

# THRIFTY OIL CO.

April 30, 1999

O.9901

Ms. Juliet Shin  
Department of Environmental Health  
Hazardous Materials Specialist  
1131 Harbor Bay Parkway  
Suite 250  
Alameda, CA 94502-6577

RE: **Thrifty Oil Co. Station #052**  
20200 Hesperian Blvd.  
Hayward, CA 94541  
1st Quarterly 1999, Status Report

Dear Ms. Shin:

Presented herewith is the First Quarter 1999, Status Report for the above referenced site, submitted for your review and files.

If you have any question or comments, please contact the undersigned in this report at (562) 921-3581.

Sincerely Yours,



Chris Panaitescu  
General Manager  
Environmental Affairs

c: ARCO Products Company  
File

ENVIRONMENTAL  
PROTECTION  
99 MAY -7 AM 9:35



# THRIFTY OIL CO.

April 30, 1999

Ms. Juliet Shin  
Department of Environmental Health  
Hazardous Materials Specialist  
1131 Harbor Bay Parkway  
Suite 250  
Alameda, CA 94502-6577

RE: **Former Thrifty Oil Co. Station #052**  
20200 Hesperian Boulevard  
Hayward, CA 94541  
*1st Quarterly 1999, Status Report*

Dear Ms. Shin:

Presented herein is the First Quarter 1999, Status Report prepared for Former Thrifty Oil Station #052 located at 20200 Hesperian Boulevard, Hayward, California 94541 (**Figure 1**). Presented in this report are the results of the quarterly groundwater monitoring program conducted during the First Quarter 1999. Thrifty Oil Co. (Thrifty) has retained the services of Earth Management Company (EMC) to conduct quarterly monitoring and sampling activities at the site. The data is presented in this report by Thrifty's in-house environmental staff.

## Groundwater Monitoring

Depth to groundwater is measured in each monitoring well on a quarterly basis. Historical gauging data obtained from December 1991 through January 1999 are presented in **Table 1**. In general, groundwater occurs under water table conditions beneath the station at depths ranging from 9.50 feet from top of casing (toc) in monitoring well MW-3 to 14.45 feet from toc in monitoring well A-7. A groundwater elevation contour map based upon January 13, 1999 data is also presented as **Figure 1**. Groundwater flow direction is toward a low depression from the northwest at 0.03 feet/foot and from the southeast at 0.04 feet/foot.

## Groundwater Sampling

As part of the on-going groundwater monitoring program, groundwater samples were obtained from monitoring wells AR-1, AR-2, MW-1, MW-2, MW-3, A-4, A-5, A-6, A-7, A-8, A-9, and A-10 on January 13, 1999. Each sample was collected using a disposal bailer. Groundwater samples were obtained by EMC and delivered in a chilled state following strict Chain-of Custody procedures to a state certified laboratory and analyzed for total petroleum hydrocarbons (TPH) by EPA method 8015 modified for gasoline, and for benzene, toluene, ethylbenzene, xylenes, and MTBE by EPA method 8020.



A summary of historical analytical sampling results are provided in **Table 1**, and copies of the analytical laboratory reports and Chain-of-Custody are contained in **Appendix A**.

The only total petroleum hydrocarbons (TPH-g) concentration above 50 ug/L was reported in a sample collected from monitoring well MW-2 (650 ug/L). A TPH isoconcentration map is included in **Figure 2**.

The only benzene concentration above 1 ug/L was detected in monitoring well MW-2 (5.8 ug/L). A benzene isoconcentration map is presented in **Figure 3**.

MTBE was not detected any of the monitoring wells both on and off-site. Laboratory MTBE results are plotted on **Figure 4**.

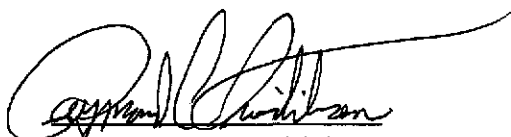
### CONCLUSIONS

Thrifty requested closure of this site on August 22, 1998, and due to the results of the recent groundwater sampling events, Thrifty feels that no further action should be required at this site.


Thrifty plans to sample under each dispenser for TPH-g, BTEX and MTBE by EPA method 8020; if MTBE is detected it will be verified by EPA method 8260. Thrifty will inform your office of the proposed sampling event, so there can be an mutual agreement as to when we can meet on site.

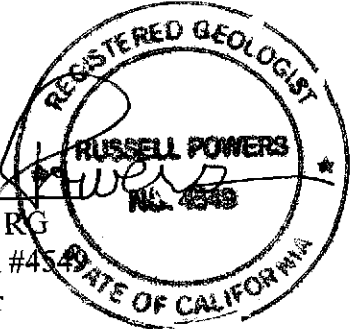
All interpretations expressed in this report are based upon review of data collected by EMC. Should you have any questions or require additional information, please contact the undersigned at (562) 921-3581, X376.

Prepared by:

