

# THRIFTY OIL CO.

ENVIRONMENTAL  
PROTECTION

00 JAN 27 PM 2: 28

January 24, 2000

O.00416

Ms. Susan Hugo  
Alameda County Health Care Services  
Department of Environmental Health  
1131 Harbor Bay parkway, 2nd Floor  
Alameda, CA 94502

LOP 4057

POOY

RE: **Thrifty Oil Co. Station #049**  
3400 San Pablo Avenue  
Oakland, CA 94612  
**4th Quarter 1999, Status Report**

Dear Ms. Hugo:

Presented herewith is the Fourth Quarter 1999, Status Report for Former Thrifty Oil Co. Station #049 located at 3400 San Pablo Avenue, Oakland, California.

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

Sincerely,



Chris Panaitescu  
General Manager  
Environmental Affairs

cc: ARCO Products Company  
File



# THRIFTY OIL CO.

January 21, 2000

Ms. Susan Hugo  
Alameda County Health Care Services  
Department of Environmental Health  
1131 Harbor Bay Parkway, 2nd Floor  
Alameda, CA 94502

RE: **Former Thrifty Oil Co. Station #049**  
3400 San Pablo Avenue  
Oakland, CA 94612  
*4th Quarter 1999, Status Report*

Dear Ms. Hugo:

Presented herein is the Fourth Quarter 1999, Status Report prepared for Former Thrifty Oil Co. (Thrifty) Station #049 located at 3400 San Pablo Avenue, Oakland, California (**Figure 1**). Presented in this report are the results of the site monitoring efforts conducted on October 13, 1999 in the Fourth Quarter 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. In general, groundwater occurs under water table conditions beneath the station at depths ranging from 5.48 feet below surface grade (bsg) in monitoring well MW-2 to 7.09 feet (bsg) in monitoring well MW-3 (**Appendix A**). A groundwater elevation contour map based on the October 13, 1999 data is presented in **Figure 2**. The groundwater is generally flowing to the west at a gradient of approximately 0.04 feet/foot.

## **Quarterly Groundwater Sampling**

As part of the ongoing groundwater monitoring program, groundwater samples were obtained from monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6 and MW-7 on October 13, 1999. 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-g) EPA method 8015 modified for gasoline. Volatile aromatic compounds of benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tert-butyl ether (MTBE) were analyzed for by EPA method 8020. A summary of historical analytical sampling results are provided in **Table 1**. 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 **Figures 3, 4, and 5**. The highest laboratory concentration results for TPH-g, benzene, and MTBE were detected in monitoring well MW-2, as follows: 7,600 ug/L TPH-g, <3 ug/L benzene, and 11,000 MTBE.

### Remediation Status

Site remedial activities were initiated in April 1991. Presently, the remediation system consists of a Groundwater Treatment System with carbon connected to groundwater monitoring well RW-1. System operational data is included in **Appendix C**. During this reporting period, the groundwater treatment system processed 4,935 gallons of groundwater, and has treated approximately 381,537 gallons of groundwater since start up (through December 30, 1999). The groundwater system was operational from October 1 through December 30, 1999.

Influent, intermediate, and effluent water samples were collected on October 20, 1999 from the treatment unit, and the samples collected by EMC were sent to American Analytics for analysis. The samples were analyzed for TPH-g by EPA method 8015, and BTEX/MTBE was analyzed by using EPA method 8020. All laboratory results for effluent samples for TPH-g, benzene, and MTBE were below laboratory detection limits. A copy of the laboratory analytical reports is included in **Appendix D**.

### Previous Major Site Activities

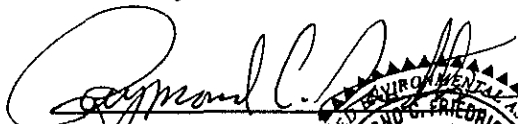
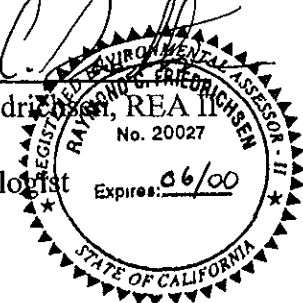
As per our conversation, the following is a summary of recent significant site assessment activities. The underground storage tanks (UST's) were removed on March 23, 1998, and approximately 1,093 tons of petroleum hydrocarbon impacted soil was removed from the site (Underground Storage Tank Removal Report, August 24, 1998).

### Other Activities


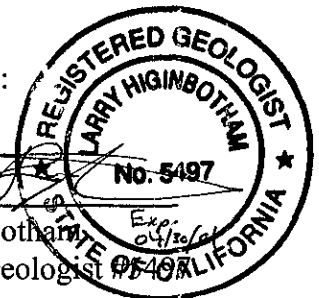
The groundwater monitoring wells, and the treatment unit, will be monitored and sampled for the next quarter. All site monitoring/sampling data generated during the next quarter will be reported in the First Quarter 2000 monitoring report.

Interpretations expressed herein are based upon data collected by EMC.

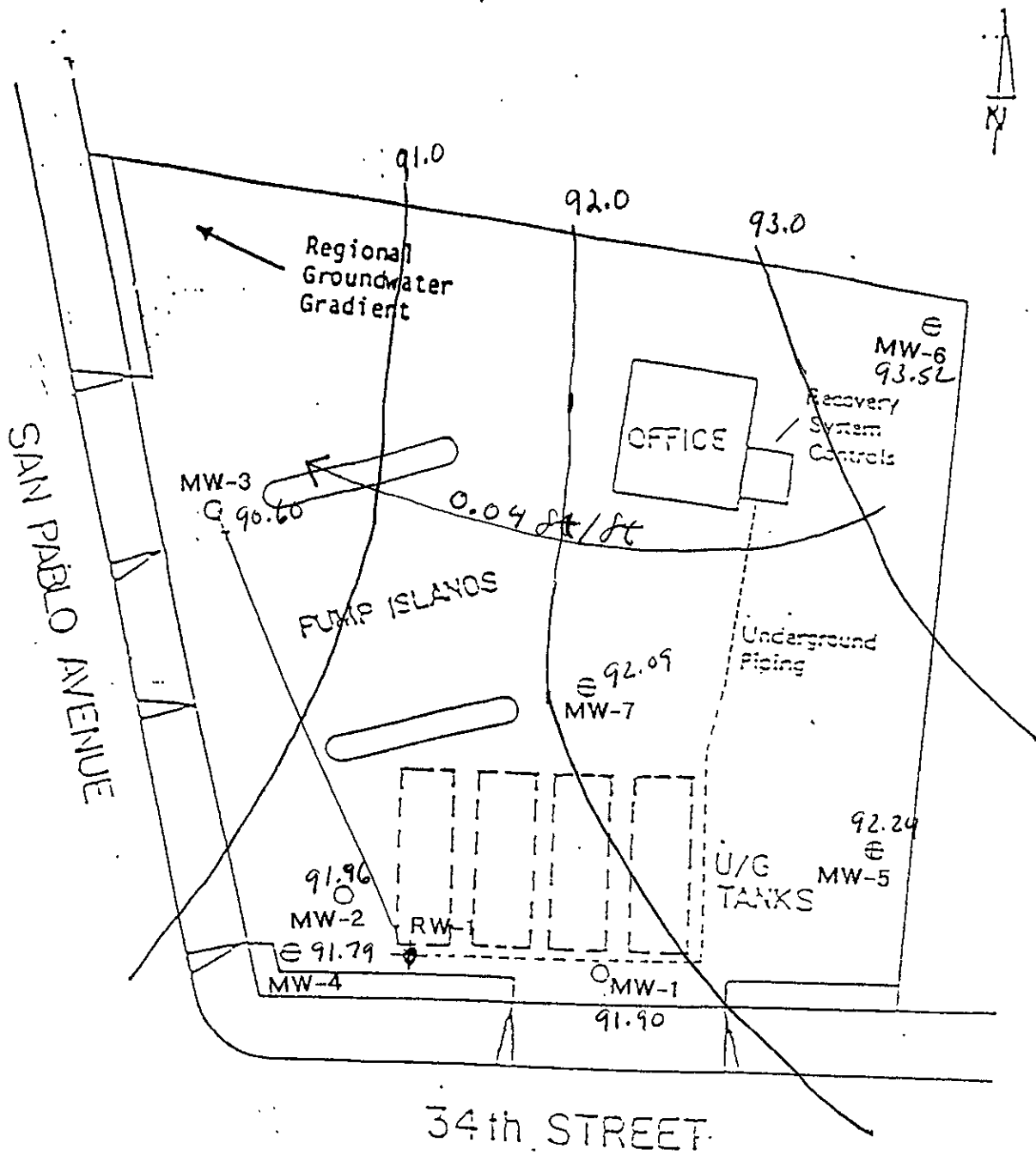
Written by:

  
Raymond C. Friedrich, REA II  
Project Manager  
Senior Hydrogeologist  


Reviewed by:

