLET	↑	15:00	↑	1 Bag	X	X	X							
94316	RE-1	↓	15:10	↓	1 Bag	X	X	X							
94317	RE-3	↓	15:16	↓	1 Bag	X	X	X							
94318	RE-6	↓	15:20	↓	1 Bag	X	X	X							
94319	RE-7	↓	15:25	↓	1 Bag	X	X	X							

<b>SAMPLE INTEGRITY-TO BE FILLED IN BY RECEIVING LAB</b>				Relinquished by: <u>[Signature]</u>		Date	Time	Received by: <u>CA-OVERNIGHT</u>	
Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				Relinquished by: <u>CA-OVERNIGHT</u>		Date	Time	Received by:	
Samples Properly Cooled Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				Relinquished by: _____		Date	Time	Received by: <u>[Signature]</u>	
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>A135054102</u>				Relinquished by: _____		Date	Time	Received by:	