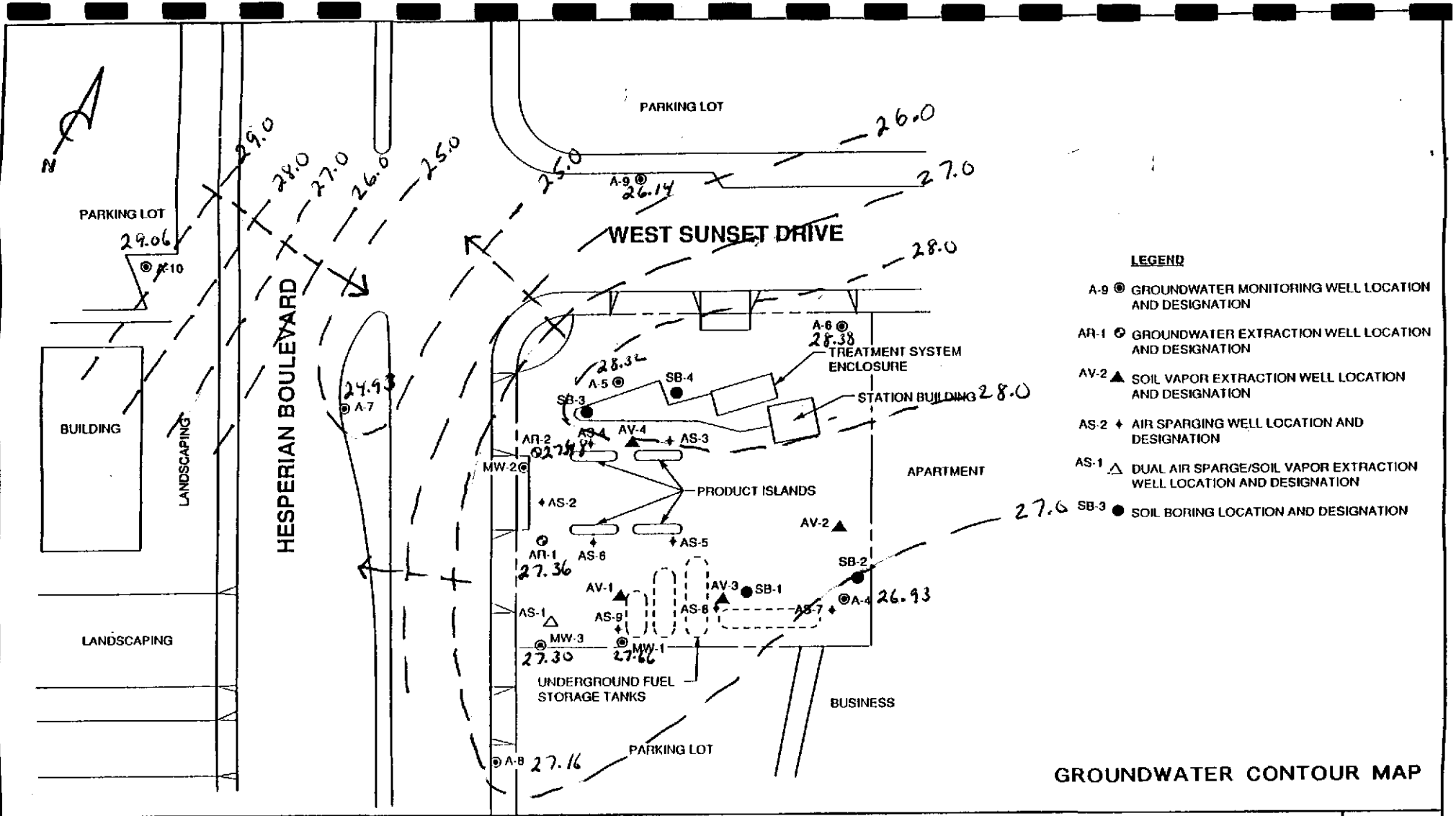
  
Raymond C. Friedrichsen  
Project Manager  
Environmental Geologist

Reviewed by:

  
Russell Powers, RG  
CA Registration #43449  
Project Manager



# FIGURES

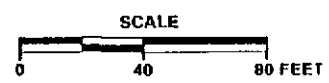


**LEGEND**

- A-9 ● GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- AR-1 ● GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION
- AV-2 ▲ SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
- AS-2 + AIR SPARGING WELL LOCATION AND DESIGNATION
- AS-1 ▲ DUAL AIR SPARGE/SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
- SB-3 ● SOIL BORING LOCATION AND DESIGNATION

**GROUNDWATER CONTOUR MAP**

THRIFTY OIL CO.



ARCO SERVICE STATION 5387  
20200 Hesperian Boulevard at West Sunset Drive  
Hayward, California

WELL LOCATION MAP

FIGURE:

1



PARKING LOT

A-10  
ND

BUILDING

LANDSCAPING

LANDSCAPING

HESPERIAN BOULEVARD

A-7  
ND

PARKING LOT

A-9  
ND

WEST SUNSET DRIVE

A-6  
ND

TREATMENT SYSTEM ENCLOSURE

STATION BUILDING

APARTMENT

PRODUCT ISLANDS

AV-2

AV-1  
AS-9  
AS-8  
AS-7  
A-4  
ND

BUSINESS

UNDERGROUND FUEL STORAGE TANKS

PARKING LOT

A-8  
ND

**LEGEND**

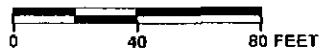
- A-9 ● GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- AR-1 ⊕ GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION
- AV-2 ▲ SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
- AS-2 † AIR SPARGING WELL LOCATION AND DESIGNATION
- AS-1 △ DUAL AIR SPARGE/SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
- SB-3 ● SOIL BORING LOCATION AND DESIGNATION

SOURCE: MAP BY GEOSTRATEGIES INC.



PACIFIC ENVIRONMENTAL GROUP, INC.