  
Larry Higinbotham  
Registered Geologist  


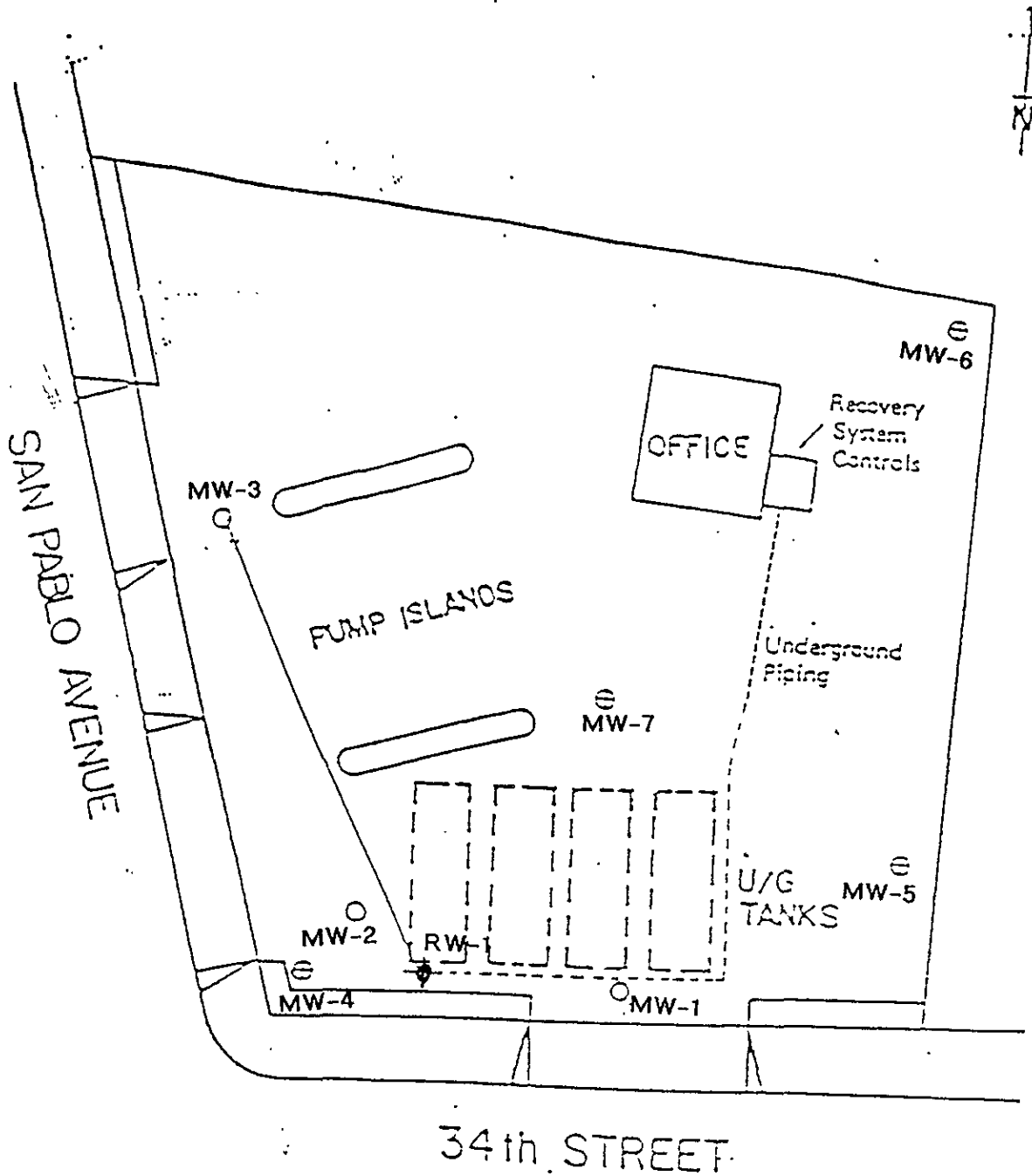
# FIGURES



GROUNDWATER CONTOUR MAP  
 THRIFTY SERVICE STATION NO. 49  
 3400 SAN PABLO AVE.  
 OAKLAND, CA

LEGEND

- MW1 - GT MONITORING WELLS
  - ⊕ MW-4 - WCC MONITORING WELLS
  - ⊕ RW-1 - PROPOSED RECOVERY WELL
- \*NOTE- Relative Casing Elevation Assumed 100 feet



SITE PLAN AND RECOVERY SYSTEM LOCATION  
 THRIFTY SERVICE STATION NO. 49  
 3400 SAN PABLO AVE.  
 OAKLAND, CA

LEGEND

- MW1 - GT MONITORING WELLS
- ⊕ MW-4 - WCC MONITORING WELLS
- ⊕ RW-1 - PROPOSED RECOVERY WELL

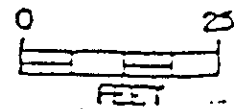
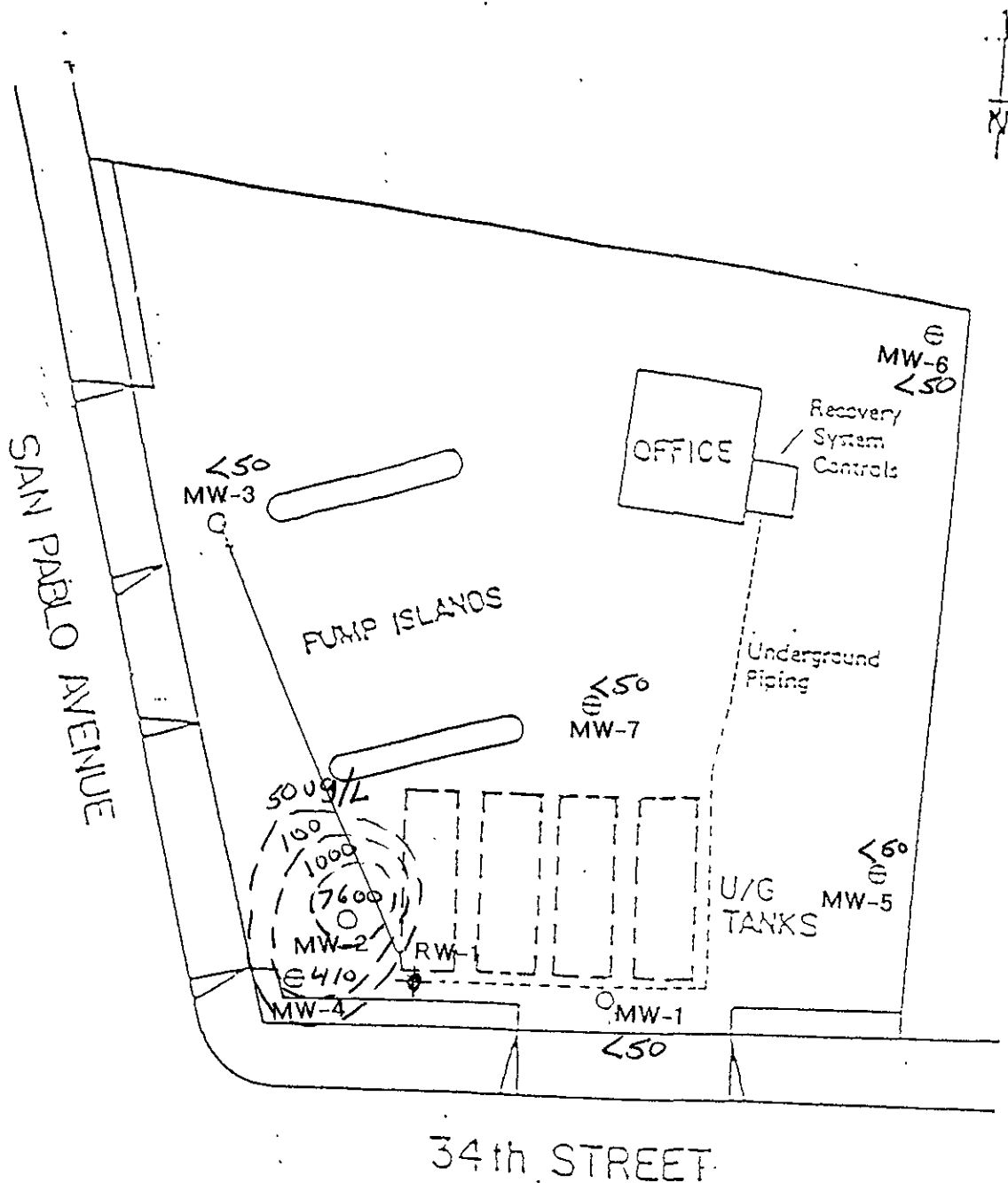