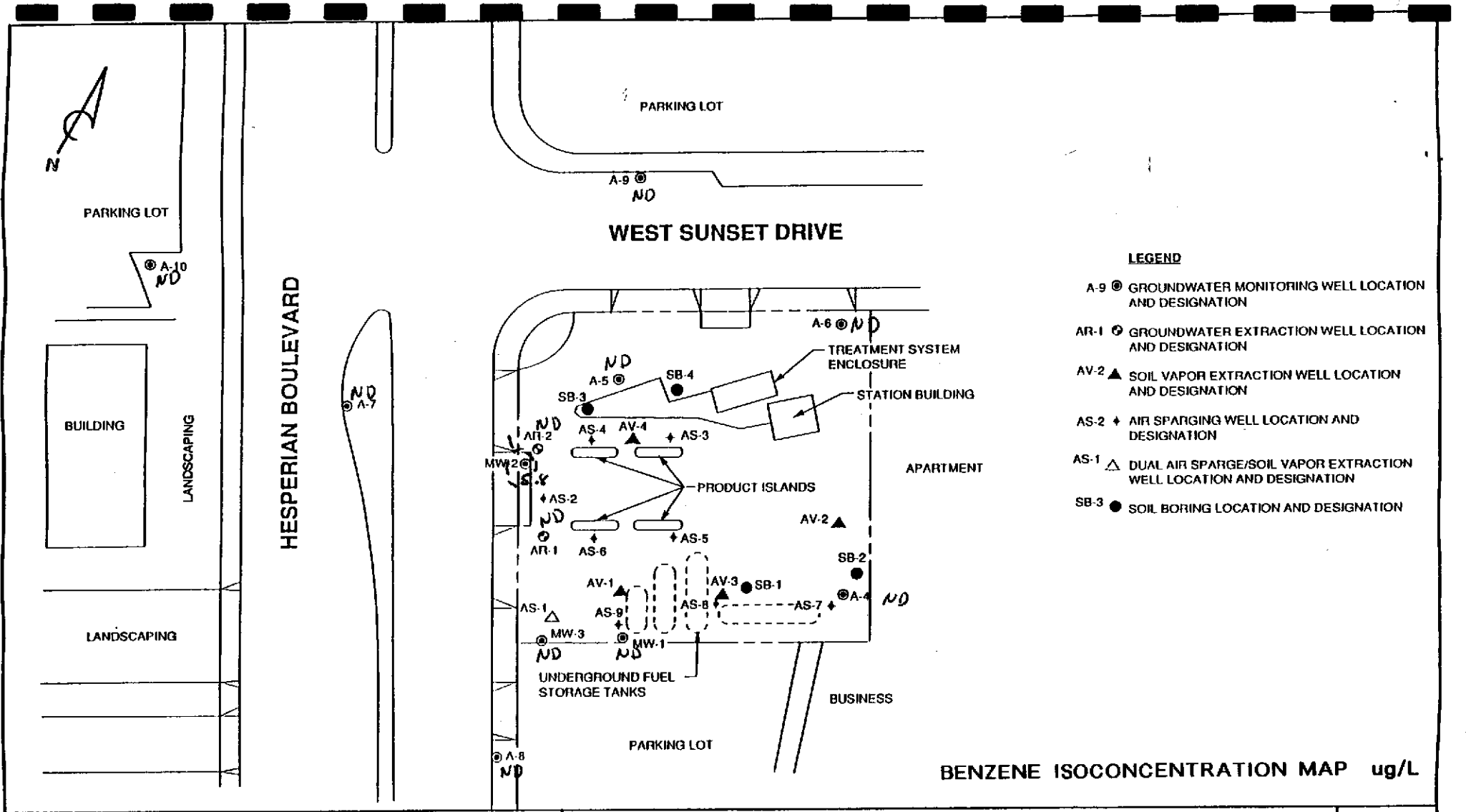
SCALE



ARCO SERVICE STATION 5387  
20200 Hesperian Boulevard at West Sunset Drive  
Hayward, California

WELL LOCATION MAP

FIGURE:  
2  
PROJECT:  
330-110.5A

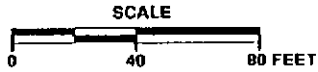


**LEGEND**

- A-9 ⊙ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- AR-1 ⊙ GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION
- AV-2 ▲ SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
- AS-2 + AIR SPARGING WELL LOCATION AND DESIGNATION
- AS-1 △ DUAL AIR SPARGE/SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
- SB-3 ● SOIL BORING LOCATION AND DESIGNATION

**BENZENE ISOCONCENTRATION MAP ug/L**

THRIFTY OIL CO.



ARCO SERVICE STATION 5387  
20200 Hesperian Boulevard at West Sunset Drive  
Hayward, California

WELL LOCATION MAP

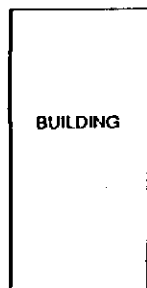
FIGURE:

3



PARKING LOT

A-10  
ND



BUILDING

LANDSCAPING

HESPERIAN BOULEVARD



A-7  
ND

PARKING LOT

A-9  
ND

WEST SUNSET DRIVE

A-6  
ND

TREATMENT SYSTEM ENCLOSURE

STATION BUILDING

APARTMENT

PRODUCT ISLANDS

AV-2

SB-2

A-4  
ND

BUSINESS

MW-2  
ND

AR-1  
ND

AS-1  
ND

MW-3  
ND

A-8  
ND

AV-1

AS-8

MW-1  
ND

PARKING LOT

UNDERGROUND FUEL STORAGE TANKS

A-5  
ND

SB-3

AS-4

AV-4

AS-3

AS-6

AS-5

AS-8

AS-7

SB-4

AS-4

AV-4

AS-3

AS-2

AS-6

AS-5

AS-8

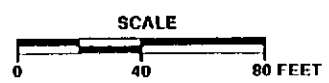
AS-7

LEGEND

- A-9 ● GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- AR-1 ● GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION
- AV-2 ▲ SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
- AS-2 + AIR SPARGING WELL LOCATION AND DESIGNATION
- AS-1 ▲ DUAL AIR SPARGE/SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
- SB-3 ● SOIL BORING LOCATION AND DESIGNATION

MTBE ISOCONCENTRATION MAP ug/L

THRIFTY OIL CO.



ARCO SERVICE STATION 5387  
20200 Hesperian Boulevard at West Sunset Drive  
Hayward, California

WELL LOCATION MAP

FIGURE:

4



**TABLE(S)**

**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #052, HAYWARD, 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)	MRE (ug/L)					
<b>Monitoring Well AR-1</b>											
09/14/92	820	67	<1.0	8.8	6.7	-	15.21	NP	0.00	38.11	22.90
11/12/92	140	66	<0.5	4.3	3.7	-	15.36	NP	0.00	38.11	22.75
02/11/93	360	190	<2.5	8.6	<2.5	-	12.81	NP	0.00	38.11	25.30
04/14/93	420	240	5.2	30	8.7	-	11.77	NP	0.00	38.11	26.34
08/12/93	370	150	<2	11	<2	-	13.55	NP	0.00	38.11	24.56
10/26/93	240	98	<2	11	<2	-	13.98	NP	0.00	38.11	24.13
02/17/94	4,700	1,100	<10	140	26	-	12.15	NP	0.00	37.46	25.31
05/03/94	620	130	1.3	48	4.3	-	12.03	NP	0.00	37.46	25.43
08/17/94	3,600	630	<5	200	12	-	12.92	NP	0.00	37.33	24.41
11/18/94	12,100	720	6.1	337	15	-	12.41	NP	0.00	37.33	24.92
09/26/95	ND	8.3	ND	ND	ND	-	11.34	NP	0.00	37.46	26.12
12/06/95	120	20	ND	20	0.6	-	11.87	NP	0.00	37.46	25.59
02/14/96	ND	ND	ND	ND	0.52	-	10.48	NP	0.00	37.46	26.98
10/29/96	ND	ND	0.99	ND	ND	-	11.80	NP	0.00	37.46	25.66
01/29/97	<50	0.41	<0.3	<0.3	<0.3	<20	11.25	NP	0.00	37.46	26.21
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	12.24	NP	0.00	37.46	25.22
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	10.80	NP	0.00	37.46	26.66
10/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	11.90	NP	0.00	37.46	25.56
01/28/98	<50	<0.3	<0.3	<0.3	<0.5	<20	11.20	NP	0.00	37.46	26.26
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	12.20	NP	0.00	37.46	25.26
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	9.10	NP	0.00	37.46	28.36
10/22/98	270	2.1	<0.3	3.6	<0.5	190	9.80	NP	0.00	37.46	27.66
01/13/99	<50	<0.3	<0.3	<0.3	<0.5	<20	10.10	NP	0.00	37.46	27.36
<b>Monitoring Well AR-2</b>											
03/30/93	390	4.1	1.6	<0.5	47	-	11.53	NP	0.00	38.39	26.86
04/14/93	310	18	<0.5	0.67	36	-	11.87	NP	0.00	38.39	26.52
08/12/93	130	16	<0.5	1.7	0.57	-	13.59	NP	0.00	38.39	24.80
10/26/93	110	15	<0.5	1.8	<0.5	-	14.25	NP	0.00	38.39	24.14
02/17/94	130	2.9	<0.5	15	0.8	-	12.76	NP	0.00	37.98	25.22
05/03/94	<50	<0.5	<0.5	<0.5	<0.5	-	12.60	NP	0.00	37.98	25.38
08/17/94	3,000	140	140	220	91	-	13.86	NP	0.00	38.18	24.32
11/18/94	623	10.5	10.5	27.9	8.0	-	13.33	NP	0.00	38.18	24.85
09/26/95	ND	ND	ND	ND	ND	-	11.67	NP	0.00	37.98	26.31

**TABLE 1**  
**GROUNDWATER DATA**  
**THRIFTY OIL STATION #052, HAYWARD, 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)					
12/06/95	320	12	12	23	2.1	-	12.32	NP	0.00	37.98	25.66
02/14/96	ND	ND	ND	ND	0.76	-	10.74	NP	0.00	37.98	27.24
10/29/96	ND	ND	ND	ND	ND	-	11.95	NP	0.00	37.98	26.03
01/29/97	<50	<0.3	<0.3	<0.3	<0.5	<20	11.35	NP	0.00	37.98	26.63
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	12.15	NP	0.00	37.98	25.83
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	11.20	NP	0.00	37.98	26.78
10/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	12.14	NP	0.00	37.98	25.84
01/28/98	<50	<0.3	<0.3	<0.3	<0.5	<20	10.05	NP	0.00	37.98	27.93
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	12.10	NP	0.00	37.98	25.88
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	9.50	NP	0.00	37.98	28.48
10/22/98	<50	<0.3	<0.3	<0.3	<0.5	<5	10.45	NP	0.00	37.98	27.53
01/13/99	<50	<0.3	0.40	<0.3	0.53	<20	10.50	NP	0.00	37.98	27.48
<b>Monitoring Well #MW-1</b>											
08/08/86	7,040	132	8.7	439	230	-	11.25	NP	0.00	38.36	27.11
12/24/91	2,200	190	8.5	6.9	2.6	-	16.12	NP	0.00	38.36	22.24
03/10/92	2,800	270	29	56	39	-	13.34	NP	0.00	38.36	25.02
06/09/92	2,900	960	27	99	63	-	14.12	NP	0.00	38.36	24.24
09/14/92	2,600	450	<5.0	45	21	-	15.34	NP	0.00	38.36	23.02
11/12/92	1,600	310	7.2	22	8.9	-	15.46	NP	0.00	38.36	22.90
02/11/93	4,000	510	47	200	91	-	11.95	NP	0.00	38.36	26.41
04/14/93	1,700	260	20	100	70	-	11.65	NP	0.00	38.36	26.71
08/12/93	830	60	3.8	39	3.6	-	12.93	NP	0.00	38.36	25.43
10/26/93	8,800	140	<10	41	<10	-	14.13	NP	0.00	38.36	24.23
02/17/94	1,200	130	12	54	58	-	11.86	NP	0.00	37.26	25.40
05/03/94	-	-	-	-	-	-	11.58	NP	0.00	37.26	25.68
08/17/94	3,900	86	5.1	78	9.4	-	12.78	NP	0.00	37.33	24.55
11/18/94	6,350	112	8.4	107	35	-	12.31	NP	0.00	37.33	25.02
09/26/95	ND	ND	ND	ND	ND	-	11.26	NP	0.00	37.26	26.00
12/06/95	4,100	0.86	0.46	0.38	0.92	-	12.16	NP	0.00	37.26	25.10
02/14/96	ND	ND	0.56	ND	0.82	-	8.53	NP	0.00	37.26	28.73
10/29/96	130	ND	ND	ND	ND	-	10.23	NP	0.00	37.26	27.03
01/29/97	<50	<0.3	<0.3	<0.3	<0.5	<20	8.15	NP	0.00	37.26	29.11
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	8.05	NP	0.00	37.26	29.21
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	10.50	NP	0.00	37.26	26.76



**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #052, HAYWARD, 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)	MTPRE (ug/L)					
<b>Monitoring Well #MW-3</b>											
08/08/86	7,450	510	549	409	1,380	-	10.61	NP	0.00	37.77	27.16
12/24/91	6,800	450	10	610	45	-	15.60	NP	0.00	37.77	22.17
03/10/92	11,000	2,500	75	400	560	-	12.90	NP	0.00	37.77	24.87
06/09/92	16,000	2,000	69	1,300	2,600	-	13.60	NP	0.00	37.77	24.17
09/14/92	14,000	630	<50	1,500	2,400	-	14.78	NP	0.00	37.77	22.99
11/12/92	7,400	400	<25	860	330	-	14.92	NP	0.00	37.77	22.85
02/11/93	8,600	580	<20	710	300	-	11.65	NP	0.00	37.77	26.12
04/14/93	6,900	300	8.8	580	99	-	11.16	NP	0.00	37.77	26.61
08/12/93	3,400	56	<5	190	<5	-	12.82	NP	0.00	37.77	24.95
10/26/93	2,900	42	<10	76	<10	-	13.60	NP	0.00	37.77	24.17
02/17/94	3,100	160	<10	36	8.6	-	11.53	NP	0.00	36.80	25.27
05/03/94	2,300	44	<2.5	8.0	<2.5	-	11.36	NP	0.00	36.80	25.44
08/17/94	1,900	7.0	<9.5	4.4	<5	-	12.38	NP	0.00	36.87	24.49
11/18/94	909	1.1	<0.5	0.9	4.0	-	11.93	NP	0.00	36.87	24.94
09/26/95	410	1.3	1.9	2.3	3.3	-	10.96	NP	0.00	36.80	25.84
12/06/95	-	0.9	4.6	3.0	4.3	-	11.56	NP	0.00	36.80	25.24
02/14/96	99	ND	0.49	0.46	ND	-	7.47	NP	0.00	36.80	29.33
10/29/96	250	0.7	0.6	ND	ND	-	9.80	NP	0.00	36.80	27.00
01/29/97	170	<0.3	<0.3	<0.3	<0.5	<20	7.50	NP	0.00	36.80	29.30
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	12.10	NP	0.00	36.80	24.70
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	9.90	NP	0.00	36.80	26.90
10/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	12.10	NP	0.00	36.80	24.70
01/28/98	<50	<0.3	<0.3	<0.3	<0.5	<20	7.50	NP	0.00	36.80	29.30
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	12.30	NP	0.00	36.80	24.50
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	8.30	NP	0.00	36.80	28.50
10/22/98	<50	<0.3	<0.3	<0.3	<0.5	<5	9.10	NP	0.00	36.80	27.70
01/13/99	<50	<0.3	<0.3	<0.3	<0.5	<20	9.50	NP	0.00	36.80	27.30
<b>Monitoring Well #4</b>											
03/06/91	34,000	11,000	870	2,500	2,100	-	13.22	NP	0.00	39.46	26.24
12/24/91	1,900	29	1.9	25	29	-	17.60	NP	0.00	39.86	22.26
03/10/92	7,400	37	<0.60	11	73	-	14.76	NP	0.00	39.86	25.10
06/09/92	4,500	3.2	1.5	37	16	-	15.63	NP	0.00	39.86	24.23
09/14/92	1,300	<2.5	2.5	61	6.8	-	16.83	NP	0.00	39.86	23.03