FIGURE 1



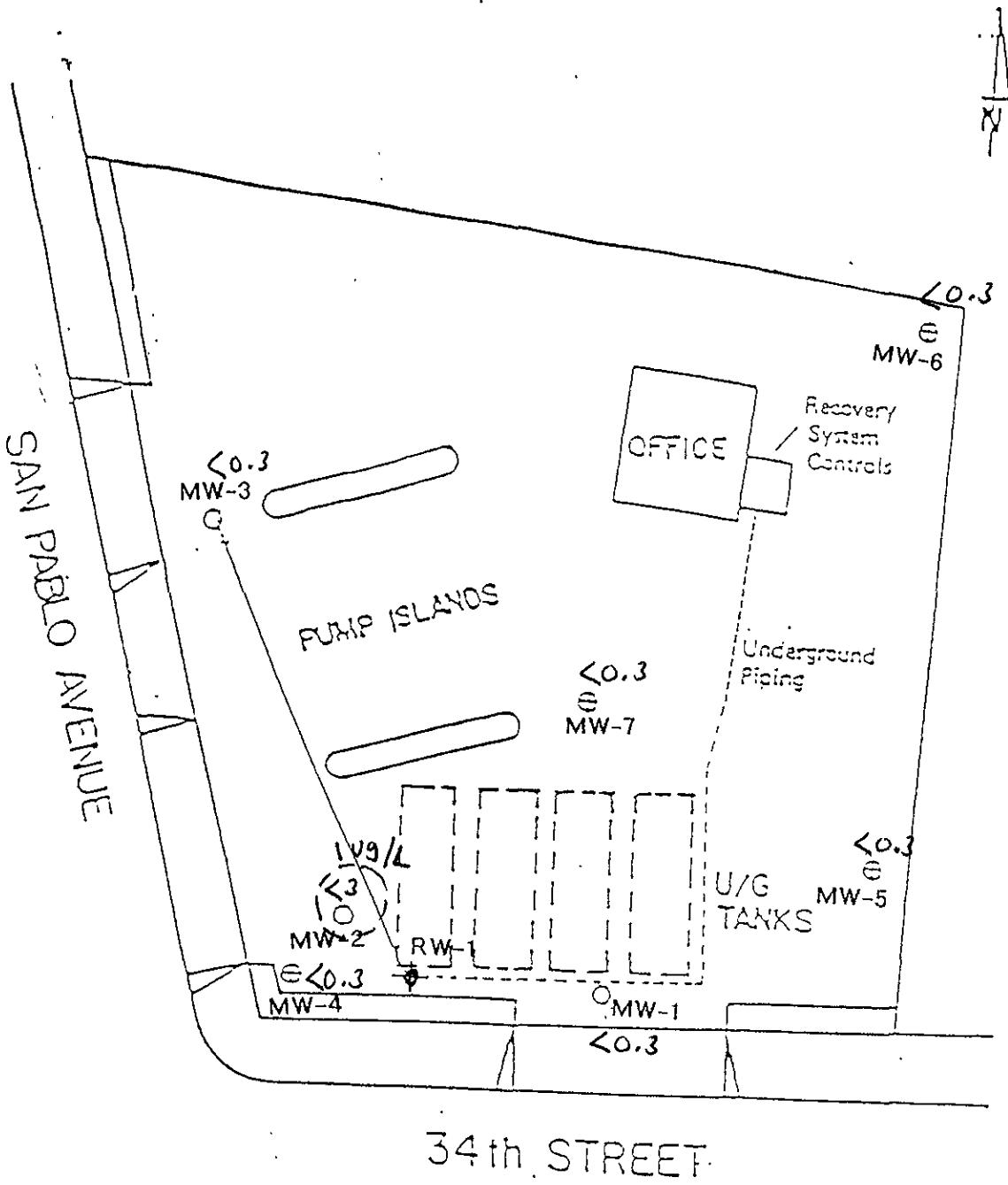
TPH ISOCONCENTRATION MAP ug/L  
 THRIFTY SERVICE STATION NO. 49  
 3400 SAN PABLO AVE.  
 OAKLAND, CA

Date: 10/13/99

LEGEND

- MW1 - GT MONITORING WELLS
- ⊕ MW-4 - WCC MONITORING WELLS
- ⊕ RW-1 - PROPOSED RECOVERY WELL





BENZENE ISOCONCENTRATION MAP ug/L Date: 10/13/99  
 THRIFTY SERVICE STATION NO. 49  
 3400 SAN PABLO AVE.  
 OAKLAND, CA

LEGEND

- MW1 - GT MONITORING WELLS
- ⊕ MW-4 - WCC MONITORING WELLS
- ⊕ RW-1 - PROPOSED RECOVERY WELL

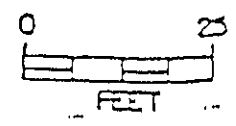
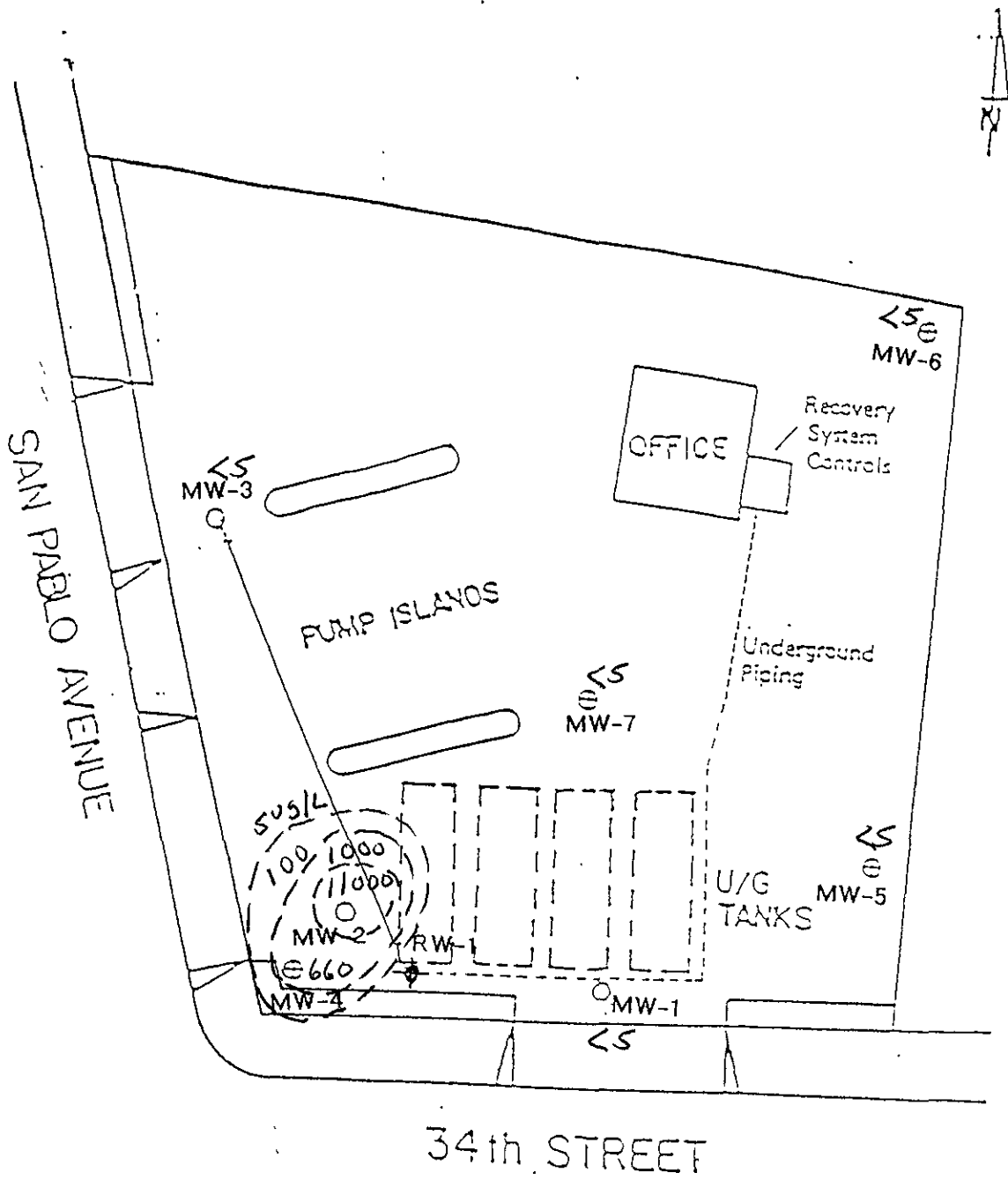


FIGURE 4

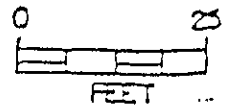




**MTBE ISOCONCENTRATION MAP ug/L**  
 THRIFTY SERVICE STATION NO. 49  
 3400 SAN PABLO AVE.  
 OAKLAND, CA

**LEGEND**

- MW1 - GT MONITORING WELLS
- ⊕ MW-4 - WCC MONITORING WELLS
- ⊕ RW-1 - PROPOSED RECOVERY WELL



**FIGURE 5**

# **TABLES**

**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #049, OAKLAND, 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 #MW-1</b>											
01/09/92	-	-	-	-	-	-	5.54	NP	0.00	-	-
04/13/92	-	-	-	-	-	-	5.86	NP	0.00	-	-
10/05/92	-	-	-	-	-	-	9.39	NP	0.00	-	-
01/06/93	-	-	-	-	-	-	4.76	NP	0.00	-	-
04/26/93	-	-	-	-	-	-	4.96	NP	0.00	-	-
01/04/94	-	-	-	-	-	-	7.00	NP	0.00	-	-
04/05/94	-	-	-	-	-	-	6.44	NP	0.00	-	-
10/09/95	44,000	4,500	4,300	1,700	10,000	-	-	-	-	-	-
01/08/96	21,000	1,200	150	34	4,800	-	6.15	NP	0.00	-	-
04/08/96	4,700	80	110	10	910	-	5.40	NP	0.00	-	-
07/22/96	7,000	280	130	<3	2,100	440	5.50	NP	0.00	-	-
10/16/96	120	<0.3	<0.3	<0.3	<0.5	180	6.02	NP	0.00	-	-
01/22/97	160	<0.3	<0.3	<0.3	<0.5	360	4.40	NP	0.00	-	-
04/21/97	20,000	420	140	5.8	840	55,000	6.30	NP	0.00	-	-
07/14/97	13,000	<0.3	<0.3	<0.3	<0.55	30,000	5.92	NP	0.00	-	-
10/07/97	-	-	-	-	-	-	7.71	7.70	0.01	-	-
01/15/98	<50	0.3	<0.3	<0.3	<0.5	-	4.40	NP	0.00	-	-
04/23/98	540	<0.3	<0.3	<0.3	<0.5	<20	8.10	NP	0.00	-	-
07/20/98	<50	<0.3	<0.3	<0.3	<0.5	<5	5.55	NP	0.00	-	-
10/14/98	50	1.4	0.56	<0.3	11	22	7.05	NP	0.00	-	-
01/21/99	<50	0.59	<0.3	<0.3	<0.5	<5	4.10	NP	0.00	-	-
04/15/99	<50	<0.3	<0.3	<0.3	<0.5	<5	4.30	NP	0.00	-	-
07/26/99	<50	<0.3	<0.3	<0.3	<0.5	<5	5.54	NP	0.00	-	-
10/13/99	<50	<0.3	<0.3	<0.3	<0.5	<5	6.13	NP	0.00	-	-
<b>MONITORING WELL #MW-2</b>											
01/09/92	-	-	-	-	-	-	5.35	NP	0.00	-	-
04/13/92	-	-	-	-	-	-	7.42	NP	0.00	-	-
10/05/92	-	-	-	-	-	-	12.15	NP	0.00	-	-
01/06/93	-	-	-	-	-	-	5.46	NP	0.00	-	-
04/26/93	-	-	-	-	-	-	5.15	NP	0.00	-	-
01/04/94	-	-	-	-	-	-	9.45	NP	0.00	-	-
04/05/94	-	-	-	-	-	-	8.23	NP	0.00	-	-
10/09/95	33,000	6,000	390	1,700	4,900	-	-	-	-	-	-

**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #049, OAKLAND, 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)					
01/08/96	<50	0.32	<0.3	0.41	2.1	-	5.60	NP	0.00	-	-
04/08/96	10,000	490	210	210	830	-	5.43	NP	0.00	-	-
07/22/96	60,000	6,500	1,000	1,500	10,000	8,500	5.65	NP	0.00	-	-
10/16/96	6,500	12	0.34	0.72	110	4,700	5.82	NP	0.00	-	-
01/22/97	3,200	<0.3	0.46	0.37	<0.5	8,000	4.30	NP	0.00	-	-
04/21/97	66,000	5,300	1,000	2,300	14,000	30,000	5.80	NP	0.00	-	-
07/14/97	17,000	1.8	4.6	4.6	350	24,000	8.92	NP	0.00	-	-
10/07/97	220,000	5,200	1,700	3,800	15,000	-	6.80	NP	0.00	-	-
01/19/98	25,000	5.4	2.2	2.1	240	-	8.50	NP	0.00	-	-
04/23/98	7,700	<0.3	0.55	0.38	4.9	28,000	7.60	NP	0.00	-	-
07/20/98	430,000	4,200	10,000	5,400	28,000	77,000	6.94	NP	0.00	-	-
10/14/98	27,000	<0.3	4.5	4.1	4.6	65,000	8.45	NP	0.00	-	-
01/21/99	16,000	7.6	9.8	4.2	310	49,000 / 42,000	6.95	NP	0.00	-	-
04/15/99	20,000	<0.3	<0.3	<0.3	<0.5	31,000 / 30,000	8.45	NP	0.00	-	-
07/26/99	6,700	<6	<6	<6	<10	*11,000 / 15,000	6.94	NP	0.00	-	-
10/13/99	7,600	<3	3.7	<3	11	11,000	5.48	NP	0.00	-	-
<b>MONITORING WELL #MW-3</b>											
01/09/92	-	-	-	-	-	-	17.60	NP	0.00	-	-
04/13/92	-	-	-	-	-	-	17.40	NP	0.00	-	-
10/05/92	-	-	-	-	-	-	17.35	NP	0.00	-	-
01/06/93	-	-	-	-	-	-	17.40	NP	0.00	-	-
04/26/93	-	-	-	-	-	-	17.90	NP	0.00	-	-
01/04/94	-	-	-	-	-	-	17.60	NP	0.00	-	-
04/05/94	-	-	-	-	-	-	16.25	NP	0.00	-	-
01/08/96	-	-	-	-	-	-	7.11	NP	0.00	-	-
04/08/96	8,800	610	31	530	900	-	7.20	NP	0.00	-	-
07/22/96	38,000	4,100	1,500	1,600	5,400	2,600	6.82	NP	0.00	-	-
10/16/96	2,400	<0.3	<0.3	<0.3	<0.5	3,800	6.84	NP	0.00	-	-
01/22/97	2,200	<0.3	<0.3	<0.3	<0.5	5,500	4.80	NP	0.00	-	-
04/21/97	15,000	1,500	36	260	710	11,000	9.40	NP	0.00	-	-
07/14/97	5,400	0.45	<0.3	<0.3	<0.5	14,000	10.92	NP	0.00	-	-
10/07/97	8,800	0.39	<0.3	<0.3	0.88	-	11.95	NP	0.00	-	-
01/19/98	22,000	1,300	15	20	310	-	7.85	NP	0.00	-	-
04/23/98	9,200	3.9	3.1	5.7	9.8	16,000	11.20	NP	0.00	-	-

**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #049, OAKLAND, 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)					
07/20/98	750	0.41	1.4	0.47	1.8	2,800	7.36	NP	0.00	-	-
10/14/98	750	<0.3	<0.3	<0.3	<0.5	15,000	11.95	NP	0.00	-	-
01/21/99	4,700	0.32	<0.3	<0.3	<0.5	12,000 / 16,000	10.45	NP	0.00	-	-
04/15/99	7,900	0.59	0.69	<0.3	0.94	11,000 / 14,000	7.86	NP	0.00	-	-
07/26/99	5,200	<3	<3	<3	<5	*9,600 / 11,000	10.40	NP	0.00	-	-
10/13/99	<50	<0.3	<0.3	<0.3	<0.5	<5	7.09	NP	0.00	-	-
<b>MONITORING WELL #MW-4</b>											
01/09/92	-	-	-	-	-	-	5.25	NP	0.00	-	-
04/13/92	-	-	-	-	-	-	6.40	NP	0.00	-	-
10/05/92	-	-	-	-	-	-	9.95	NP	0.00	-	-
01/06/93	-	-	-	-	-	-	4.10	NP	0.00	-	-
04/26/93	-	-	-	-	-	-	4.84	NP	0.00	-	-
01/04/94	-	-	-	-	-	-	9.05	NP	0.00	-	-
04/05/94	-	-	-	-	-	-	8.10	NP	0.00	-	-
10/09/95	63,000	9,000	2,100	2,500	9,600	-	-	-	-	-	-
01/08/96	23,000	2,200	830	880	3,600	-	5.57	NP	0.00	-	-
04/08/96	56,000	5,000	2,500	2,600	11,000	-	5.36	NP	0.00	-	-
07/22/96	33,000	3,700	1,600	1,400	6,000	2,400	4.80	NP	0.00	-	-
10/16/96	2,800	7.8	0.60	0.41	52	2,000	5.47	NP	0.00	-	-
01/22/97	1,400	<0.3	<0.3	<0.3	<0.5	3,100	5.15	NP	0.00	-	-
04/21/97	-	-	-	-	-	-	6.36	5.30	1.06	-	-
07/14/97	-	-	-	-	-	-	5.24	5.21	0.03	-	-
10/07/97	-	-	-	-	-	-	7.82	7.80	0.02	-	-
01/15/98	-	-	-	-	-	-	6.68	6.60	0.08	-	-
04/23/98	-	-	-	-	-	-	6.36	5.30	1.06	-	-
07/20/98	<50	<0.3	<0.3	<0.3	<0.5	<5	6.05	NP	0.00	-	-
10/14/98	3,100	86	23	20	520	1,100	6.85	NP	0.00	-	-
01/21/99	9,100	3.2	5.6	1.8	130	24,000 / 17,000	6.10	NP	0.00	-	-
04/15/99	14,000	<0.3	0.71	<0.3	<0.5	20,000 / 22,000	6.05	NP	0.00	-	-
07/26/99	4,500	<6	<6	<6	<10	*8,700 / 9,800	6.07	NP	0.00	-	-
10/13/99	410	<0.3	0.63	<0.3	<0.5	660	5.54	NP	0.00	-	-

**TABLE 1**  
**GROUNDWATER DATA**  
**THRIFTY OIL STATION #049, OAKLAND, 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)					
<b>MONITORING WELL #MW-5</b>											
01/09/92	-	-	-	-	-	-	5.32	NP	0.00	-	-
04/13/92	-	-	-	-	-	-	4.82	NP	0.00	-	-
10/0/92	-	-	-	-	-	-	8.78	NP	0.00	-	-
01/06/93	-	-	-	-	-	-	3.46	NP	0.00	-	-
04/26/93	-	-	-	-	-	-	4.66	NP	0.00	-	-
01/04/94	-	-	-	-	-	-	6.36	NP	0.00	-	-
04/05/94	-	-	-	-	-	-	5.94	NP	0.00	-	-
07/12/95	<100	<0.5	<0.5	<0.5	<1	-	-	-	-	-	-
10/09/95	440	31	11	19	84	-	-	-	-	-	-
01/08/96	<50	<0.3	<0.3	<0.3	<0.5	-	6.63	NP	0.00	-	-
04/08/96	<50	<0.3	<0.3	<0.3	<0.5	-	5.22	NP	0.00	-	-
07/22/96	<50	<0.3	<0.3	<0.3	<0.5	<20	6.62	NP	0.00	-	-
10/16/96	<50	<0.3	<0.3	<0.3	<0.5	<20	6.12	NP	0.00	-	-
01/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	5.17	NP	0.00	-	-
04/21/97	73	2.5	0.34	0.74	3.8	21	6.64	NP	0.00	-	-
07/14/97	<50	<0.3	<0.3	<0.3	<0.5	<20	6.67	NP	0.00	-	-
10/07/97	130	<0.3	<0.3	<0.3	<0.5	-	8.20	NP	0.00	-	-
01/19/98	85	<0.3	<0.3	<0.3	<0.5	-	1.55	NP	0.00	-	-
04/23/98	220	0.39	<0.3	<0.3	<0.5	350	8.10	NP	0.00	-	-
07/20/98	<50	<0.3	<0.3	<0.3	<0.5	<5	6.30	NP	0.00	-	-
10/14/98	<50	<0.3	<0.3	<0.3	<0.5	<5	7.65	NP	0.00	-	-
01/21/99	<50	<0.3	<0.3	<0.3	<0.5	*6.7 / <5	6.15	NP	0.00	-	-
04/15/99	<50	<0.3	<0.3	<0.3	<0.5	<5	1.60	NP	0.00	-	-
07/26/99	<50	<0.3	<0.3	<0.3	<0.5	<5	6.13	NP	0.00	-	-
10/13/99	<50	<0.3	<0.3	<0.3	<0.5	<5	6.61	NP	0.00	-	-
<b>MONITORING WELL #MW-6</b>											
01/09/92	-	-	-	-	-	-	6.30	NP	0.00	-	-
04/13/92	-	-	-	-	-	-	5.47	NP	0.00	-	-
10/05/92	-	-	-	-	-	-	9.85	NP	0.00	-	-
01/06/93	-	-	-	-	-	-	4.16	NP	0.00	-	-
04/26/93	-	-	-	-	-	-	5.75	NP	0.00	-	-
01/14/94	-	-	-	-	-	-	7.20	NP	0.00	-	-
04/05/94	-	-	-	-	-	-	6.76	NP	0.00	-	-