**TABLE 1**  
**GROUNDWATER DATA**  
**THRIFTY OIL STATION #052, HAYWARD, 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)					
11/12/92	610	7.2	0.98	34	0.97	-	16.97	NP	0.00	39.86	22.89
02/11/93	740	2.4	<0.5	5.0	3.5	-	13.43	NP	0.00	39.86	26.43
04/14/93	380	<0.5	<0.5	10	1.6	-	13.06	NP	0.00	39.86	26.80
08/12/93	1,200	0.93	<0.5	0.91	<0.5	-	14.94	NP	0.00	39.86	24.92
10/26/93	160	<0.5	<0.5	1.0	<0.5	-	15.52	NP	0.00	39.86	24.34
02/17/94	320	0.5	<0.5	28	0.9	-	14.02	NP	0.00	39.46	25.44
05/03/94	130	<0.5	<0.5	1.1	<0.5	-	13.85	NP	0.00	39.46	25.61
08/17/94	62	<0.5	<0.5	<0.5	<0.5	-	14.95	NP	0.00	39.53	24.58
11/18/94	98	1.3	0.6	<0.5	<0.5	-	14.46	NP	0.00	39.53	25.07
12/06/95	ND	0.6	ND	ND	ND	-	13.82	NP	0.00	39.53	25.71
02/14/96	ND	ND	2.3	ND	0.71	-	11.24	NP	0.00	39.53	28.29
10/29/96	140	ND	ND	ND	ND	-	13.50	NP	0.00	39.53	26.03
01/29/97	<50	<0.3	<0.3	<0.3	<0.5	<20	12.65	NP	0.00	39.53	26.88
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	13.97	NP	0.00	39.53	25.56
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	12.70	NP	0.00	39.53	26.83
10/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	13.95	NP	0.00	39.53	25.58
01/28/98	<50	<0.3	<0.3	<0.3	<0.5	<20	11.90	NP	0.00	39.53	27.63
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	13.92	NP	0.00	39.53	25.61
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	10.80	NP	0.00	39.53	28.73
10/22/98	<50	<0.3	<0.3	<0.3	<0.5	<5	12.60	NP	0.00	39.53	26.93
01/13/99	<50	<0.3	<0.3	<0.3	<0.5	<20	12.60	NP	0.00	39.53	26.93
<b>Monitoring Well A-5</b>											
12/24/91	1,600	21	<0.30	32	52	-	16.85	NP	0.00	38.94	22.09
03/10/92	1,000	1.6	<0.30	43	100	-	13.83	NP	0.00	38.94	25.11
06/09/92	680	34	<1.5	14	16	-	14.91	NP	0.00	38.94	24.03
09/14/92	770	12	<0.30	51	65	-	16.14	NP	0.00	38.94	22.80
11/12/92	520	3.0	<2.5	29	36	-	16.35	NP	0.00	38.94	22.59
02/11/93	150	1.6	0.96	5.1	1.5	-	13.21	NP	0.00	38.94	25.73
04/14/93	190	5.4	<0.5	1.5	0.97	-	12.97	NP	0.00	38.94	25.97
08/12/93	230	1.7	<0.5	5.3	0.94	-	14.12	NP	0.00	38.94	24.82
10/26/93	190	2.8	<0.5	5.5	2.0	-	14.72	NP	0.00	38.94	24.22
02/17/94	340	<0.5	<0.5	13	2.9	-	13.20	NP	0.00	38.47	25.27
05/03/94	170	1.4	<0.5	4.0	1.9	-	13.08	NP	0.00	38.47	25.39
08/17/94	270	0.6	<0.5	7.3	1.1	-	14.18	NP	0.00	38.54	24.36

**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #052, HAYWARD, 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)					
11/18/94	338	-	<0.5	4.6	<0.5	-	13.73	NP	0.00	38.54	24.81
09/26/95	ND	0.63	1.1	ND	1.2	-	12.44	NP	0.00	38.47	26.03
12/06/95	ND	ND	ND	ND	ND	-	12.92	NP	0.00	38.47	25.55
02/14/96	ND	ND	2.0	ND	1.1	-	10.76	NP	0.00	38.47	27.71
10/29/96	ND	ND	ND	ND	ND	-	12.35	NP	0.00	38.47	26.12
01/29/97	<50	<0.3	<0.3	<0.3	<0.5	<20	10.85	NP	0.00	38.47	27.62
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	13.56	NP	0.00	38.47	24.91
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	11.80	NP	0.00	38.47	26.67
10/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	12.20	NP	0.00	38.47	26.27
01/28/98	<50	<0.3	<0.3	<0.3	<0.5	<20	10.12	NP	0.00	38.47	28.35
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	13.50	NP	0.00	38.47	24.97
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	10.20	NP	0.00	38.47	28.27
10/22/98	<50	<0.3	<0.3	<0.3	<0.5	<5	11.50	NP	0.00	38.47	26.97
01/13/99	<50	0.32	0.38	<0.3	<0.5	<20	10.15	NP	0.00	38.47	28.32
<b>Monitoring Well A-6</b>											
12/24/91	<30	<0.3	<0.3	<0.3	<0.3	-	16.88	NP	0.00	39.07	22.19
03/10/92	<30	<0.3	<0.3	<0.3	<0.3	-	13.73	NP	0.00	39.07	25.34
06/09/92	<30	<0.3	<0.3	<0.3	<0.3	-	14.95	NP	0.00	39.07	24.12
09/14/92	<50	<0.5	<0.5	<0.5	<0.5	-	16.20	NP	0.00	39.07	22.87
11/12/92	<50	<0.5	<0.5	<0.5	<0.5	-	16.35	NP	0.00	39.07	22.72
02/11/93	<50	<0.5	<0.5	<0.5	<0.5	-	13.04	NP	0.00	39.07	26.03
04/14/93	<50	<0.5	<0.5	<0.5	<0.5	-	12.23	NP	0.00	39.07	26.84
08/12/93	<50	<0.5	<0.5	<0.5	<0.5	-	14.18	NP	0.00	39.07	24.89
10/26/93	<50	<0.5	<0.5	<0.5	<0.5	-	14.85	NP	0.00	39.07	24.22
05/03/94	<50	<0.5	<0.5	<0.5	<0.5	-	13.66	NP	0.00	39.07	25.41
08/17/94	<50	<0.5	<0.5	<0.5	<0.5	-	14.34	NP	0.00	38.78	24.44
11/18/94	<50	<0.5	<0.5	<0.5	<0.5	-	13.76	NP	0.00	38.78	25.02
09/26/95	ND	ND	ND	ND	ND	-	12.56	NP	0.00	38.78	26.22
12/06/95	ND	ND	ND	ND	ND	-	13.18	NP	0.00	38.78	25.60
02/14/96	ND	ND	ND	ND	ND	-	12.46	NP	0.00	38.78	26.32
10/29/96	50	ND	ND	ND	ND	-	12.40	NP	0.00	38.78	26.38
01/29/97	<50	<0.3	<0.3	<0.3	<0.5	<20	13.85	NP	0.00	38.78	24.93
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	12.49	NP	0.00	38.78	26.29
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	12.10	NP	0.00	38.78	26.68