**TABLE 1**  
**GROUNDWATER DATA**  
**THRIFTY OIL STATION #049, OAKLAND, 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)					
07/10/95	<100	<0.5	0.9	<0.5	1.1	-	-	-	-	-	
10/09/95	250	4.8	5.6	11	58	-	-	-	-	-	
01/08/96	<50	<0.3	<0.3	<0.3	<0.5	-	6.16	NP	0.00	-	
04/08/96	230	4.6	4.7	3.2	33	-	4.60	NP	0.00	-	
07/22/96	<50	<0.3	<0.3	<0.3	<0.5	<20	7.30	NP	0.00	-	
10/16/96	<50	<0.3	<0.3	<0.3	<0.5	<20	5.82	NP	0.00	-	
01/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	4.40	NP	0.00	-	
04/21/97	130	<0.3	<0.3	<0.3	<0.5	<20	7.10	NP	0.00	-	
07/14/97	<50	<0.3	<0.3	<0.3	0.70	<20	7.35	NP	0.00	-	
10/07/97	<50	0.78	0.3	<0.3	<0.5	-	6.98	NP	0.00	-	
01/23/98	<50	<0.3	<0.3	<0.3	<0.5	-	2.35	NP	0.00	-	
04/23/98	<50	<0.3	<0.3	<0.3	<0.5	<20	6.90	NP	0.00	-	
07/20/98	<50	<0.3	1.1	<0.3	1.4	<5	5.45	NP	0.00	-	
10/14/98	<50	<0.3	<0.3	<0.3	<0.5	<5	4.95	NP	0.00	-	
01/21/99	<50	0.35	0.62	<0.3	<0.5	<5	3.90	NP	0.00	-	
04/15/99	<50	<0.3	<0.3	<0.3	<0.5	<5	2.35	NP	0.00	-	
07/26/99	1,000	<0.3	<0.3	<0.3	<0.5	*2,300 / 3,900	3.93	NP	0.00	-	
10/13/99	<50	<0.3	<0.3	<0.3	<0.5	<5	6.15	NP	0.00	-	
<b>MONITORING WELL #MW-7</b>											
01/09/92	-	-	-	-	-	-	6.30	NP	0.00	-	
04/13/92	-	-	-	-	-	-	6.68	NP	0.00	-	
10/05/92	-	-	-	-	-	-	9.60	NP	0.00	-	
01/06/93	-	-	-	-	-	-	13.90	NP	0.00	-	
04/26/93	-	-	-	-	-	-	5.55	NP	0.00	-	
01/04/94	-	-	-	-	-	-	7.58	NP	0.00	-	
04/05/94	-	-	-	-	-	-	6.66	NP	0.00	-	
10/09/95	27,000	2,400	140	1,700	2,700	-	-	-	-	-	
01/08/96	13,000	800	42	540	860	-	6.94	NP	0.00	-	
04/08/94	9,100	840	31	690	1,200	-	5.48	NP	0.00	-	
07/22/96	11,000	1,700	22	660	700	840	6.60	NP	0.00	-	
10/16/96	180	<0.3	<0.3	<0.3	<0.5	270	6.42	NP	0.00	-	
01/22/97	130	<0.3	<0.3	<0.3	<0.5	470	5.70	NP	0.00	-	
04/21/97	10,000	1,400	27	820	490	1,100	5.30	NP	0.00	-	
07/14/97	8,200	660	15	230	270	560	7.90	NP	0.00	-	

**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #049, OAKLAND, 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)					
10/07/97	7,700	480	15	8.4	350	-	7.70	NP	0.00	-	-
01/19/98	1,400	20	0.74	0.46	4.4	-	6.05	NP	0 00	-	-
04/23/98	590	<0.3	<0.3	<0.3	<0.5	1,700	7.60	NP	0.00	-	-
07/20/98	4,900	570	150	300	500	1,500	5.30	NP	0.00	-	-
10/14/98	1,100	1.0	<0.3	<0.3	5.3	2,000	8.60	NP	0.00	-	-
01/21/99	570	0.32	<0.3	<0.3	<0.5	* 1,500 / 1,700	6.70	NP	0.00	-	-
04/15/99	770	<0.3	<0.3	<0.3	<0.5	* 1,400 / 1,200	6.07	NP	0.00	-	-
07/26/99	500	<0.3	<0.3	<0.3	<0.5	*710 / 950	7.86	NP	0.00	-	-
10/13/99	<50	<0 3	0.44	<0.3	0 62	<5	6.93	NP	0.00	-	-
<b>MONITORING WELL #RW-1</b>											
01/09/92	-	-	-	-	-	-	14.00	NP	0.00	-	-
04/13/92	-	-	-	-	-	-	14.00	NP	0.00	-	-
10/05/92	-	-	-	-	-	-	15.05	NP	0.00	-	-
01/06/93	-	-	-	-	-	-	5.43	NP	0.00	-	-
04/26/93	-	-	-	-	-	-	13.20	NP	0.00	-	-
0104/94	-	-	-	-	-	-	14.30	NP	0.00	-	-
04/05/94	-	-	-	-	-	-	14.13	NP	0.00	-	-
01/08/96	-	-	-	-	-	-	14.22	NP	0.00	-	-
04/08/96	-	-	-	-	-	-	14.33	NP	0 00	-	-
07/22/96	8,100	530	84	120	860	-	14.27	NP	0.00	-	-
10/16/96	-	-	-	-	-	-	13.10	NP	0.00	-	-
01/22/97	-	-	-	-	-	-	16.97	NP	0.00	-	-
10/07/97	-	-	-	-	-	-	14.20	NP	0.00	-	-
01/15/98	-	-	-	-	-	-	15.60	NP	0.00	-	-
04/23/98	81,000	0.72	1.4	3 2	5.7	270,000	14.20	NP	0.00	-	-
07/20/98	-	-	-	-	-	-	14.30	NP	0.00	-	-
10/14/98	-	-	-	-	-	-	11.20	NP	0 00	-	-
01/21/99	-	-	-	-	-	-	-	-	-	-	-
04/15/99	-	-	-	-	-	-	13.10	NP	0.00	-	-
07/26/99	4,400	<3	<3	<3	<5	*6,800 / 9,000	13.83	NP	0.00	-	-
10/13/99	-	-	-	-	-	-	-	-	-	-	-



**TABLE 1  
GROUNDWATER DATA  
THRIFTY OIL STATION #049, OAKLAND, 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)					

**NOTE:**

\* MTBE 8020 / 8260  
 ND = Nondetectable  
 NP = No free hydrocarbon product  
 " - " = Not analyzed / Not available

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**



PROJECT STATUS REPORT  
 THRIFTY OIL CO. S.S. #049  
 3400 SAN PABLO AVENUE  
 BELL, CA  
 DATE: 10-13-1999.

OBSERVATION WELLS

NO.	DTW	DTP	PT	DTB	DIA.	ODORS			F/P	
						YES	NO	S	YES	NO
MONTHLY										
MW-1	6.13			17.78	2 <sup>7</sup>		X		X	-
MW-2	5.48			23.80	2 <sup>7</sup>		X		X	-
MW-3	7.09			24.20	2 <sup>7</sup>		X		X	-
MW-4	8.54			13.71	4 <sup>7</sup>		X		X	-
MW-5	6.61			13.78	2 <sup>7</sup>		X		X	-
MW-6	6.15			13.08	2 <sup>7</sup>		X		X	-
MW-7	6.93			13.60	4 <sup>7</sup>		X		X	-
RW-1	—			24.37	6 <sup>7</sup>		—		—	-

EXPLANATION

DTW - DEPTH TO WATER FROM SURFACE	DTP - DEPTH TO PRODUCT FROM SURFACE
PT - PRODUCT THICKNESS	S - SLIGHT
MEASUREMENTS IN FEET	
REMARKS: Q.U.S. and System J.	
FREE PRODUCT REMOVED: APPROX. — GALLONS	WATER REMOVED: APPROX. 90 GALLONS
DATA RECORDED BY: [Signature]	INPUT BY: C.D.

### FIELD DATA -GROUNDWATER SAMPLING PROGRAM

Site:	⇒ 049	Date:	10-13-1994
Address:			
Personnel:	BERBOW	Weather:	SUNNY DAY
Well No:	MK-1	Equip:	BAPLER

Before Purging:			
Total Well Depth: (ft.)	17.78	Well Diameter	2 1/2
Depth to Water (ft)	6.13	Est. Purge Volume:	8

Sampling Data:							
Initial Turbidity:				Final Turbidity:			
Time	9:04	9:05	9:06	9:07	9:08	9:09	9:10
EC	880	860	860	840	820	810	810
pH	6.16	6.13	6.11	6.08	6.04	6.01	5.93
Temp	71.3	71.0	70.8	70.7	70.5	70.3	70.1
Gal.	1	2	3	4	5	6	8
Time							
EC							
pH							
Temp							
Gal.							

After Purging/Before Sample Collection			
Depth to Water (ft.)	4.41	Total Well Depth(ft.)	17.78

**FIELD DATA -GROUNDWATER SAMPLING PROGRAM**

Site:	<u>3049</u>	Date:	<u>10-13-99</u>
Address:			
Personnel:	<u>BARBARA P</u>	Weather:	<u>SUNNY DM</u>
Well No:	<u>MW-2</u>	Equip:	<u>BAILER</u>

<b>Before Purging:</b>			
Total Well Depth: (ft.)	<u>23.80</u>	Well Diameter	<u>2<sup>4</sup></u>
Depth to Water (ft)	<u>5.48</u>	Est. Purge Volume:	<u>12</u>

<b>Sampling Data:</b>							
<b>Initial Turbidity:</b>				<b>Final Turbidity:</b>			
Time	<u>8:19</u>	<u>8:21</u>	<u>8:23</u>	<u>8:24</u>	<u>8:26</u>	<u>8:28</u>	<u>8:30</u>
EC	<u>870</u>	<u>860</u>	<u>860</u>	<u>830</u>	<u>810</u>	<u>810</u>	<u>790</u>
pH	<u>6.03</u>	<u>5.98</u>	<u>5.94</u>	<u>5.88</u>	<u>5.84</u>	<u>5.82</u>	<u>5.77</u>
Temp	<u>71.1</u>	<u>70.9</u>	<u>70.8</u>	<u>70.6</u>	<u>70.4</u>	<u>70.2</u>	<u>69.9</u>
Gal.	<u>1</u>	<u>3</u>	<u>5</u>	<u>6</u>	<u>8</u>	<u>10</u>	<u>12</u>
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>23.80</u>

**FIELD DATA -GROUNDWATER SAMPLING PROGRAM**

Site: <u>2-049</u>	Date: <u>10-13-99</u>
Address: _____	
Personnel: <u>B. P. B. M.</u>	Weather: <u>SUNNY DAY</u>
Well No: <u>MW-3</u>	Equip: <u>BAUER</u>

<b>Before Purging:</b>			
Total Well Depth: (ft.)	<u>24.20</u>	Well Diameter	<u>2"</u>
Depth to Water (ft)	<u>2.09</u>	Est. Purge Volume:	<u>M</u>

<b>Sampling Data:</b>							
Initial Turbidity:				Final Turbidity:			
Time	<u>8:05</u>	<u>8:07</u>	<u>8:08</u>	<u>8:10</u>	<u>8:11</u>	<u>8:13</u>	<u>8:15</u>
EC	<u>780</u>	<u>710</u>	<u>690</u>	<u>640</u>	<u>630</u>	<u>620</u>	<u>590</u>
pH	<u>6.18</u>	<u>6.14</u>	<u>6.11</u>	<u>6.09</u>	<u>6.09</u>	<u>6.04</u>	<u>6.01</u>
Temp	<u>71.3</u>	<u>71.1</u>	<u>70.9</u>	<u>70.7</u>	<u>70.5</u>	<u>70.2</u>	<u>70.1</u>
Gal.	<u>1</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>7</u>	<u>9</u>	<u>M</u>
Time							
EC							
pH							
Temp							
Gal.							

<b>After Purging/Before Sample Collection</b>	
Depth to Water (ft.)	<u>4.35</u>
Total Well Depth(ft.)	<u>24.20</u>

## FIELD DATA - GROUNDWATER SAMPLING PROGRAM

Site:	22044	Date:	10-13-1999
Address:			
Personnel:	SFRBOM P.	Weather:	SUNNY DAY
Well No:	MW-4	Equip:	ROICAR

<b>Before Purging:</b>			
Total Well Depth: (ft.)	13.71	Well Diameter	4"
Depth to Water (ft)	5.54	Est. Purge Volume:	21

Sampling Data:								
Initial Turbidity:		Final Turbidity:						
Time	8:42	8:45	8:48	8:51	8:54	8:57	9:00	
EC	710	680	670	650	650	650	610	
pH	6.08	6.02	5.93	5.87	5.84	5.81	5.77	
Temp	71.4	71.2	71.1	70.8	70.6	70.4	70.2	
Gal.	3	6	9	12	15	18	21	
Time								
EC								
pH								
Temp								
Gal.								

<b>After Purging/Before Sample Collection</b>	
Depth to Water (ft.)	4.11
Total Well Depth (ft.)	13.71

FIELD DATA - GROUNDWATER SAMPLING PROGRAM

Site:	SS 049	Date:	10-13-1999
Address:			
Personnel:	BERNARD D	Weather:	SUNNY DAY
Well No:	MW-5	Equip:	BAUER

Before Purging:			
Total Well Depth: (ft.)	13.78	Well Diameter	2 <sup>4</sup>
Depth to Water (ft)	6.61	Est. Purge Volume:	5

Sampling Data:							
Initial Turbidity:				Final Turbidity:			
Time	9:14	9:15	9:16	9:17	9:18	9:19	9:20
EC	710	710	680	640	610	590	580
pH	6.18	6.13	6.15	6.11	6.09	6.04	5.94
Temp	71.4	71.2	70.8	70.6	70.4	70.1	69.9
Gal.	0.5	1	1.5	2	3	4	5
Time							
EC							
pH							
Temp							
Gal.							

After Purging/Before Sample Collection	TIME:	AM/PM
Depth to Water (ft.) 4.22	Total Well Depth(ft.)	13.78



**FIELD DATA -GROUNDWATER SAMPLING PROGRAM**

Site: <u>069</u>	Date: <u>10-13-99</u>
Address: _____	
Personnel: <u>PERSON</u>	Weather: <u>SUNNY DM</u>
Well No: <u>MW 6</u>	Equip: <u>ROTRON</u>

<b>Before Purging:</b>			
Total Well Depth: (ft.)	<u>13.08</u>	Well Diameter	<u>2"</u>
Depth to Water (ft)	<u>6.15</u>	Est. Purge Volume:	<u>5</u>

<b>Sampling Data:</b>							
<b>Initial Turbidity:</b>				<b>Final Turbidity:</b>			
Time	<u>7:54</u>	<u>7:55</u>	<u>7:56</u>	<u>7:57</u>	<u>7:58</u>	<u>7:59</u>	<u>8:00</u>
EC	<u>880</u>	<u>860</u>	<u>840</u>	<u>840</u>	<u>820</u>	<u>810</u>	<u>790</u>
pH	<u>6.14</u>	<u>6.09</u>	<u>6.06</u>	<u>6.03</u>	<u>5.97</u>	<u>5.93</u>	<u>5.87</u>
Temp	<u>71.4</u>	<u>71.2</u>	<u>70.9</u>	<u>70.7</u>	<u>70.4</u>	<u>70.1</u>	<u>69.9</u>
Gal.	<u>0.5</u>	<u>1</u>	<u>1.5</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Time							
EC							
pH							
Temp							
Gal.							

<b>After Purging/Before Sample Collection</b>			
Depth to Water (ft.)	<u>3.20</u>	Total Well Depth(ft.)	<u>13.08</u>

FIELD DATA - GROUNDWATER SAMPLING PROGRAM

Site:	→ 069	Date:	10-13-1999
Address:			
Personnel:	STREBOW D.	Weather:	SUNNY DAY
Well No:	MW-7	Equip:	BAIFR

Before Purging:			
Total Well Depth: (ft.)	13.60	Well Diameter	4"
Depth to Water (ft)	6.93	Est. Purge Volume:	17

Sampling Data:							
Initial Turbidity:				Final Turbidity:			
Time	9:25	9:27	9:30	9:32	9:35	9:37	9:40
EC	830	810	780	760	740	710	690
pH	6.09	6.04	5.96	5.93	5.84	5.81	5.77
Temp	70.4	70.2	69.9	69.7	69.5	69.3	69.0
Gal.	2	4	7	9	12	14	17
Time							
EC							
pH							
Temp							
Gal.							