**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #052, HAYWARD, 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)					
<b>Monitoring Well A-8</b>											
09/14/92	<50	<0.5	<0.5	<0.5	<0.5	-	14.19	NP	0.00	37.23	23.04
11/12/92	<50	<0.5	<0.5	<0.5	<0.5	-	14.35	NP	0.00	37.23	22.88
02/11/93	<50	<0.5	<0.5	<0.5	<0.5	-	11.25	NP	0.00	37.23	25.98
04/14/93	<50	<0.5	<0.5	<0.5	<0.5	-	12.33	NP	0.00	37.23	24.90
08/12/93	<50	<0.5	<0.5	<0.5	<0.5	-	12.41	NP	0.00	37.23	24.82
10/26/93	<50	<0.5	<0.5	<0.5	<0.5	-	13.02	NP	0.00	37.23	24.21
02/17/94	<50	<0.5	<0.5	<0.5	<0.5	-	11.47	NP	0.00	36.76	25.29
05/03/94	<50	<0.5	<0.5	<0.5	<0.5	-	11.35	NP	0.00	36.76	25.41
08/17/94	<50	<0.5	1.7	<0.5	1.4	-	12.34	NP	0.00	36.84	24.50
11/18/94	<50	1.0	<0.5	<0.5	<0.5	-	11.90	NP	0.00	36.84	24.94
09/26/95	ND	ND	ND	ND	ND	-	10.94	NP	0.00	36.76	25.82
12/06/95	ND	ND	ND	ND	ND	-	11.42	NP	0.00	36.76	25.34
02/14/96	ND	ND	0.48	ND	ND	-	8.80	NP	0.00	36.76	27.96
10/29/96	200	ND	ND	ND	ND	-	11.30	NP	0.00	36.76	25.46
01/29/97	<50	<0.3	<0.3	<0.3	<0.5	<20	7.60	NP	0.00	36.76	29.16
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	10.54	NP	0.00	36.76	26.22
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	11.20	NP	0.00	36.76	25.56
10/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	12.14	NP	0.00	36.76	24.62
01/28/98	<50	<0.3	<0.3	<0.3	<0.5	<20	4.43	NP	0.00	36.76	32.33
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	10.55	NP	0.00	36.76	26.21
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	9.07	NP	0.00	36.76	27.69
10/22/98	<50	<0.3	<0.3	<0.3	<0.5	<5	12.12	NP	0.00	36.76	24.64
01/13/99	<50	<0.3	<0.3	<0.3	<0.5	<20	9.60	NP	0.00	36.76	27.16
<b>Monitoring Well A-9</b>											
09/14/92	<50	<0.5	<0.5	<0.5	<0.5	-	16.12	NP	0.00	38.71	22.59
11/12/92	<50	<0.5	<0.5	<0.5	<0.5	-	16.29	NP	0.00	38.71	22.42
02/11/93	<50	<0.5	<0.5	<0.5	<0.5	-	12.31	NP	0.00	38.71	26.40
04/14/93	<50	<0.5	<0.5	<0.5	<0.5	-	12.01	NP	0.00	38.71	26.70
08/12/93	<50	<0.5	<0.5	<0.5	<0.5	-	13.90	NP	0.00	38.71	24.81
10/26/93	<50	<0.5	<0.5	<0.5	<0.5	-	14.86	NP	0.00	38.71	23.85
02/17/94	<50	<0.5	<0.5	<0.5	<0.5	-	12.99	NP	0.00	38.19	25.20
08/17/94	<50	<0.5	<0.5	<0.5	<0.5	-	14.03	NP	0.00	38.19	24.16
11/18/94	<50	<0.5	<0.5	<0.5	<0.5	-	13.44	NP	0.00	37.24	23.80

**TABLE 1**  
**GROUNDWATER DATA**  
**THRIFTY OIL STATION #052, HAYWARD, 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)					
09/26/95	ND	<0.5	ND	ND	ND	-	12.43	NP	0.00	38.24	25.81
12/06/95	ND	<0.5	ND	ND	ND	-	13.14	NP	0.00	38.19	25.05
02/14/96	ND	ND	1.8	0.49	0.82	-	9.05	NP	0.00	38.19	29.14
10/29/96	ND	ND	ND	ND	ND	-	12.85	NP	0.00	38.19	25.34
01/29/97	<50	<0.3	<0.3	<0.3	<0.5	<20	9.02	NP	0.00	38.19	29.17
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	12.05	NP	0.00	38.19	26.14
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	12.18	NP	0.00	38.19	26.01
10/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	7.45	NP	0.00	38.19	30.74
01/28/98	<50	<0.3	<0.3	<0.3	<0.5	<20	21.25	NP	0.00	38.19	16.94
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	12.10	NP	0.00	38.19	26.09
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	10.40	NP	0.00	38.19	27.79
10/22/98	<50	<0.3	<0.3	<0.3	<0.5	<5	13.55	NP	0.00	38.19	24.64
01/13/99	<50	<0.3	<0.3	<0.3	<0.5	<20	12.05	NP	0.00	38.19	26.14
<b>Monitoring Well A-10</b>											
12/07/92	660	30	<2.5	<2.5	<2.5	-	16.81	NP	0.00	38.94	22.13
02/11/93	210	<0.5	0.97	<0.5	<0.5	-	13.15	NP	0.00	38.94	25.79
04/14/93	770	<0.5	3.0	0.76	1.9	-	12.19	NP	0.00	38.94	26.75
08/12/93	390	<0.5	<0.5	<0.5	0.84	-	14.87	NP	0.00	38.94	24.07
10/26/93	290	<0.5	<0.5	<0.5	<0.5	-	15.65	NP	0.00	38.94	23.29
02/17/94	52	<0.5	<0.5	<0.5	<0.5	-	14.16	NP	0.00	38.66	24.50
05/03/94	<50	<0.5	<0.5	<0.5	<0.5	-	14.00	NP	0.00	38.66	24.66
08/17/94	<50	<0.5	<0.5	<0.5	<0.5	-	15.08	NP	0.00	38.72	23.64
11/18/94	<50	<0.5	<0.5	<0.5	<0.5	-	14.68	NP	0.00	38.72	24.04
09/26/95	ND	ND	ND	ND	ND	-	13.58	NP	0.00	38.66	25.08
12/06/95	ND	ND	ND	ND	ND	-	14.24	NP	0.00	38.66	24.42
02/14/96	ND	ND	ND	ND	ND	-	6.70	NP	0.00	38.66	31.96
10/29/96	ND	ND	ND	ND	1.1	-	14.10	NP	0.00	38.66	24.56
01/29/97	<50	0.41	4.8	0.60	4.4	37	11.20	NP	0.00	38.66	27.46
04/30/97	<20	0.40	4.2	0.5	3.8	50	12.66	NP	0.00	38.66	26.00
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	13.20	NP	0.00	38.66	25.46