After Purging/Before Sample Collection	TIME:	AM/PM
Depth to Water (ft.)	4.44	Total Well Depth(ft)
		13.60

# **APPENDIX B**



## LABORATORY ANALYSIS RESULTS

Page 1

Client: Thrifty Oil Company  
Project No.: N/A  
Project Name: SS #049  
Sample Matrix: Water  
Method: EPA 8015M (Gasoline)

AA Project No.: A135049-58  
Date Received: 10/14/99  
Date Reported: 10/29/99  
Units: ug/L

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
96196	MW-6	10/13/99	10/22/99	<50	50
96197	MW-3	10/13/99	10/22/99	<50	50
96198	MW-2	10/13/99	10/22/99	7600	50
96199	MW4	10/13/99	10/22/99	410	50
96200	MW-1	10/13/99	10/22/99	<50	50
96201	MW-5	10/13/99	10/22/99	<50	50
96202	MW-7	10/13/99	10/22/99	<50	50
96203	TRIP BLANK	10/13/99	10/22/99	<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 #049  
**Sample Matrix:** Water  
**Method:** EPA 8020 (BTEX)

**AA Project No.:** A135049-58  
**Date Received:** 10/14/99  
**Date Reported:** 10/29/99  
**Units:** ug/L

	10/13/99	10/13/99	10/13/99	10/13/99	
<b>Date Sampled:</b>	10/13/99	10/13/99	10/13/99	10/13/99	
<b>Date Analyzed:</b>	10/22/99	10/22/99	10/22/99	10/22/99	
<b>AA ID No.:</b>	96196	96197	96198	96199	
<b>Client ID No.:</b>	MW-6	MW-3	MW-2	MW4	MRL
<b>Compounds:</b>					
Benzene	<0.3	<0.3	<3	<0.3	0.3
Ethylbenzene	<0.3	<0.3	<3	<0.3	0.3
Toluene	<0.3	<0.3	3.7	0.63	0.3
Xylenes	<0.5	<0.5	11	<0.5	0.5

George Havallas  
Laboratory Director



**LABORATORY ANALYSIS RESULTS**

Client: Thrifty Oil Company  
Project No.: N/A  
Project Name: SS #049  
Sample Matrix: Water  
Method: EPA 8020 (BTEX)

AA Project No.: A135049-58  
Date Received: 10/14/99  
Date Reported: 10/29/99  
Units: ug/L

Date Sampled:	10/13/99	10/13/99	10/13/99	10/13/99	
Date Analyzed:	10/22/99	10/22/99	10/22/99	10/22/99	
AA ID No.:	96200	96201	96202	96203	
Client ID No.:	MW-1	MW-5	MW-7	TRIP BLANK	MRL
<b>Compounds:</b>					
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	0.44	<0.3	0.3
Xylenes	<0.5	<0.5	0.62	<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 #049  
**Sample Matrix:** Water  
**Method:** MTBE (EPA 8020)

**AA Project No.:** A135049-58  
**Date Received:** 10/14/99  
**Date Reported:** 10/29/99  
**Units:** ug/L

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
96196	MW-6	10/13/99	10/22/99	<5	5
96197	MW-3	10/13/99	10/22/99	<5	5
96198	MW-2	10/13/99	10/22/99	11000	5
96199	MW4	10/13/99	10/22/99	660	5
96200	MW-1	10/13/99	10/22/99	<5	5
96201	MW-5	10/13/99	10/22/99	<5	5
96202	MW-7	10/13/99	10/22/99	<5	5

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: 10-13-99

PAGE 1 OF 1

AA Client <u>T.O.C.</u>						Phone <u>562/921-3581</u>		Sampler's Name <u>SEBASTIAN P.</u>												
Project Manager <u>JEFF SURYARUSUMA</u>						P.O. No.		Sampler's Signature <u>[Signature]</u>												
Project Name <u>Q.V.S.</u>						Project No.		Project Manager's Signature												
Job Name and Address <u>3400 SAN PABLO AVE. OAKLAND, CA 94612</u>						<b>ANALYSIS REQUIRED</b>				Test Requirements										
						Detection Limits		Test Name				<table border="1" style="width:100%; height: 100px;"> <tr> <td style="width: 20px; text-align: center;">TPH</td> <td style="width: 20px; text-align: center;">BTEX</td> <td style="width: 20px; text-align: center;">MTBE</td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> </tr> </table>		TPH	BTEX	MTBE				
TPH	BTEX	MTBE																		
AA ID.#	Client's ID.	Date	Time	Sample Type	Number of Containers	TPH	BTEX	MTBE												
96196	MW-6	10.13.99	13:00	WATER	3	X	X	X												
96197	MW-3	↓	13:10	↑	3	X	X	X												
96198	MW-2		13:15		3	X	X	X												
96199	MW-4		13:20		3	X	X	X												
96200	MW-1		13:25		3	X	X	X												
96201	MW-5		13:30		3	X	X	X												
96202	MW-7		13:35		3	X	X	X												
96203	TRIP BLANK		7:30		2	X	X													
<b>SAMPLE INTEGRITY TO BE FILLED IN BY RECEIVING LAB</b>						Relinquished by: <u>[Signature]</u>		Date	Time	Received by: <u>CA. OVERNIGHT</u>										
Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						Relinquished by: <u>CA. OVERNIGHT</u>		10.13.99	17:00											
Samples Properly Cooled Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						Relinquished by: _____		10.13.99	17:30											
Samples Accepted Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						Relinquished by: _____		10/14/99	10	<u>[Signature]</u>										
If Not Why: _____						Relinquished by: _____		Date	Time	Received by: _____										
AA Project No. <u>A135049-58</u>																				



# **APPENDIX C**

THRIFTY OIL CO. SERVICE STATION # 49  
6125 TELEGRAPH AVENUE, OAKLAND, CALIFORNIA  
GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERBAN P.

DATE OF INSPECTION: 12-30-1999

OBSERVATIONS AND COMMENTS: CHECK OIL, BELTS, CLEAN WATER  
FILTER

FLOW METER READING: 99619

SAMPLES OBTAINED: N/A

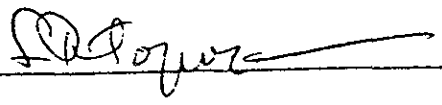
PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: 14

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: 11

PRESSURE GAUGE READING DOWN STREAM OF THE PRIMARY GAC UNIT: 1.4

PRESSURE GAUGE READING DOWN STREAM OF THE SECONDARY GAC UNIT: 1.2

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: 0.9

INSPECTOR'S SIGNATURE: 

49  
THRIFTY OIL CO. SERVICE STATION  
6125 TELEGRAPH AVENUE, OAKLAND, CALIFORNIA  
GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERBA P.

DATE OF INSPECTION: 12-23-1999

OBSERVATIONS AND COMMENTS: CHECK OIL, BELT, CLEAN WATER  
FILTER

FLOW METER READING: 99196

SAMPLES OBTAINED: N/A

PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: 13

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: 11

PRESSURE GAUGE READING DOWN STREAM OF THE PRIMARY GAC UNIT: 1.3

PRESSURE GAUGE READING DOWN STREAM OF THE SECONDARY GAC UNIT: 1.1

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: 0.9

INSPECTOR'S SIGNATURE: 

49  
THRIFTY OIL CO. SERVICE STATION #  
6125 TELEGRAPH AVENUE, OAKLAND, CALIFORNIA  
GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SEBASTIAN P

DATE OF INSPECTION: 12-17-1999

OBSERVATIONS AND COMMENTS: Add oil, clean filter, replace cartridge  
water filter

FLOW METER READING: 98937

SAMPLES OBTAINED: N/A

PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: 13

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: 11

PRESSURE GAUGE READING DOWN STREAM OF THE PRIMARY GAC UNIT: 1.3

PRESSURE GAUGE READING DOWN STREAM OF THE SECONDARY GAC UNIT: 1.1

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: 0.9

INSPECTOR'S SIGNATURE: [Signature]

49  
THRIFTY OIL CO. SERVICE STATION #  
6125 TELEGRAPH AVENUE, OAKLAND, CALIFORNIA  
GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERBAN P

DATE OF INSPECTION: 12-00-99

OBSERVATIONS AND COMMENTS: check belt, add oil, clean water

filter

FLOW METER READING: 98703

SAMPLES OBTAINED: N/A

PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: 13

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: 11

PRESSURE GAUGE READING DOWN STREAM OF THE PRIMARY GAC UNIT: 1.3

PRESSURE GAUGE READING DOWN STREAM OF THE SECONDARY GAC UNIT: 11

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: 0.8

INSPECTOR'S SIGNATURE: 

49  
THRIFTY OIL CO. SERVICE STATION #  
6125 TELEGRAPH AVENUE, OAKLAND, CALIFORNIA  
GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SEBASTIAN P

DATE OF INSPECTION: 12-03-1999

OBSERVATIONS AND COMMENTS: Add oil, replace water filter, inspect

hoses connections

FLOW METER READING: 98446

SAMPLES OBTAINED: N/A

PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: .13

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: 11

PRESSURE GAUGE READING DOWN STREAM OF THE PRIMARY GAC UNIT: 1.3

PRESSURE GAUGE READING DOWN STREAM OF THE SECONDARY GAC UNIT: 1.1

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: 0.8

INSPECTOR'S SIGNATURE: [Signature]

THRIFTY OIL CO. SERVICE STATION # 049  
6125 TELEGRAPH AVENUE, OAKLAND, CALIFORNIA  
GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SEBASTIAN P.

DATE OF INSPECTION: 11-26-1999

OBSERVATIONS AND COMMENTS: Add oil, change water filter, replace water cartridge -

FLOW METER READING: 98007

SAMPLES OBTAINED: N/A

PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: 13

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: 11

PRESSURE GAUGE READING DOWN STREAM OF THE PRIMARY GAC UNIT: 1.3

PRESSURE GAUGE READING DOWN STREAM OF THE SECONDARY GAC UNIT: 1.1

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: 0.8

INSPECTOR'S SIGNATURE: [Signature]

THRIFTY OIL CO. SERVICE STATION 049  
6125 TELEGRAPH AVENUE, OAKLAND, CALIFORNIA  
GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERBON P.

DATE OF INSPECTION: 11-12-1999

OBSERVATIONS AND COMMENTS: Add oil, clean water filter, replace cartridge  
water filter

FLOW METER READING: 97019

SAMPLES OBTAINED: N/A

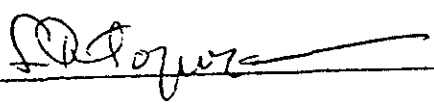
PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: 13

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: 11

PRESSURE GAUGE READING DOWN STREAM OF THE PRIMARY GAC UNIT: 1.4

PRESSURE GAUGE READING DOWN STREAM OF THE SECONDARY GAC UNIT: 1.3

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: 0.9

INSPECTOR'S SIGNATURE: 



THRIFTY OIL CO. SERVICE STATION # 049  
6125 TELEGRAPH AVENUE, OAKLAND, CALIFORNIA  
GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SEBASTIAN P.

DATE OF INSPECTION: 11-05-1999

OBSERVATIONS AND COMMENTS: Add oil, check belt, hoses, clean water filter, replace cartridge water filter

FLOW METER READING: 96428

SAMPLES OBTAINED: N/A

PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: 13

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: 11

PRESSURE GAUGE READING DOWN STREAM OF THE PRIMARY GAC UNIT: 1.3

PRESSURE GAUGE READING DOWN STREAM OF THE SECONDARY GAC UNIT: 1.4

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: 0.9

INSPECTOR'S SIGNATURE: [Signature]

THRIFTY OIL CO. SERVICE STATION 049.  
6125 TELEGRAPH AVENUE, OAKLAND, CALIFORNIA  
GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERBAN P.

DATE OF INSPECTION: 10-29-1999

OBSERVATIONS AND COMMENTS: Check oil, belt, replace water filter,

FLOW METER READING: 95991

SAMPLES OBTAINED: N/A

PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: 13

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: 11

PRESSURE GAUGE READING DOWN STREAM OF THE PRIMARY GAC UNIT: 1.4

PRESSURE GAUGE READING DOWN STREAM OF THE SECONDARY GAC UNIT: 1.3

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: 0.9

INSPECTOR'S SIGNATURE: [Signature]

THRIFTY OIL CO. SERVICE STATION # 049  
~~6125 TELEGRAPH AVENUE, OAKLAND, CALIFORNIA~~  
GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SEBASTIAN P-

DATE OF INSPECTION: 10-22-1999

OBSERVATIONS AND COMMENTS: CHECK OIL, BELT, CLEAN WATER  
FILTER, REPLACE CARTRIDGE FILTER

FLOW METER READING: 954.59

SAMPLES OBTAINED: N/A

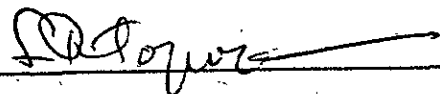
PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: 13

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: M

PRESSURE GAUGE READING DOWN STREAM OF THE PRIMARY GAC UNIT: 1.4

PRESSURE GAUGE READING DOWN STREAM OF THE SECONDARY GAC UNIT: 1.3

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: 0.9

INSPECTOR'S SIGNATURE: 

THRIFTY OIL CO. SERVICE STATION # 049  
6125 TELEGRAPH AVENUE, OAKLAND, CALIFORNIA  
GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERBATA P

DATE OF INSPECTION: 10-13-1999

OBSERVATIONS AND  
COMMENTS: CHECK OIL, BELT, HOSES,  
REPLACE WATER CARTRIDGE

FLOW METER READING: 95098

SAMPLES OBTAINED: yes

PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: 13

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: 11

PRESSURE GAUGE READING DOWN STREAM OF THE PRIMARY GAC UNIT: 1.4

PRESSURE GAUGE READING DOWN STREAM OF THE SECONDARY GAC UNIT: 1.3

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: 0.9

INSPECTOR'S SIGNATURE: [Signature]

THRIFTY OIL CO. SERVICE STATION # 649  
~~6125 TELEGRAPH AVENUE, OAKLAND, CALIFORNIA~~  
GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERBOK P.

DATE OF INSPECTION: 10-07-1999

OBSERVATIONS AND COMMENTS: check oil, belt, hoses, replace water

cartridge,

FLOW METER READING: 94830

SAMPLES OBTAINED: N/A

PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: 13

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: 11

PRESSURE GAUGE READING DOWN STREAM OF THE PRIMARY GAC UNIT: 1.4

PRESSURE GAUGE READING DOWN STREAM OF THE SECONDARY GAC UNIT: 1.3

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: 0.9

INSPECTOR'S SIGNATURE: 

649

THRIFTY OIL CO. SERVICE STATION #  
6125 TELEGRAPH AVENUE, OAKLAND, CALIFORNIA  
GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERRA, P.

DATE OF INSPECTION: 10-01-1999

OBSERVATIONS AND COMMENTS: CHECK OIL, BELT, HOSES, REPLACE WATER FILTER

FLOW METER READING: 94684

SAMPLES OBTAINED: N/A

PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: 13

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: 11

PRESSURE GAUGE READING DOWN STREAM OF THE PRIMARY GAC UNIT: 1.3

PRESSURE GAUGE READING DOWN STREAM OF THE SECONDARY GAC UNIT: 0.9

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: \_\_\_\_\_

INSPECTOR'S SIGNATURE: 

# APPENDIX D



**LABORATORY ANALYSIS RESULTS**

Page 1

**Client:** Thrifty Oil Company  
**Project No.:** N/A  
**Project Name:** SS #049  
**Sample Matrix:** Water  
**Method:** EPA 8015M (Gasoline)

**AA Project No.:** A135049-59  
**Date Received:** 10/14/99  
**Date Reported:** 10/26/99  
**Units:** ug/L

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
96204	Effluent	10/13/99	10/20/99	<50	50
96205	Interm	10/13/99	10/20/99	<50	50
96206	Influent	10/13/99	10/20/99	6000	50

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

George Havalias  
Laboratory Director





LABORATORY ANALYSIS RESULTS

Client: Thrifty Oil Company  
Project No.: N/A  
Project Name: SS #049  
Sample Matrix: Water  
Method: EPA 8020 (BTEX)

AA Project No.: A135049-59  
Date Received: 10/14/99  
Date Reported: 10/26/99  
Units: ug/L

Date Sampled:	10/13/99	10/13/99	10/13/99	
Date Analyzed:	10/20/99	10/20/99	10/20/99	
AA ID No.:	96204	96205	96206	
Client ID No.:	Effluent	Interm	Influent	MRL
<u>Compounds:</u>				
Benzene	<0.3	<0.3	<0.3	0.3
Ethylbenzene	<0.3	<0.3	<0.3	0.3
Toluene	<0.3	<0.3	<0.3	0.3
Xylenes	<0.5	<0.5	<0.5	0.5

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

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



**LABORATORY ANALYSIS RESULTS**

**Client:** Thrifty Oil Company  
**Project No.:** N/A  
**Project Name:** SS #049 ✓  
**Sample Matrix:** Water  
**Method:** MTBE (EPA 8020)

**AA Project No.:** A135049-59 ✓  
**Date Received:** 10/14/99  
**Date Reported:** 10/26/99  
**Units:** ug/L

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
96204	Effluent	10/13/99	10/20/99	<5	5
96205	Interm	10/13/99	10/20/99	11	5
96206	Influent	10/13/99	10/20/99	13000	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 #049  
Method: EPA 8015M (Gasoline)  
Sample ID: Matrix Spike  
Concentration: 500 ug/L

AA ID No.: 96204  
Project No.: N/A  
AA Project No.: A135049-59  
Date Analyzed: 10/20/99  
Date Reported: 10/26/99

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept. Rec. Range (%)
Gasoline Range Organics	430	86	490	98	13	59 - 149

George Havallas  
Laboratory Director



LABORATORY QA/QC REPORT

Client: Thrifty Oil Company  
Project Name: SS #049  
Method: EPA 8020 (BTEX)  
Sample ID: Matrix Spike  
Concentration: 20 ug/L

AA ID No.: 96204  
Project No.: N/A  
AA Project No.: A135049-59  
Date Analyzed: 10/20/99  
Date Reported: 10/26/99

Compounds	Result (ug/L)	Spike Recovery (%)	Dup. Result (ug/L)	Spike/Dup. Recovery (%)	RPD (%)	Accept. Rec. Range (%)
Benzene	17.58	88	17.8	89	1	65 - 135
Ethylbenzene	19.09	95	18.4	92	3	77 - 123
Toluene	19.20	96	18.4	92	4	66 - 134
Xylenes	19.08	95	18.5	92	3	73 - 127

George Havallas  
Laboratory Director



# AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

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(818) 998-5548

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1-800-533-8378

FAX (818) 998-7258

DATE: 10-13-99

PAGE 1 OF 1

AA Client: <b>I.O.C</b>						Phone: <b>(562) 921-3581</b>		Sampler's Name: <b>SERRONI D</b>		
Project Manager: <b>JEFF SURYAKUSUMA</b>						P.O. No.		Sampler's Signature: <i>[Signature]</i>		
Project Name: <b>System Sampling (OK)</b>						Project No.		Project Manager's Signature		
Job Name and Address: <b>3400 SAN PABLO AVE OAKLAND, CA. 94612</b>						<b>ANALYSIS REQUIRED</b>				
						Detection Limits		Test Requirements		
						Test Name				
AA ID.#	Client's ID.	Date	Time	Sample Type	Number of Containers	TPH	BPE	MIB		
96204	EFFWENT	10.13.99	10:30	WATER	2	X	X	X	} 3 drops 1:1 HCL added	
96205	INTERM.	10.13.99	10:35	WATER	2	X	X	X		
96206	INFWENT	10.13.99	10:40	WATER	2	X	X	X		
<b>SAMPLE INTEGRITY TO BE FILLED IN BY RECEIVING LAB</b>						Relinquished by: <i>[Signature]</i>		Date: 10.13.99	Time: 11:00	Received by: <b>CA. OVERNIGHT</b>
Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						Relinquished by: <b>CA. OVERNIGHT</b>		Date: 10.13.99	Time: 17:30	Received by: _____
Samples Properly Cooled Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						Relinquished by: _____		Date: 01/14/99	Time: 10-	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>A135049-59</b>						Relinquished by: _____		Date: _____	Time: _____	Received by: _____