**TABLE 1**  
**GROUNDWATER DATA**  
**THRIFTY OIL STATION #052, HAYWARD, 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)					
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	12.60	NP	0.00	38.66	26.06
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	8.08	NP	0.00	38.66	30.58
10/22/98	<50	<0.3	<0.3	<0.3	<0.5	<5	11.15	NP	0.00	38.66	27.51
01/13/99	<50	<0.3	<0.3	<0.3	<0.5	<20	9.60	NP	0.00	38.66	29.06

**NOTE:** ND = Nondetectable  
NP = No free hydrocarbon product  
NS = No sample collected

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 or 8260

# APPENDIX A



**LABORATORY ANALYSIS RESULTS**

Client: Thrifty Oil Company  
Project No.: N/A  
Project Name: SS# 052 ✓  
Sample Matrix: Water  
Method: EPA 8015M (Gasoline)

AA Project No.: A135052-13 ✓  
Date Received: 01/15/99  
Date Reported: 01/21/99  
Units: ug/L

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
81520	A-10	01/13/99	01/19/99	<50	50
81521	A-7	01/13/99	01/19/99	<50	50
81522	A-9	01/13/99	01/19/99	<50	50
81523	A-6	01/13/99	01/19/99	<50	50
81524	A-4	01/13/99	01/19/99	<50	50
81525	A-5	01/13/99	01/19/99	<50	50
81526	AR-2	01/13/99	01/19/99	<50	50
81527	MW-2	01/13/99	01/19/99	650	50
81528	AR-1	01/13/99	01/19/99	<50	50
81529	MW-1	01/13/99	01/19/99	<50	50
81530	MW-3	01/13/99	01/19/99	<50	50
81531	A-8	01/13/99	01/19/99	<50	50
81532	Trip Blank	01/13/99	01/19/99	<50	50

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# 052  
Sample Matrix: Water  
Method: EPA 8020 (BTEX)

AA Project No.: A135052-13  
Date Received: 01/15/99  
Date Reported: 01/21/99  
Units: ug/L

Date Sampled:	01/13/99	01/13/99	01/13/99	01/13/99	
Date Analyzed:	01/19/99	01/19/99	01/19/99	01/19/99	
AA ID No.:	81520	81521	81522	81523	
Client ID No.:	A-10	A-7	A-9	A-6	MRL

Compounds:

Benzene	<0.3	<0.3	<0.3	<0.3	0.3
Ethylbenzene	<0.3	<0.3	<0.3	<0.3	0.3
Toluene	<0.3	<0.3	<0.3	<0.3	0.3
Xylenes	<0.5	<0.5	<0.5	<0.5	0.5

George Havalias  
Laboratory Director



**LABORATORY ANALYSIS RESULTS**

Client: Thrifty Oil Company  
Project No.: N/A  
Project Name: SS# 052  
Sample Matrix: Water  
Method: EPA 8020 (BTEX)

AA Project No.: A135052-13  
Date Received: 01/15/99  
Date Reported: 01/21/99  
Units: ug/L

Date Sampled:	01/13/99	01/13/99	01/13/99	01/13/99	
Date Analyzed:	01/19/99	01/19/99	01/19/99	01/19/99	
AA ID No.:	81524	81525	81526	81527	
Client ID No.:	A-4	A-5	AR-2	MW-2	MRL
<b>Compounds:</b>					
Benzene	<0.3	0.32	<0.3	5.8	0.3
Ethylbenzene	<0.3	<0.3	<0.3	1.4	0.3
Toluene	<0.3	0.38	0.40	1.0	0.3
Xylenes	<0.5	<0.5	0.53	1.1	0.5

George Havalias  
Laboratory Director



**LABORATORY ANALYSIS RESULTS**

Client: Thrifty Oil Company  
Project No.: N/A  
Project Name: SS# 052  
Sample Matrix: Water  
Method: EPA 8020 (BTEX)

AA Project No.: A135052-13  
Date Received: 01/15/99  
Date Reported: 01/21/99  
Units: ug/L

Date Sampled:	01/13/99	01/13/99	01/13/99	01/13/99	
Date Analyzed:	01/19/99	01/19/99	01/19/99	01/19/99	
AA ID No.:	81528	81529	81530	81531	
Client ID No.:	AR-1	MW-1	MW-3	A-8	MRL
<b>Compounds:</b>					
Benzene	<0.3	0.43	<0.3	<0.3	0.3
Ethylbenzene	<0.3	<0.3	<0.3	<0.3	0.3
Toluene	<0.3	<0.3	<0.3	<0.3	0.3
Xylenes	<0.5	<0.5	<0.5	<0.5	0.5

George Havalias  
Laboratory Director





**LABORATORY ANALYSIS RESULTS**

Client: Thrifty Oil Company  
Project No.: N/A  
Project Name: SS# 052  
Sample Matrix: Water  
Method: EPA 8020 (BTEX)

AA Project No.: A135052-13  
Date Received: 01/15/99  
Date Reported: 01/21/99  
Units: ug/L

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Date Sampled:	01/13/99	
Date Analyzed:	01/19/99	
AA ID No.:	81532	
Client ID No.:	Trip Blank	MRL
<b>Compounds:</b>		
Benzene	<0.3	0.3
Ethylbenzene	<0.3	0.3
Toluene	<0.3	0.3
Xylenes	<0.5	0.5

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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# 052  
**Sample Matrix:** Water  
**Method:** Oxygenates (EPA 8260)

**AA Project No.:** A135052-13  
**Date Received:** 01/15/99  
**Date Reported:** 02/03/99  
**Units:** mg/L

	01/13/99	01/13/99	01/13/99	01/13/99	
<b>Date Sampled:</b>	01/13/99	01/13/99	01/13/99	01/13/99	
<b>Date Analyzed:</b>	01/27/99	01/27/99	01/27/99	01/27/99	
<b>AA ID No.:</b>	81520	81521	81522	81523	
<b>Client ID No.:</b>	A-10	A-7	A-9	A-6	<b>MRL</b>
<b>Compounds:</b>					
Di-isopropyl ether	<0.02	<0.02	<0.02	<0.02	0.02
Ethanol	<0.5	<0.5	<0.5	<0.5	0.5
Ethyl tert-Butyl Ether	<0.02	<0.02	<0.02	<0.02	0.02
Methanol	<2	<2	<2	<2	2
Methyl tert-Butyl Ether	<0.02	<0.02	<0.02	<0.02	0.02
Tert-Amyl Methyl Ether	<0.02	<0.02	<0.02	<0.02	0.02
Tert-Butanol	<0.5	<0.5	<0.5	<0.5	0.5

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



**LABORATORY ANALYSIS RESULTS**

Client: Thrifty Oil Company  
Project No.: N/A  
Project Name: SS# 052  
Sample Matrix: Water  
Method: Oxygenates (EPA 8260)

AA Project No.: A135052-13  
Date Received: 01/15/99  
Date Reported: 02/03/99  
Units: mg/L

Date Sampled:	01/13/99	01/13/99	01/13/99	01/13/99	
Date Analyzed:	01/27/99	01/27/99	01/27/99	01/27/99	
AA ID No.:	81524	81525	81526	81527	
Client ID No.:	A-4	A-5	AR-2	MW-2	MRL
<b>Compounds:</b>					
Di-isopropyl ether	<0.02	<0.02	<0.02	<0.02	0.02
Ethanol	<0.5	<0.5	<0.5	<0.5	0.5
Ethyl tert-Butyl Ether	<0.02	<0.02	<0.02	<0.02	0.02
Methanol	<2	<2	<2	<2	2
Methyl tert-Butyl Ether	<0.02	<0.02	<0.02	<0.02	0.02
Tert-Amyl Methyl Ether	<0.02	<0.02	<0.02	<0.02	0.02
Tert-Butanol	<0.5	<0.5	<0.5	<0.5	0.5

George Havallas  
Laboratory Director



**LABORATORY ANALYSIS RESULTS**

Client: Thrifty Oil Company  
Project No.: N/A  
Project Name: SS# 052  
Sample Matrix: Water  
Method: Oxygenates (EPA 8260)

AA Project No.: A135052-13  
Date Received: 01/15/99  
Date Reported: 02/03/99  
Units: mg/L

Date Sampled:	01/13/99	01/13/99	01/13/99	01/13/99	
Date Analyzed:	01/27/99	01/27/99	01/27/99	01/27/99	
AA ID No.:	81528	81529	81530	81531	
Client ID No.:	AR-1	MW-1	MW-3	A-8	MRL
<b>Compounds:</b>					
Di-isopropyl ether	<0.02	<0.02	<0.02	<0.02	0.02
Ethanol	<0.5	<0.5	<0.5	<0.5	0.5
Ethyl tert-Butyl Ether	<0.02	<0.02	<0.02	<0.02	0.02
Methanol	<2	<2	<2	<2	2
Methyl tert-Butyl Ether	<0.02	<0.02	<0.02	<0.02	0.02
Tert-Amyl Methyl Ether	<0.02	<0.02	<0.02	<0.02	0.02
Tert-Butanol	<0.5	<0.5	<0.5	<0.5	0.5

MRL: Method Reporting Limit

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

  
George Havallas  
Laboratory Director



**LABORATORY QA/QC REPORT**

Client: Thrifty Oil Company  
Project Name: SS# 052  
Method: EPA 8020 (BTEX)  
Sample ID: Matrix Spike  
Concentration: 20 ug/L

AA ID No.: 81520  
Project No.: N/A  
AA Project No.: A135052-13  
Date Analyzed: 01/19/99  
Date Reported: 01/21/99



Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept.Rec. Range (%)
Benzene	22.24	111	24.23	121	9	65 - 135
Ethylbenzene	19.29	96	17.87	89	8	77 - 123
Toluene	19.96	100	19.60	98	2	66 - 134
Xylenes	19.24	96	17.84	89	8	73 - 127

George Havalias  
Laboratory Director



LABORATORY QA/QC REPORT

Client: Thrifty Oil Company  
Project Name: SS# 052  
Method: EPA 8015M (Gasoline)  
Sample ID: Matrix Spike  
Concentration: 500 ug/L

AA ID No.: 81520  
Project No.: N/A  
AA Project No.: A135052-13  
Date Analyzed: 01/19/99  
Date Reported: 01/21/99

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept.Rec. Range (%)
Gasoline Range Organics	410	82	430	86	5	59 - 149

George Havalias  
Laboratory Director



# AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311

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

DATE: 01-13-99

PAGE 1 OF 4

AA Client <b>THRIFTY OIL CO.</b>	Phone <b>562 (921-3581)</b>	Sampler's Name <b>SERBON P.</b>
Project Manager <b>JEFF SURYAKUSUMA</b>	P.O. No.	Sampler's Signature <i>[Signature]</i>
Project Name <b>Q.W.S.</b>	Project No.	Project Manager's Signature

Job Name and Address <b>20200 HESPERIAN Blvd - HAYWARD, CA. 94541</b>	<b>ANALYSIS REQUIRED</b>	
	Detection Limits	Test Requirements
	Test Name <i>TPT BTEX OXYGENATE</i>	

AA ID.#	Client's ID.	Date	Time	Sample Type	Number of Containers	TPT	BTEX	OXYGENATE										
81520	A-10	01.13.99	17:45	WATER	3	X	X	X										ANALYSIS REQUIRED FOR OXYGENATE COMPOUNDS USED IN CA. GASOLINE EPA METHOD 8260  1 METHANOL 2 ETHANOL 3 TERTIARY BUTANOL 4 MTBE 5 DIPP 6 ETBE 7 TAME
81521	A-7		17:50		3	X	X	X										
81522	A-9		17:55		3	X	X	X										
81523	A-6		18:00		3	X	X	X										
81524	A-4		18:05		3	X	X	X										
81525	A-5		18:10		3	X	X	X										
81526	AR-2		18:15		3	X	X	X										
81527	MW-2		18:20		3	X	X	X										
81528	AR-1		18:25		3	X	X	X										
81529	MW-1		18:30		3	X	X	X										
81530	MW-B		18:35		3	X	X	X										
81531	A-8		18:40		3	X	X	X										
81532	TRIP BLANK		7:30		2	X	X											

<b>SAMPLE INTEGRITY-TO BE FILLED IN BY RECEIVING LAB</b>		Relinquished by:	Date	Time	Received by:
Samples Intact	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<i>[Signature]</i>	01.13.99	17:00	CA OVERNIGHT
Samples Properly Cooled	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CA. OVERNIGHT	01.13.99	17:30	
Samples Accepted	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
If Not Why:		Relinquished by:	Date	Time	Received by:
			1/13/99	11:00	<i>[Signature]</i>
AA Project No.	<b>A105052-13</b>	Relinquished by:	Date	Time	Received by: