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SH

# THRIFTY OIL CO.

October 26, 2001

O.20637

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

NOV 01 2001

RE: **Former Thrifty Oil Co. Station #049**  
**ARCO Products Company Station #9535**  
3400 San Pablo Avenue  
Oakland, CA 94612  
***3rd Quarter 2001, Status Report***

Dear Ms. Hugo:

Presented herewith is the Third Quarter 2001, 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.

October 25, 2001

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  
*3rd Quarter 2001, Status Report*

Dear Ms. Hugo:

Presented herein is the Third Quarter 2001, 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 and remediation efforts conducted in the Third Quarter 2001. Thrifty has retained the services of Earth Management Company (EMC) to conduct quarterly monitoring and sampling, and remediation system monitoring 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 5.40 feet below surface grade (bsg) in monitoring well MW-6 to 7.23 feet bsg in recovery well MW-3 (**Appendix A**). A groundwater elevation contour map based on the July 18, 2001 data is presented in **Figure 2**. Groundwater elevation data indicates that the flow direction is toward the west with a groundwater gradient of approximately 0.03 feet/foot.

## Quarterly Groundwater Sampling

As part of the ongoing groundwater monitoring program, groundwater samples were obtained from monitoring wells MW-1 through MW-7 on July 18, 2001. 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) by EPA method 8015 modified for gasoline. Volatile aromatic compounds of benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tert-butyl ether (MTBE) were analyzed by EPA method 8021B. 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, BTEX, 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**, respectively. Laboratory results indicate the highest concentrations of TPH-g, benzene and MTBE were in monitoring well MW-4, with concentrations of 52,200 ug/L, 3,320, and 16,800 ug/L, respectively. The isoconcentration maps do not incorporate data from the treatment system influent, even though the groundwater is pumped solely from RW-1, because it was not sampled on the same day as the quarterly water sampling.

### **Remediation Status**

Site remedial activities were initiated in April 1991. Presently, the remediation system consists of a Groundwater Treatment System with carbon, with groundwater extraction from recovery well RW-1. System operational data is included in **Table 2** and **Appendix C**. During this reporting period, the groundwater treatment system processed 231,480 gallons of groundwater, and has treated approximately 789,728 gallons of groundwater since start up (through September 28, 2001). The groundwater system was shut down on July 13, 2001 for quarterly water sampling, and restarted the same day when sampling was completed. The system was shut down again on August 25 and restarted August 27, 2001 because of a power outage.

Inlet, intermediate 1, intermediate 2, intermediate 3, and outlet water samples were collected on July 17, 2001 from the treatment unit, and the samples collected by EMC were sent a state certified laboratory for analysis. The samples collected on July 17, 2001 were analyzed for TPH-g, BTEX, and MTBE by EPA methods 8015M and 8021B, respectively. All analyzed outlet samples were below the laboratory detection limits. Copies of the laboratory analytical reports are included in **Appendix D**.

### **Other Activities**

With the high concentration of petroleum hydrocarbon contamination in well MW-4, Thrifty proposes to connect this well (MW-4) to the existing remediation system to enhance the reduction of the petroleum hydrocarbons in the groundwater. Once approval is received from the ACHCS, an upgrading remedial action work plan will be sent to the ACHCS for approval.

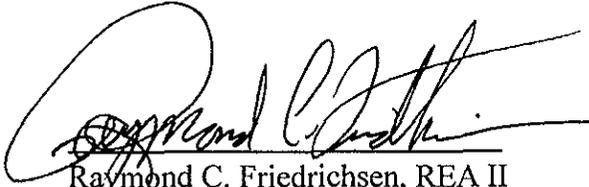
The groundwater monitoring wells, and the treatment unit, will be monitored and sampled for the next quarter. All site monitoring/sampling data generated during the next quarter will be reported

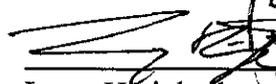
in the Third Quarter 2001 monitoring report.

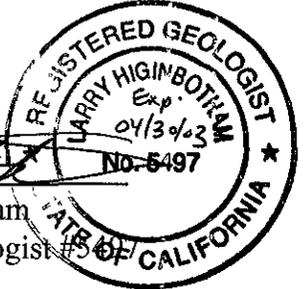
All interpretations expressed in this report are based solely upon data collected by EMC, and Associated Laboratories.

Written by:

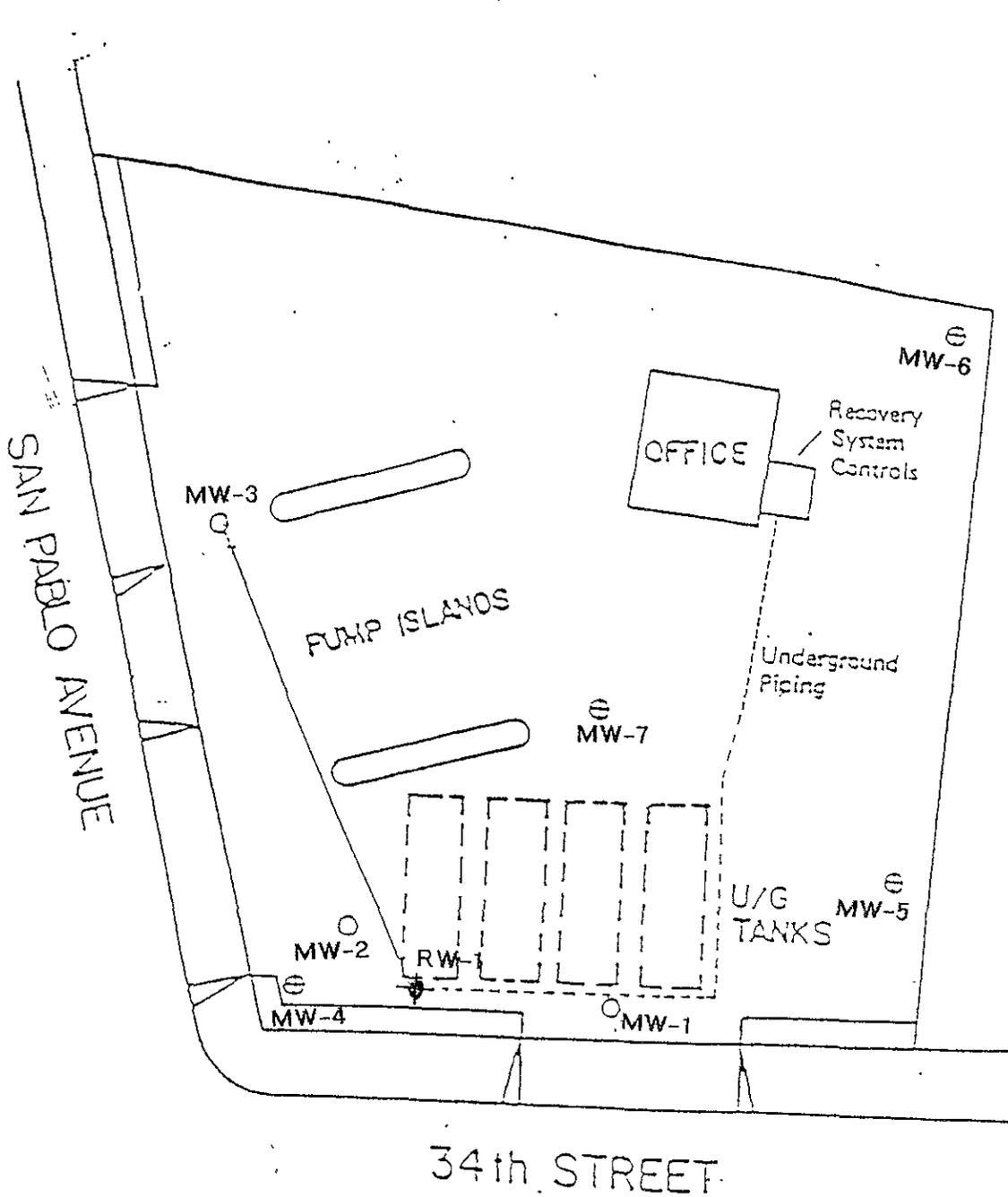
Reviewed by:

  
Raymond C. Friedrichsen, REA II  
Project Manager, MBA  
Senior Environmental Hydrogeologist

  
Larry Higinbotham  
Registered Geologist #5015



# FIGURES



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

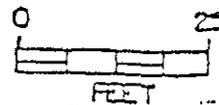
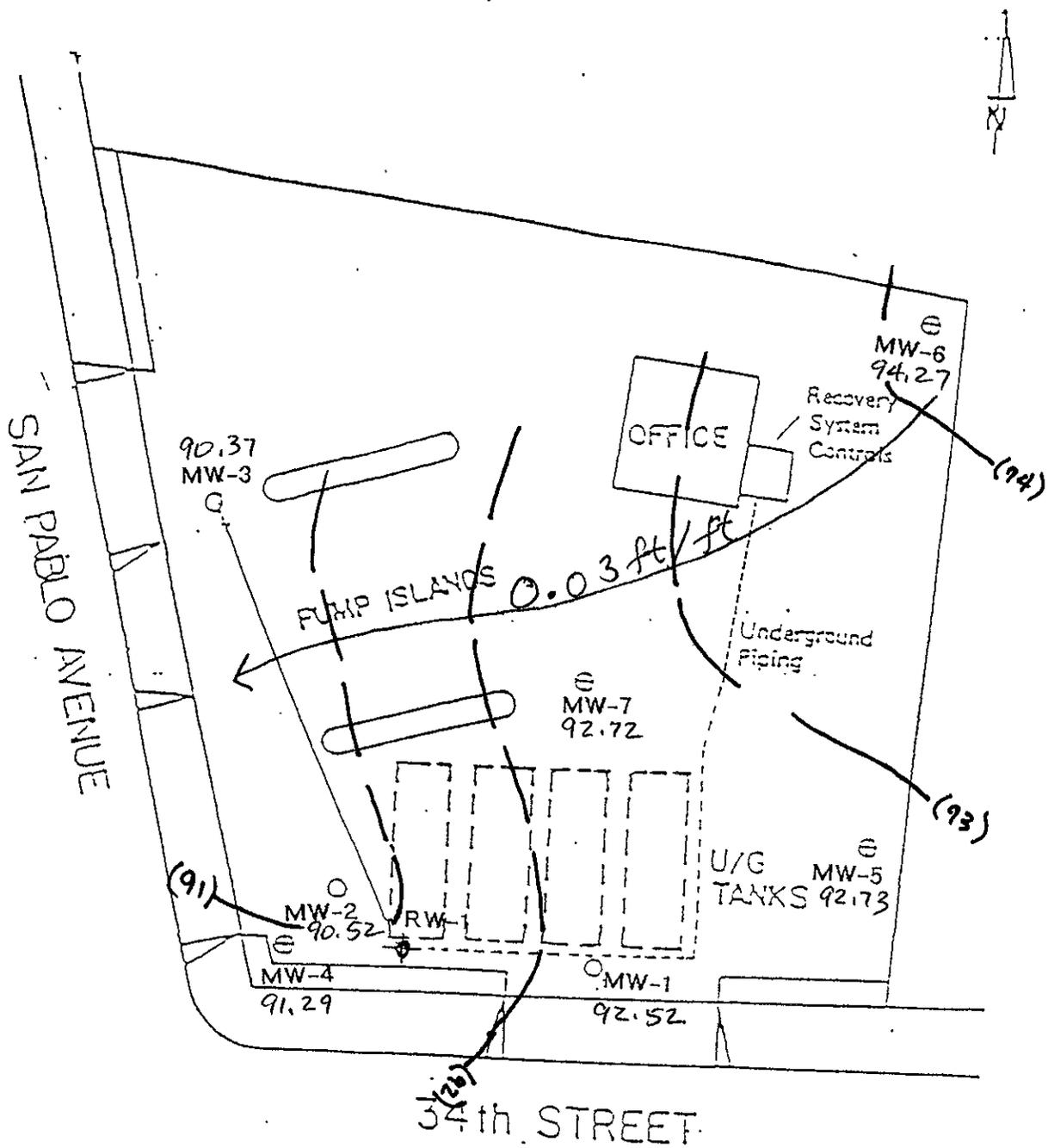


FIGURE 1

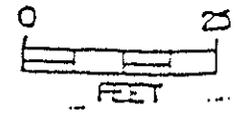


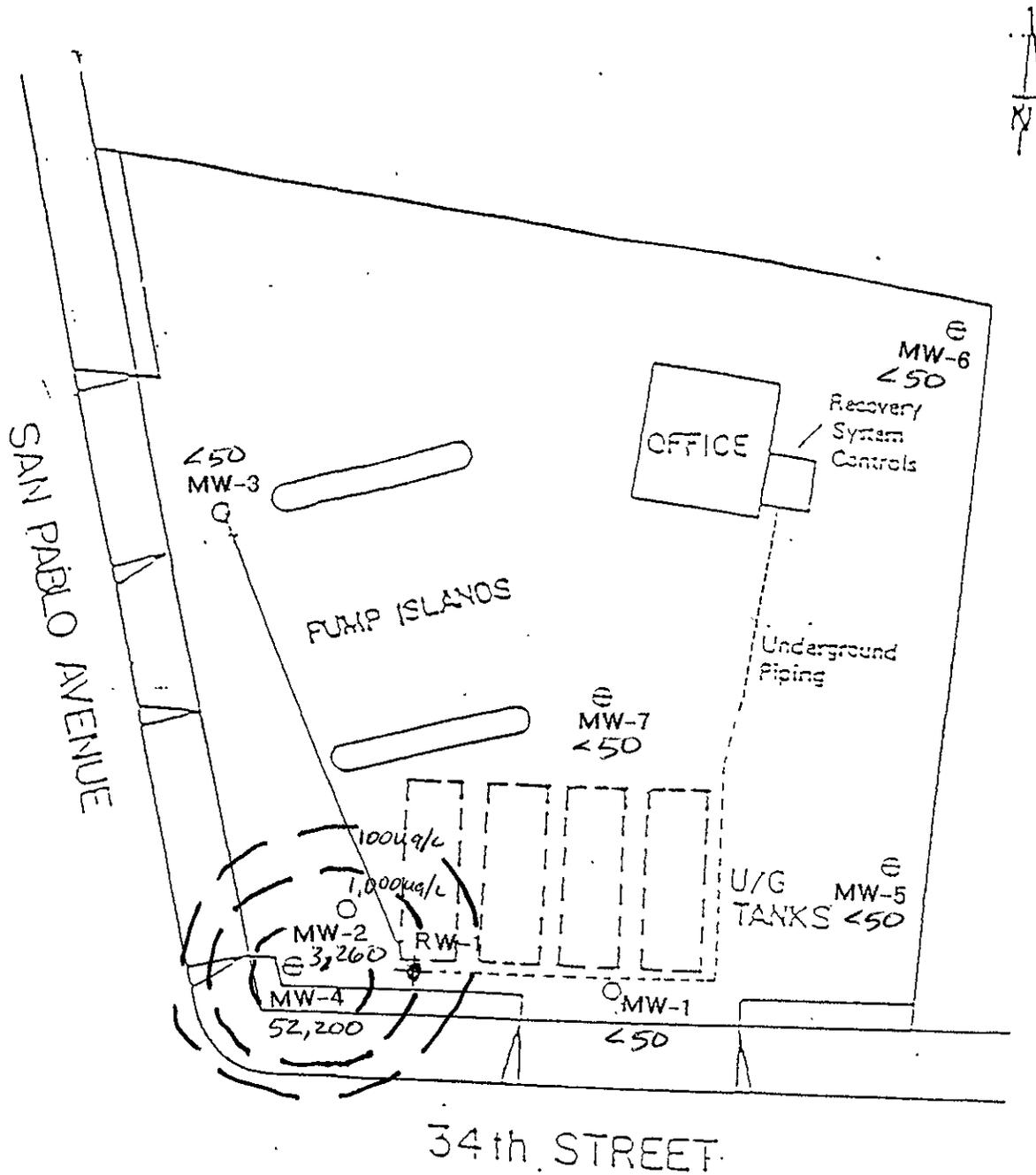
7118/01

**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





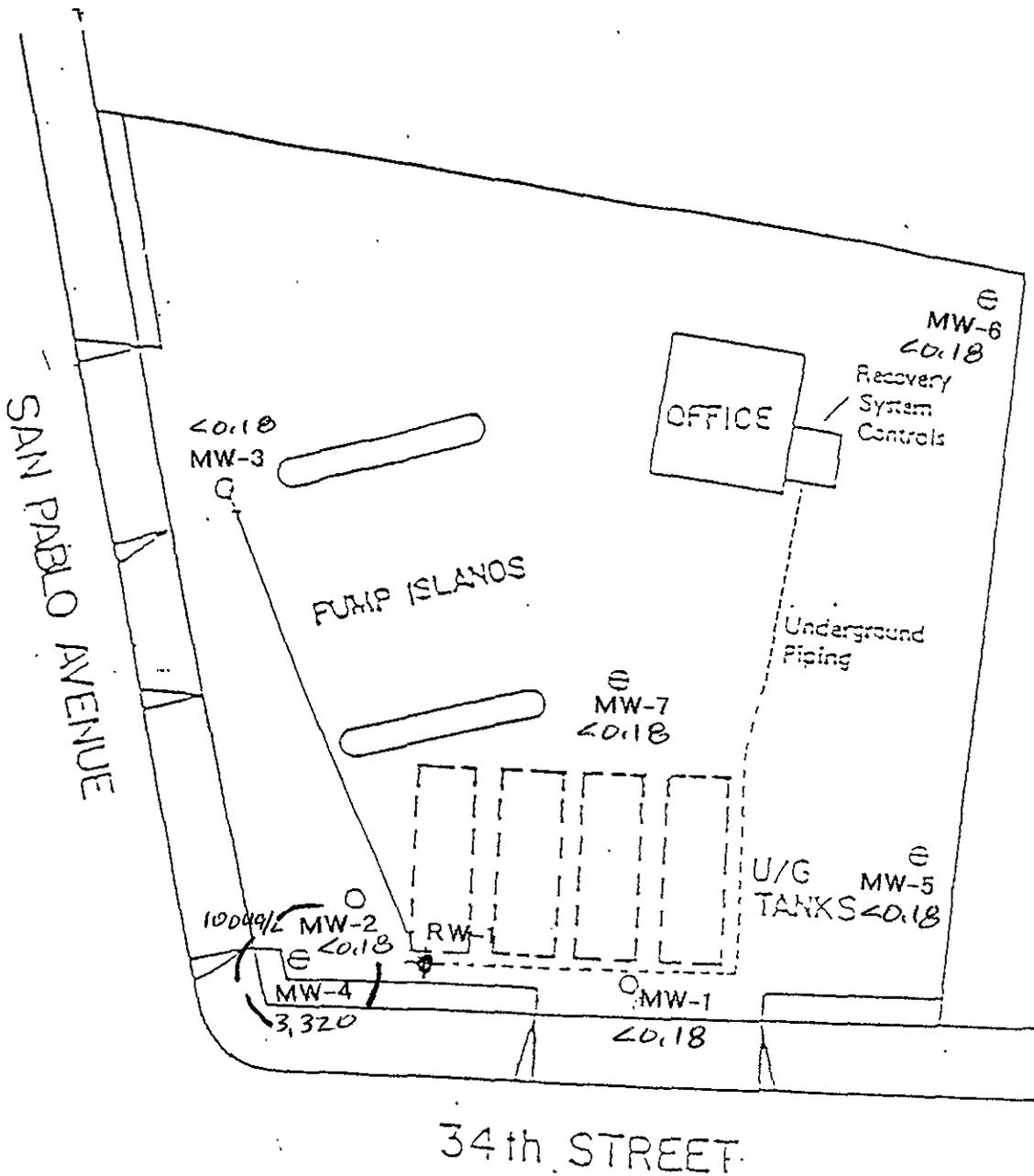
7/18/01

TPH 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



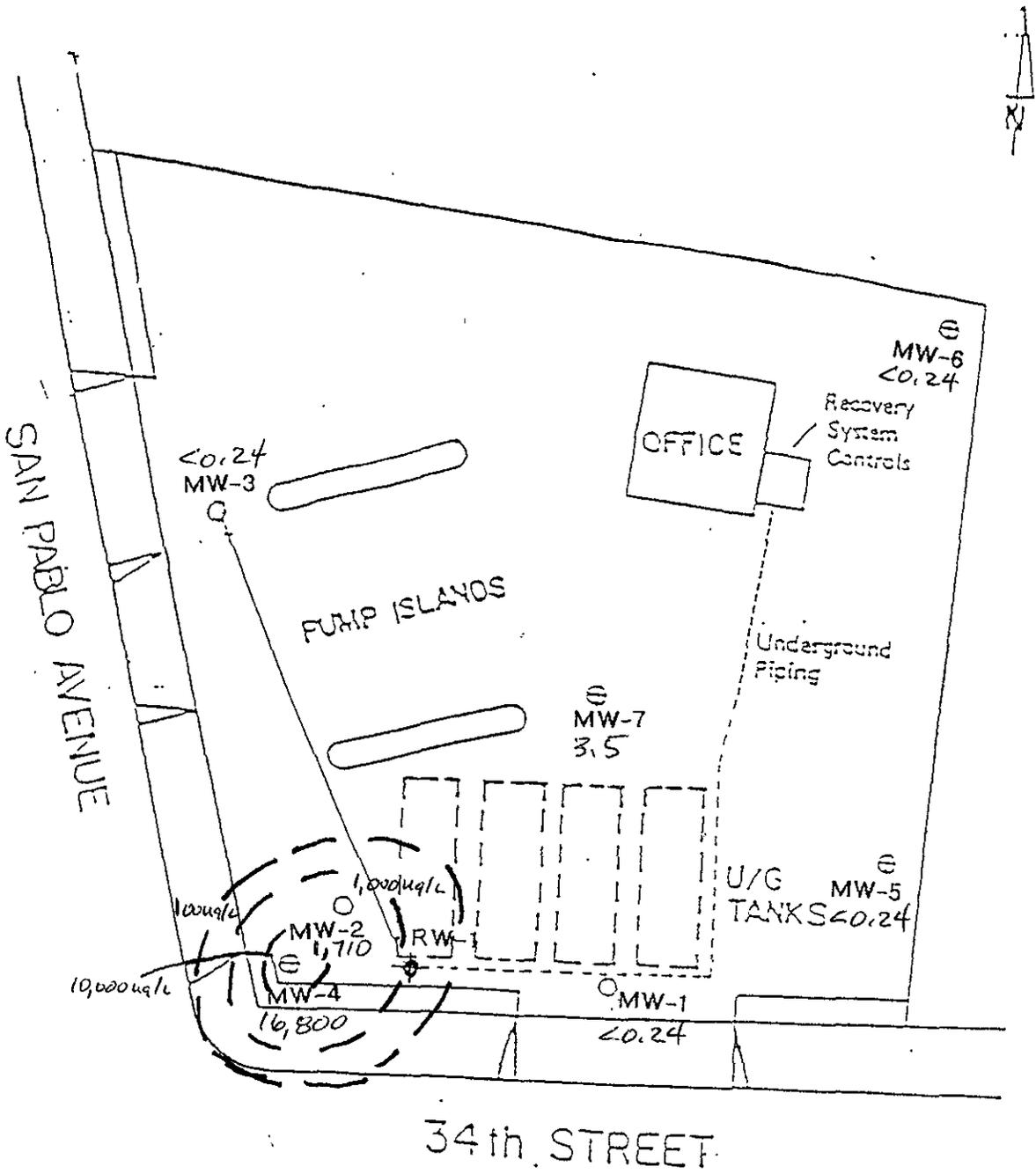


7/18/01

BENZENE 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



7/18/01

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)	MIBE (ug/L)					
<b>MONITORING WELL #MW-1</b>											
01/09/92	-	-	-	-	-	-	5.54	NP	0.00	98.03	92.49
04/13/92	-	-	-	-	-	-	5.86	NP	0.00	98.03	92.17
10/05/92	-	-	-	-	-	-	9.39	NP	0.00	98.03	88.64
01/06/93	-	-	-	-	-	-	4.76	NP	0.00	98.03	93.27
04/26/93	-	-	-	-	-	-	4.96	NP	0.00	98.03	93.07
01/04/94	-	-	-	-	-	-	7.00	NP	0.00	98.03	91.03
04/05/94	-	-	-	-	-	-	6.44	NP	0.00	98.03	91.59
10/09/95	44,000	4,500	4,300	1,700	10,000	-	-	-	-	98.03	-
01/08/96	21,000	1,200	150	34	4,800	-	6.15	NP	0.00	98.03	91.88
04/08/96	4,700	80	110	10	910	-	5.40	NP	0.00	98.03	92.63
07/22/96	7,000	280	130	<3	2,100	440	5.50	NP	0.00	98.03	92.53
10/16/96	120	<0.3	<0.3	<0.3	<0.5	180	6.02	NP	0.00	98.03	92.01
01/22/97	160	<0.3	<0.3	<0.3	<0.5	360	4.40	NP	0.00	98.03	93.63
04/21/97	20,000	420	140	5.8	840	55,000	6.30	NP	0.00	98.03	91.73
07/14/97	13,000	<0.3	<0.3	<0.3	<0.55	30,000	5.92	NP	0.00	98.03	92.11
10/07/97	-	-	-	-	-	-	7.71	7.70	0.01	98.03	90.33
01/15/98	<50	0.3	<0.3	<0.3	<0.5	-	4.40	NP	0.00	98.03	93.63
04/23/98	540	<0.3	<0.3	<0.3	<0.5	<20	8.10	NP	0.00	98.03	89.93
07/20/98	<50	<0.3	<0.3	<0.3	<0.5	<5	5.55	NP	0.00	98.03	92.48
10/14/98	50	1.4	0.56	<0.3	11	22	7.05	NP	0.00	98.03	90.98
01/21/99	<50	0.59	<0.3	<0.3	<0.5	<5	4.10	NP	0.00	98.03	93.93
04/15/99	<50	<0.3	<0.3	<0.3	<0.5	<5	4.30	NP	0.00	98.03	93.73
07/26/99	<50	<0.3	<0.3	<0.3	<0.5	<5	5.54	NP	0.00	98.03	92.49
10/13/99	<50	<0.3	<0.3	<0.3	<0.5	<5	6.13	NP	0.00	98.03	91.90
01/20/00	<50	<0.3	<0.3	<0.3	<0.5	<5	6.04	NP	0.00	98.03	91.99
04/05/00	<50	<0.25	<0.25	<0.25	<0.5	<5	4.03	NP	0.00	98.03	94.00
07/19/00	<50	<0.3	<0.3	<0.3	<0.6	<5	4.00	NP	0.00	98.03	94.03
10/18/00	<50	<0.18	<0.14	<0.18	<0.26	<0.24	5.53	NP	0.00	98.03	92.50
01/17/01	<50	<0.18	<0.14	<0.18	<0.26	<0.24	3.97	NP	0.00	98.03	94.06
04/19/01	<50	<0.18	<0.14	<0.18	<0.26	<0.24	3.98	NP	0.00	98.03	94.05
07/18/01	<50	<0.18	<0.14	<0.18	<0.26	<0.24	5.51	NP	0.00	98.03	92.52

**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-2</b>											
01/09/92	-	-	-	-	-	-	5.35	NP	0.00	97.44	92.09
04/13/92	-	-	-	-	-	-	7.42	NP	0.00	97.44	90.02
10/05/92	-	-	-	-	-	-	12.15	NP	0.00	97.44	85.29
01/06/93	-	-	-	-	-	-	5.46	NP	0.00	97.44	91.98
04/26/93	-	-	-	-	-	-	5.15	NP	0.00	97.44	92.29
01/04/94	-	-	-	-	-	-	9.45	NP	0.00	97.44	87.99
04/05/94	-	-	-	-	-	-	8.23	NP	0.00	97.44	89.21
10/09/95	33,000	6,000	390	1,700	4,900	-	-	-	-	97.44	-
01/08/96	<50	0.32	<0.3	0.41	2.1	-	5.60	NP	0.00	97.44	91.84
04/08/96	10,000	490	210	210	830	-	5.43	NP	0.00	97.44	92.01
07/22/96	60,000	6,500	1,000	1,500	10,000	8,500	5.65	NP	0.00	97.44	91.79
10/16/96	6,500	12	0.34	0.72	110	4,700	5.82	NP	0.00	97.44	91.62
01/22/97	3,200	<0.3	0.46	0.37	<0.5	8,000	4.30	NP	0.00	97.44	93.14
04/21/97	66,000	5,300	1,000	2,300	14,000	30,000	5.80	NP	0.00	97.44	91.64
07/14/97	17,000	1.8	4.6	4.6	350	24,000	8.92	NP	0.00	97.44	88.52
10/07/97	220,000	5,200	1,700	3,800	15,000	-	6.80	NP	0.00	97.44	90.64
01/19/98	25,000	5.4	2.2	2.1	240	-	8.50	NP	0.00	97.44	88.94
04/23/98	7,700	<0.3	0.55	0.38	4.9	28,000	7.60	NP	0.00	97.44	89.84
07/20/98	430,000	4,200	10,000	5,400	28,000	77,000	6.94	NP	0.00	97.44	90.50
10/14/98	27,000	<0.3	4.5	4.1	4.6	65,000	8.45	NP	0.00	97.44	88.99
01/21/99	16,000	7.6	9.8	4.2	310	* 49,000 / 42,000	6.95	NP	0.00	97.44	90.49
04/15/99	20,000	<0.3	<0.3	<0.3	<0.5	* 31,000 / 30,000	8.45	NP	0.00	97.44	88.99
07/26/99	6,700	<6	<6	<6	<10	*11,000 / 15,000	6.94	NP	0.00	97.44	90.50
10/13/99	7,600	<3	3.7	<3	11	11,000	5.48	NP	0.00	97.44	91.96
01/20/00	7,500	<6	<6	<6	<10	*14,000 / 16,000	5.84	NP	0.00	97.44	91.60
04/05/00	10,400	<0.25	<0.25	<0.25	<0.5	*10,000 / 14,400	5.41	NP	0.00	97.44	92.03
07/19/00	130	<0.3	<0.3	<0.3	<0.6	*9,620 / 6,520	5.40	NP	0.00	97.44	92.04
10/18/00	150	<0.18	<0.14	<0.18	<0.26	*9,090 / 6,560	6.91	NP	0.00	97.44	90.53
01/17/01	75	<0.18	2	2	3	*8,650 / 9,710	5.41	NP	0.00	97.44	92.03
04/19/01	4,380	<0.18	<0.14	<0.18	<0.26	8,890	5.40	NP	0.00	97.44	92.04
07/18/01	3,260	<0.18	<0.14	<0.18	2	*7960 / 1,710	6.92	NP	0.00	97.44	90.52

**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-3</b>											
01/09/92	-	-	-	-	-	-	17.60	NP	0.00	97.69	80.09
04/13/92	-	-	-	-	-	-	17.40	NP	0.00	97.69	80.29
10/05/92	-	-	-	-	-	-	17.35	NP	0.00	97.69	80.34
01/06/93	-	-	-	-	-	-	17.40	NP	0.00	97.69	80.29
04/26/93	-	-	-	-	-	-	17.90	NP	0.00	97.69	79.79
01/04/94	-	-	-	-	-	-	17.60	NP	0.00	97.69	80.09
04/05/94	-	-	-	-	-	-	16.25	NP	0.00	97.69	81.44
01/08/96	-	-	-	-	-	-	7.11	NP	0.00	97.69	90.58
04/08/96	8,800	610	31	530	900	-	7.20	NP	0.00	97.69	90.49
07/22/96	38,000	4,100	1,500	1,600	5,400	2,600	6.82	NP	0.00	97.69	90.87
10/16/96	2,400	<0.3	<0.3	<0.3	<0.5	3,800	6.84	NP	0.00	97.69	90.85
01/22/97	2,200	<0.3	<0.3	<0.3	<0.5	5,500	4.80	NP	0.00	97.69	92.89
04/21/97	15,000	1,500	36	260	710	11,000	9.40	NP	0.00	97.69	88.29
07/14/97	5,400	0.45	<0.3	<0.3	<0.5	14,000	10.92	NP	0.00	97.69	86.77
10/07/97	8,800	0.39	<0.3	<0.3	0.88	-	11.95	NP	0.00	97.69	85.74
01/19/98	22,000	1,300	15	20	310	-	7.85	NP	0.00	97.69	89.84
04/23/98	9,200	3.9	3.1	5.7	9.8	16,000	11.20	NP	0.00	97.69	86.49
07/20/98	750	0.41	1.4	0.47	1.8	2,800	7.36	NP	0.00	97.69	90.33
10/14/98	750	<0.3	<0.3	<0.3	<0.5	15,000	11.95	NP	0.00	97.69	85.74
01/21/99	4,700	0.32	<0.3	<0.3	<0.5	* 12,000 / 16,000	10.45	NP	0.00	97.69	87.24
04/15/99	7,900	0.59	0.69	<0.3	0.94	* 11,000 / 14,000	7.86	NP	0.00	97.69	89.83
07/26/99	5,200	<3	<3	<3	<5	*9,600 / 11,000	10.40	NP	0.00	97.69	87.29
10/13/99	<50	<0.3	<0.3	<0.3	<0.5	<5	7.09	NP	0.00	97.69	90.60
01/20/00	<50	<0.3	<0.3	<0.3	<0.5	<5	6.86	NP	0.00	97.69	90.83
04/05/00	<50	0.8	<0.25	<0.25	<0.5	*5.6 / <5	8.85	NP	0.00	97.69	88.84
07/19/00	<50	<0.3	<0.3	<0.3	<0.6	<5	8.86	NP	0.00	97.69	88.83
10/18/00	<50	<0.18	<0.14	<0.18	<0.26	<0.24	7.32	NP	0.00	97.69	90.37
01/17/01	<50	<0.18	2	<0.18	1	*39 / 39	5.40	NP	0.00	97.69	92.29
04/19/01	<50	<0.18	<0.14	<0.18	<0.26	<0.24	8.87	NP	0.00	97.69	88.82
07/18/01	<50	<0.18	<0.14	<0.18	<0.26	<0.24	7.32	NP	0.00	97.69	90.37
<b>MONITORING WELL #MW-4</b>											
01/09/92	-	-	-	-	-	-	5.25	NP	0.00	97.33	92.08
04/13/92	-	-	-	-	-	-	6.40	NP	0.00	97.33	90.93

**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)					
10/05/92	-	-	-	-	-	-	9.95	NP	0.00	97.33	87.38
01/06/93	-	-	-	-	-	-	4.10	NP	0.00	97.33	93.23
04/26/93	-	-	-	-	-	-	4.84	NP	0.00	97.33	92.49
01/04/94	-	-	-	-	-	-	9.05	NP	0.00	97.33	88.28
04/05/94	-	-	-	-	-	-	8.10	NP	0.00	97.33	89.23
10/09/95	63,000	9,000	2,100	2,500	9,600	-	-	-	-	97.33	-
01/08/96	23,000	2,200	830	880	3,600	-	5.57	NP	0.00	97.33	91.76
04/08/96	56,000	5,000	2,500	2,600	11,000	-	5.36	NP	0.00	97.33	91.97
07/22/96	33,000	3,700	1,600	1,400	6,000	2,400	4.80	NP	0.00	97.33	92.53
10/16/96	2,800	7.8	0.60	0.41	52	2,000	5.47	NP	0.00	97.33	91.86
01/22/97	1,400	<0.3	<0.3	<0.3	<0.5	3,100	5.15	NP	0.00	97.33	92.18
04/21/97	-	-	-	-	-	-	6.36	5.30	1.06	97.33	91.77
07/14/97	-	-	-	-	-	-	5.24	5.21	0.03	97.33	92.11
10/07/97	-	-	-	-	-	-	7.82	7.80	0.02	97.33	89.53
01/15/98	-	-	-	-	-	-	6.68	6.60	0.08	97.33	90.71
04/23/98	-	-	-	-	-	-	6.36	5.30	1.06	97.33	91.77
07/20/98	<50	<0.3	<0.3	<0.3	<0.5	<5	6.05	NP	0.00	97.33	91.28
10/14/98	3,100	86	23	2.0	520	1,100	6.85	NP	0.00	97.33	90.48
01/21/99	9,100	3.2	5.6	1.8	130	* 24,000 / 17,000	6.10	NP	0.00	97.33	91.23
04/15/99	14,000	<0.3	0.71	<0.3	<0.5	* 20,000 / 22,000	6.05	NP	0.00	97.33	91.28
07/26/99	4,500	<6	<6	<6	<10	* 8,700 / 9,800	6.07	NP	0.00	97.33	91.26
10/13/99	410	<0.3	0.63	<0.3	<0.5	660	5.54	NP	0.00	97.33	91.79
01/20/00	770	<0.3	<0.3	<0.3	<0.5	* 2,400 / 1,900	5.49	NP	0.00	97.33	91.84
04/05/00	61,200	0.9	<0.25	<0.25	<0.5	* 18,500 / 21,900	5.30	NP	0.00	97.33	92.03
07/19/00	96,600	1,770	1,760	2,690	8,730	21,900 / 9,740 J	5.29	NP	0.00	97.33	92.04
10/18/00	34,900	698	1,010	607	4,130	* 27,800 / 15,900	6.02	NP	0.00	97.33	91.31
01/17/01	29,100	799	930	614	3,400	* 24,300 / 31,400	4.88	NP	0.00	97.33	92.45
04/19/01	103,000	4,880	3,980	3,260	11,800	66,900	4.89	NP	0.00	97.33	92.44
07/18/01	52,200	3,320	2,090	440	5,520	* 55,500 / 16,800	6.04	NP	0.00	97.33	91.29
<b>MONITORING WELL #MW-5</b>											
01/09/92	-	-	-	-	-	-	5.32	NP	0.00	98.85	93.53
04/13/92	-	-	-	-	-	-	4.82	NP	0.00	98.85	94.03
10/0/92	-	-	-	-	-	-	8.78	NP	0.00	98.85	90.07
01/06/93	-	-	-	-	-	-	3.46	NP	0.00	98.85	95.39

**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)					
04/26/93	-	-	-	-	-	-	4.66	NP	0.00	98.85	94.19
01/04/94	-	-	-	-	-	-	6.36	NP	0.00	98.85	92.49
04/05/94	-	-	-	-	-	-	5.94	NP	0.00	98.85	92.91
07/12/95	<100	<0.5	<0.5	<0.5	<1	-	-	-	-	98.85	-
10/09/95	440	31	11	19	84	-	-	-	-	98.85	-
01/08/96	<50	<0.3	<0.3	<0.3	<0.5	-	6.63	NP	0.00	98.85	92.22
04/08/96	<50	<0.3	<0.3	<0.3	<0.5	-	5.22	NP	0.00	98.85	93.63
07/22/96	<50	<0.3	<0.3	<0.3	<0.5	<20	6.62	NP	0.00	98.85	92.23
10/16/96	<50	<0.3	<0.3	<0.3	<0.5	<20	6.12	NP	0.00	98.85	92.73
01/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	5.17	NP	0.00	98.85	93.68
04/21/97	73	2.5	0.34	0.74	3.8	21	6.64	NP	0.00	98.85	92.21
07/14/97	<50	<0.3	<0.3	<0.3	<0.5	<20	6.67	NP	0.00	98.85	92.18
10/07/97	130	<0.3	<0.3	<0.3	<0.5	-	8.20	NP	0.00	98.85	90.65
01/19/98	85	<0.3	<0.3	<0.3	<0.5	-	1.55	NP	0.00	98.85	97.30
04/23/98	220	0.39	<0.3	<0.3	<0.5	350	8.10	NP	0.00	98.85	90.75
07/20/98	<50	<0.3	<0.3	<0.3	<0.5	<5	6.30	NP	0.00	98.85	92.55
10/14/98	<50	<0.3	<0.3	<0.3	<0.5	<5	7.65	NP	0.00	98.85	91.20
01/21/99	<50	<0.3	<0.3	<0.3	<0.5	*6.7 / <5	6.15	NP	0.00	98.85	92.70
04/15/99	<50	<0.3	<0.3	<0.3	<0.5	<5	1.60	NP	0.00	98.85	97.25
07/26/99	<50	<0.3	<0.3	<0.3	<0.5	<5	6.13	NP	0.00	98.85	92.72
10/13/99	<50	<0.3	<0.3	<0.3	<0.5	<5	6.61	NP	0.00	98.85	92.24
01/20/00	<50	<0.3	<0.3	<0.3	<0.5	<5	6.14	NP	0.00	98.85	92.71
04/05/00	<50	0.5	<0.25	<0.25	<0.5	*5.4 / <5	4.58	NP	0.00	98.85	94.27
07/19/00	<50	<0.3	<0.3	<0.3	<0.6	<5	4.59	NP	0.00	98.85	94.26
10/18/00	<50	<0.18	<0.14	<0.18	<0.26	<0.24	6.28	NP	0.00	98.85	92.57
01/17/01	<50	<0.18	<0.14	<0.18	1	*5 / 4.8	4.58	NP	0.00	98.85	94.27
04/19/01	<50	<0.18	<0.14	<0.18	<0.26	<0.24	4.58	NP	0.00	98.85	94.27
07/18/01	<50	<0.18	<0.14	<0.18	<0.26	<0.24	6.12	NP	0.00	98.85	92.73
<b>MONITORING WELL #MW-6</b>											
01/09/92	-	-	-	-	-	-	6.30	NP	0.00	99.67	93.37
04/13/92	-	-	-	-	-	-	5.47	NP	0.00	99.67	94.20
10/05/92	-	-	-	-	-	-	9.85	NP	0.00	99.67	89.82
01/06/93	-	-	-	-	-	-	4.16	NP	0.00	99.67	95.51
04/26/93	-	-	-	-	-	-	5.75	NP	0.00	99.67	93.92

**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)					
01/14/94	-	-	-	-	-	-	7.20	NP	0.00	99.67	92.47
04/05/94	-	-	-	-	-	-	6.76	NP	0.00	99.67	92.91
07/10/95	<100	<0.5	0.9	<0.5	1.1	-	-	-	-	99.67	-
10/09/95	250	4.8	5.6	11	58	-	-	-	-	99.67	-
01/08/96	<50	<0.3	<0.3	<0.3	<0.5	-	6.16	NP	0.00	99.67	93.51
04/08/96	230	4.6	4.7	3.2	33	-	4.60	NP	0.00	99.67	95.07
07/22/96	<50	<0.3	<0.3	<0.3	<0.5	<20	7.30	NP	0.00	99.67	92.37
10/16/96	<50	<0.3	<0.3	<0.3	<0.5	<20	5.82	NP	0.00	99.67	93.85
01/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	4.40	NP	0.00	99.67	95.27
04/21/97	130	<0.3	<0.3	<0.3	<0.5	<20	7.10	NP	0.00	99.67	92.57
07/14/97	<50	<0.3	<0.3	<0.3	0.70	<20	7.35	NP	0.00	99.67	92.32
10/07/97	<50	0.78	0.3	<0.3	<0.5	-	6.98	NP	0.00	99.67	92.69
01/23/98	<50	<0.3	<0.3	<0.3	<0.5	-	2.35	NP	0.00	99.67	97.32
04/23/98	<50	<0.3	<0.3	<0.3	<0.5	<20	6.90	NP	0.00	99.67	92.77
07/20/98	<50	<0.3	1.1	<0.3	1.4	<5	5.45	NP	0.00	99.67	94.22
10/14/98	<50	<0.3	<0.3	<0.3	<0.5	<5	4.95	NP	0.00	99.67	94.72
01/21/99	<50	0.35	0.62	<0.3	<0.5	<5	3.90	NP	0.00	99.67	95.77
04/15/99	<50	<0.3	<0.3	<0.3	<0.5	<5	2.35	NP	0.00	99.67	97.32
07/26/99	1,000	<0.3	<0.3	<0.3	<0.5	*2,300 / 3,900	3.93	NP	0.00	99.67	95.74
10/13/99	<50	<0.3	<0.3	<0.3	<0.5	<5	6.15	NP	0.00	99.67	93.52
01/20/00	<50	<0.3	<0.3	<0.3	<0.5	*42 / 41	5.84	NP	0.00	99.67	93.83
04/05/00	4,600	338	2.8	1.2	55.2	*282 / 230	3.89	NP	0.00	99.67	95.78
07/19/00	60	1	2	<0.3	<0.6	*87 / 76	3.07	NP	0.00	99.67	96.60
10/18/00	-	-	-	-	-	-	-	-	-	99.67	-
01/17/01	103	<0.18	2	<0.18	3	*78 / 106	3.87	NP	0.00	99.67	95.80
04/19/01	<50	<0.18	<0.14	<0.18	<0.26	<0.24	3.86	NP	0.00	99.67	95.81
07/18/01	<50	<0.18	<0.14	<0.18	<0.26	<0.24	5.40	NP	0.00	99.67	94.27
<b>MONITORING WELL #MW-7</b>											
01/09/92	-	-	-	-	-	-	6.30	NP	0.00	99.02	92.72
04/13/92	-	-	-	-	-	-	6.68	NP	0.00	99.02	92.34
10/05/92	-	-	-	-	-	-	9.60	NP	0.00	99.02	89.42
01/06/93	-	-	-	-	-	-	13.90	NP	0.00	99.02	85.12
04/26/93	-	-	-	-	-	-	5.55	NP	0.00	99.02	93.47
01/04/94	-	-	-	-	-	-	7.58	NP	0.00	99.02	91.44

**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)	TOUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MTBE (ug/L)					
04/05/94	-	-	-	-	-	-	6.66	NP	0.00	99.02	92.36
10/09/95	27,000	2,400	140	1,700	2,700	-	-	-	-	99.02	-
01/08/96	13,000	800	42	540	860	-	6.94	NP	0.00	99.02	92.08
04/08/94	9,100	840	31	690	1,200	-	5.48	NP	0.00	99.02	93.54
07/22/96	11,000	1,700	22	660	700	840	6.60	NP	0.00	99.02	92.42
10/16/96	180	<0.3	<0.3	<0.3	<0.5	270	6.42	NP	0.00	99.02	92.60
01/22/97	130	<0.3	<0.3	<0.3	<0.5	470	5.70	NP	0.00	99.02	93.32
04/21/97	10,000	1,400	27	820	490	1,100	5.30	NP	0.00	99.02	93.72
07/14/97	8,200	660	15	230	270	560	7.90	NP	0.00	99.02	91.12
10/07/97	7,700	480	15	8.4	350	-	7.70	NP	0.00	99.02	91.32
01/19/98	1,400	20	0.74	0.46	4.4	-	6.05	NP	0.00	99.02	92.97
04/23/98	590	<0.3	<0.3	<0.3	<0.5	1,700	7.60	NP	0.00	99.02	91.42
07/20/98	4,900	570	150	300	500	1,500	5.30	NP	0.00	99.02	93.72
10/14/98	1,100	1.0	<0.3	<0.3	5.3	2,000	8.60	NP	0.00	99.02	90.42
01/21/99	570	0.32	<0.3	<0.3	<0.5	*1,500 / 1,700	6.70	NP	0.00	99.02	92.32
04/15/99	770	<0.3	<0.3	<0.3	<0.5	*1,400 / 1,200	6.07	NP	0.00	99.02	92.95
07/26/99	500	<0.3	<0.3	<0.3	<0.5	*710 / 950	7.86	NP	0.00	99.02	91.16
10/13/99	<50	<0.3	0.44	<0.3	0.62	<5	6.93	NP	0.00	99.02	92.09
01/20/00	<50	<0.3	<0.3	<0.3	<0.5	*5 / <5	6.44	NP	0.00	99.02	92.58
04/05/00	5,670	415	19	1.7	60.1	*329 / 194	7.86	NP	0.00	99.02	91.16
07/19/00	1,350	14	<3	<3	10	*237 / 120	7.10	NP	0.00	99.02	91.92
10/18/00	<50	<0.18	<0.14	<0.18	<0.26	*63 / 41.1	5.28	NP	0.00	99.02	93.74
01/17/01	<50	<0.18	<0.14	<0.18	3	*57 / 81	5.27	NP	0.00	99.02	93.75
04/19/01	<50	<0.18	<0.14	<0.18	<0.26	66	7.86	NP	0.00	99.02	91.16
07/18/01	<50	<0.18	<0.14	<0.18	<0.26	*9 / 3.5	6.30	NP	0.00	99.02	92.72
<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	-	-
01/04/94	-	-	-	-	-	-	14.30	NP	0.00	-	-
04/05/94	-	-	-	-	-	-	14.13	NP	0.00	-	-
01/08/96	-	-	-	-	-	-	14.22	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)					
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	-	-	-	-	-	-	-	-	-	-	-
01/20/00	-	-	-	-	-	-	13.22	NP	0.00	-	-
04/05/00	-	-	-	-	-	-	-	-	-	-	-
07/19/00	-	-	-	-	-	-	13.25	NP	0.00	-	-
10/18/00	-	-	-	-	-	-	11.14	NP	0.00	-	-
01/17/01	-	-	-	-	-	-	11.12	NP	0.00	-	-
04/19/01	-	-	-	-	-	-	-	-	-	-	-
07/18/01	-	-	-	-	-	-	11.20	NP	0.00	-	-

**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

**TABLE 2**  
**GROUNDWATER REMEDIATION SYSTEM MONITORING PROGRAM**  
 Thrifty Oil Co. Station No 049, OAKLAND, CA

Date	Totalizer (gallons)	Total Cum. Discharge (gallons)	Flow (gal/day)	EFFLUENT (ug/L)						INFLUENT (ug/L)					
				TPH-g	B	T	E	X	MTBE	TPH-g	B	T	E	X	MTBE
4/8/91	1,310	0	-	-	<0.3	<0.3	<0.3	<0.9	-	-	910	2000	160	2000	-
4/15/91	1,434	124	18	-	<0.3	<0.3	<0.3	<0.3	-	-	2800	4600	310	5000	-
4/22/91	1,510	200	11	-	<15	<15	<15	<45	-	-	3100	3300	<15	2800	-
4/29/91	1,660	350	21	-	<0.3	<0.3	<0.3	<0.9	-	-	3600	4500	300	5000	-
5/6/91	1,740	430	11	-	<0.3	<0.3	<0.3	<0.9	-	-	3600	3500	300	3800	-
5/13/91	1,880	570	20	-	<0.3	<0.3	<0.3	<0.9	-	-	3300	3200	230	3900	-
5/20/91	2,010	700	19	-	<0.3	<0.3	<0.3	<0.9	-	-	3300	3400	260	5100	-
5/28/91	2,050	740	5	-	<0.3	<0.3	<0.3	<0.9	-	-	2900	3000	230	4200	-
6/3/91	2,110	800	10	-	<0.3	<0.3	<0.3	<0.9	-	-	2500	2100	110	2800	-
6/10/91	2,160	850	7	-	<0.3	<0.3	<0.3	<0.9	-	-	1800	1700	120	2100	-
6/17/91	2,219	909	8	-	<0.3	<0.3	<0.3	<0.9	-	-	2100	1900	170	2700	-
6/24/91	2,263	953	6	-	<0.3	<0.3	<0.3	<0.9	-	-	2100	1800	150	2700	-
07/01/91	2,313	1,003	7	-	<0.5	<0.5	<1	<1	-	-	2,700	2,000	150	2,900	-
07/08/91	2,700	1,390	55	-	<0.5	<0.5	<1	<1	-	-	4,000	2,500	130	4,400	-
07/15/91	2,872	1,562	25	-	<0.5	<0.5	<1	<1	-	-	3,100	1,900	140	3,200	-
07/22/91	3,144	1,834	39	-	<0.5	<0.5	<1	<1	-	-	3,400	2,100	110	2,800	-
07/29/91	3,220	1,910	11	-	<0.5	<0.5	<1	<1	-	-	5,100	2,200	180	2,700	-
08/05/91	3,348	2,038	18	-	<0.5	<0.5	<1	<1	-	-	5,100	3,900	400	4,200	-
08/12/91	3,472	2,162	18	-	<0.5	<0.5	<1	<1	-	-	11,000	6,200	440	8,400	-
08/19/91	3,548	2,238	11	-	<0.5	<0.5	<1	<1	-	-	4,500	2,400	130	2,600	-
08/26/91	3,655	2,345	15	-	<0.5	<0.5	<1	<1	-	-	4,400	2,500	260	3,600	-
09/09/91	3,822	2,512	12	-	<0.5	<0.5	<1	<1	-	-	5,200	3,000	390	3,700	-
09/16/91	3,884	2,574	9	-	<0.5	<0.5	<1	<1	-	-	4,100	2,000	460	4,900	-
09/23/91	4,013	2,703	18	-	<0.5	<0.5	<1	<1	-	-	4,600	1,600	710	6,400	-
09/30/91	4,082	2,782	11	-	<0.5	<0.5	<1	<1	-	-	5,700	2,000	380	6,200	-
10/07/91	4,131	2,821	6	System shut down											
10/14/91	4,195	2,885	9	-	<0.5	<0.5	<1	<1	-	-	4,400	2,000	370	8,100	-
10/21/91	4,406	3,096	30	-	<0.5	<0.5	<1	<1	-	-	2,300	1,100	190	4,200	-
10/28/91	4,474	3,164	10	-	<0.5	<0.5	<1	<1	-	-	6,400	4,100	620	6,100	-
11/03/91	4,613	3,303	23	-	<0.5	<0.5	<1	<1	-	-	6,100	2,800	200	5,600	-
11/11/91	4,700	3,390	11	-	<0.5	<0.5	<1	<1	-	-	6,500	2,300	<30	4,900	-
11/18/91	4,887	3,577	27	-	<0.5	<0.5	<1	<1	-	-	5,600	2,500	300	4,600	-
11/25/91	5,042	3,732	22	-	<0.5	<0.5	<1	<1	-	-	5,400	2,800	230	5,700	-
12/03/91	5,263	3,953	28	-	<0.5	<0.5	<1	<1	-	-	7,200	3,300	490	5,500	-
12/09/91	5,362	4,052	17	-	<0.5	<0.5	<1	<1	-	-	4,400	1,700	140	3,900	-
12/16/91	5,486	4,176	18	-	<0.5	<0.5	<0.5	<0.5	-	-	4,700	2,300	310	4,600	-
12/23/91	5,516	4,206	4	-	<0.5	<0.5	<0.5	<0.5	-	-	4,000	2,200	290	5,900	-
12/30/91	5,575	4,265	8	-	<0.5	<0.5	<0.5	<0.5	-	-	5,200	2,500	350	5,800	-
01/15/92	5,720	4,410	9	-	<0.5	<0.5	<0.5	<0.5	-	-	3,400	1,900	300	6,300	-

**TABLE 2**  
**GROUNDWATER REMEDIATION SYSTEM MONITORING PROGRAM**  
 Thrifty Oil Co. Station No 049, OAKLAND, CA

Date	Totalizer (gallons)	Total/Cum. Discharge (gallons)	Flow (gal/day)	EFFLUENT (ug/L)						INFLUENT (ug/L)						
				TPH-g	B	T	E	X	MTBE	TPH-g	B	T	E	X	MTBE	
02/10/92	6,264	4,954	21	-	<0.5	<0.5	<0.5	<0.5	-	-	5,800	2,800	320	7,200	-	
03/09/92	8,520	7,210	81	<200	<0.5	16	<0.5	<0.5	-	47,000	7,100	4,800	630	10,300	-	
04/13/92	22,888	21,578	411	<200	<0.5	<0.5	<0.5	<0.5	-	29,000	4,500	2,200	160	4,800	-	
05/11/92	24,920	23,610	73	<200	<0.5	<0.5	<0.5	<0.5	-	22,000	4,300	1,500	130	3,800	-	
06/01/92	28,330	27,020	162	<200	<0.5	<0.5	<0.5	<0.5	-	18,000	3,400	1,500	660	4,200	-	
07/13/92	72,675	27,020	-	-	<0.5	<0.5	<0.5	<0.5	-	-	1,800	750	150	5,600	-	
07/13/92	72,675	27,020	-	The system pumped air and flowmeter jumped from 30,000 gallons to 70,000 gallons.						-	-	-	-	-	-	-
08/17/92	75,046	29,391	68	-	<0.5	<0.5	<0.5	<0.5	-	-	1,100	350	200	1,100	-	
09/14/92	75,582	29,927	19	-	<0.5	<0.5	<0.5	<1	-	-	2,100	520	<25	3,500	-	
10/05/92	75,680	30,025	5	<200	<0.5	<0.5	<0.5	<1	-	19,000	1,700	270	<25	4,000	-	
11/09/92	77,280	31,625	46	-	<0.5	<0.5	<0.5	<0.5	-	-	4,000	1,400	120	5,900	-	
12/14/92	79,420	33,765	61	-	<0.5	<0.5	<0.5	<1	-	-	7,300	4,900	1,800	16,000	-	
01/04/93	84,720	39,065	252	-	<0.5	<0.5	<0.5	<1	-	-	5,400	2,100	450	7,800	-	
02/15/93	102,689	57,034	428	<200	<0.5	<0.5	<0.5	<1	-	41,000	6,600	3,200	280	9,600	-	
02/22/93	146,430	57,034	-	The system pumped air and flowmeter jumped from 102,689 gallons to 146,430 gallons.						-	-	-	-	-	-	-
03/08/93	147,500	58,104	76	-	<0.5	<0.5	<0.5	<1	-	-	7,400	3,400	56	11,000	-	
04/26/93	151,200	61,804	76	<100	<0.5	<0.5	<0.5	<1	-	36,000	4,300	2,200	420	8,300	-	
04/26/93	151,200	61,804	-	Shut down system for repair						-	-	-	-	-	-	-
07/21/93	151,240	61,844	0	Restart the system						-	-	-	-	-	-	-
08/11/93	151,650	62,254	20	-	<0.5	<0.5	<0.5	<1	-	-	6,500	2,300	390	6,200	-	
09/16/93	154,005	64,609	65	<60	<0.3	<0.3	<0.3	<0.6	-	43,000	2,300	320	<4.4	2,900	-	
10/04/93	154,896	65,500	50	<60	<0.3	<0.3	<0.3	<0.6	-	33,000	2,900	470	6.9	3,500	-	
11/05/93	157,431	68,035	79	<50	<0.3	<0.3	<0.3	<0.5	-	15,000	1,100	27	<0.3	920	-	
12/03/93	159,324	69,928	68	<50	<0.3	<0.3	<0.3	<0.5	-	16,000	1,100	88	<6.6	2,300	-	
01/06/94	166,440	77,044	209	-	<0.3	<0.3	<0.3	<0.5	-	-	3,800	730	<13	1,200	-	
02/03/94	170,720	81,324	153	-	<0.3	<0.3	<0.3	<0.5	-	-	3,600	610	<4.4	4,800	-	
03/03/94	178,168	88,772	266	-	<0.3	<0.3	<0.3	<0.5	-	-	2,800	2,000	270	3,400	-	
04/07/94	185,670	96,274	214	<50	<0.3	<0.3	<0.3	<0.5	-	26,000	2,200	550	<6.6	1,900	-	
05/12/94	188,840	99,444	91	<50	<0.3	<0.3	<0.3	<0.5	-	4,600	100	10	8.4	280	-	
06/16/94	194,680	105,284	167	<50	<0.3	<0.3	<0.3	<0.5	-	<50	<0.3	<0.3	<0.3	<0.5	-	
07/11/94	199,135	109,739	178	<50	<0.3	<0.3	<0.3	<0.5	-	4,000	220	<2.6	320	-	-	
08/04/94	200,910	111,514	74	<50	<0.3	<0.3	<0.3	<0.5	-	7,800	480	6.2	<0.3	630	-	
09/15/94	203,450	114,054	60	<50	<0.3	<0.3	<0.3	<0.5	-	3,200	150	2.4	2.6	170	-	
10/10/94	205,210	115,814	70	<50	<0.3	<0.3	<0.5	<0.5	-	1,300	86	1.5	1.1	15	-	
11/07/94	206,060	116,664	30	<50	<0.3	<0.3	<0.5	<0.5	-	170	15	<0.3	<0.5	0.5	-	
12/05/94	207,093	117,697	37	<50	<0.3	<0.3	<0.5	<0.5	-	75	13	<0.3	<0.5	<0.5	-	
01/09/95	207,293	117,897	6	<50	<0.3	<0.3	<0.5	<0.5	-	<50	<0.3	<0.3	<0.5	<0.5	-	
02/01/95	207,650	118,254	16	<50	<0.3	<0.3	<0.5	<0.5	-	<50	<0.3	<0.3	<0.5	<0.5	-	
02/06/95	207,810	118,414	32	<50	<0.3	<0.3	<0.5	<0.5	-	<50	2.7	<0.3	<0.5	<0.5	-	

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 Thrifty Oil Co. Station No 049, OAKLAND, CA

Date	Totalizer (gallons)	Total/Cum. Discharge (gallons)	Flow (gal/day)	EFFLUENT (ug/L)						INFLUENT (ug/L)						
				TPH-g	B	T	E	X	MTBE	TPH-g	B	T	E	X	MTBE	
03/10/95	208,430	119,034	19	<100	<0.5	<0.5	<0.5	<1	-	<100	<0.5	<0.5	<0.5	<1	-	
04/10/95	208,564	119,168	4	<100	<0.5	<0.5	<0.5	<1	-	3,300	180	7.6	2.1	150	-	
05/08/95	208,608	119,212	2	<100	<0.5	<0.5	<0.5	<1	-	11,000	640	9.2	<5	1,100	-	
06/05/95	208,926	119,530	11	<100	<0.5	<0.5	<0.5	<1	-	5,100	270	2.2	<0.5	49	-	
07/10/95	214,182	124,786	150	<100	<0.5	<0.5	<0.5	<1	-	13,000	1,600	120	24	1,300	-	
08/07/95	221,876	132,480	275	Shut down system for repair						-	-	-	-	-	-	-
08/28/95	221,997	132,601	6	Restart the system						-	-	-	-	-	-	-
09/06/95	222,003	132,607	1	<100	<0.5	<0.5	<0.5	<1	-	2,300	<0.5	<0.5	<0.5	<1	-	
10/09/95	222,343	132,947	10	<100	<0.5	<0.5	<0.5	<1	-	2,000	5.6	0.77	0.66	3.8	-	
11/06/95	222,704	133,308	13	<50	0.3	0.31	<0.3	0.68	-	3,000	27	1.7	3.7	48	-	
12/11/95	223,792	134,366	31	<50	<0.3	<0.3	<0.3	<0.5	-	<50	<0.3	<0.3	<0.3	0.96	-	
01/08/96	224,661	135,265	31	970	<0.3	<0.3	<0.3	0.67	-	1,800	39	<0.3	<0.3	<0.5	-	
02/12/96	227,812	138,416	90	<50	10	0.37	<0.3	0.53	-	3,300	190	<7.5	<7.5	20	-	
03/12/96	229,301	139,905	51	<50	<0.3	<0.3	<0.3	<0.5	-	2,700	250	2.3	<1.5	<2.5	-	
04/08/96	242,320	152,924	482	<50	<0.3	<0.3	<0.3	<0.5	-	1,000	90	5	<0.3	67	-	
05/06/96	247,840	158,444	197	100	<0.3	<0.3	<0.3	<0.5	-	15,000	2,200	600	32	2,400	-	
06/03/96	248,423	159,027	21	Shut down system for carbon change						-	-	-	-	-	-	
08/08/96	248,423	159,027	-	Start-up system						-	-	-	-	-	-	
08/20/96	248,630	159,234	17	<50	<0.3	<0.3	<0.3	<0.5	-	2,100	24	<0.3	<0.3	49	-	
09/23/96	259,030	169,634	306	<50	<0.3	<0.3	<0.3	<0.5	-	4,100	260	<3	<3	34	-	
10/16/96	263,610	174,214	199	<50	<0.3	<0.3	<0.3	<0.5	-	2,700	220	3.8	<0.6	44	-	
11/19/96	263,986	174,590	11	<50	<0.3	<0.3	<0.3	<0.5	-	1,200	<0.3	<0.3	<0.3	<0.5	-	
12/16/96	264,210	174,814	8	<50	<0.3	<0.3	<0.3	1.5	-	29,000	410	2,300	120	1,100	-	
01/22/97	266,220	176,824	54	<50	<0.3	<0.3	<0.3	<0.5	-	68,000	<0.3	<0.3	<0.3	<0.5	-	
02/24/97	267,030	177,634	25	<50	<0.3	<0.3	<0.3	<0.5	-	51,000	3,500	3,200	390	2,200	-	
03/17/97	267,230	177,834	10	<50	<0.3	<0.3	<0.3	<0.5	-	89,000	<6	11	<6	14	-	
04/21/97	267,415	178,019	5	<50	<0.3	<0.3	<0.3	<0.5	-	61,000	730	18	130	360	-	
05/22/97	276,535	187,139	294	<50	<0.3	<0.3	<0.3	<0.5	-	850	1.3	<0.3	0.4	4.6	-	
06/23/97	281,214	191,818	146	-	-	-	-	-	-	-	-	-	-	-	-	
07/14/97	284,210	194,814	143	<50	<0.3	<0.3	<0.3	<0.5	-	6,800	<0.3	0.59	<0.3	9	-	
08/18/97	298,610	209,214	411	-	-	-	-	-	-	-	-	-	-	-	-	
09/15/97	301,043	211,647	87	-	-	-	-	-	-	-	-	-	-	-	-	
10/07/97	333,480	244,084	1,474	<50	<0.3	<0.3	<0.3	<0.5	-	94,000	<0.3	<0.3	<0.3	<0.5	-	
11/17/97	334,286	244,890	20	-	-	-	-	-	-	-	-	-	-	-	-	
12/08/97	334,382	244,986	5	-	-	-	-	-	-	-	-	-	-	-	-	
12/12/97	334,382	244,986	-	Shut down system due to stolen equipment						-	-	-	-	-	-	-
04/08/98	334,382	244,986	-	<50	<0.3	<0.3	<0.3	<0.5	<20	3,100	12	1	<0.3	490	2,600	
05/11/98	334,382	244,986	-	-	-	-	-	-	-	-	-	-	-	-	-	
06/22/98	334,382	244,986	-	-	-	-	-	-	-	-	-	-	-	-	-	

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Date	Totalizer (gallons)	Total/Cum. Discharge (gallons)	Flow (gal/dy)	EFFLUENT (ug/L)						INFLUENT (ug/L)					
				TPH-g	B	T	E	X	MTBE	TPH-g	B	T	E	X	MTBE
07/20/98	334,382	244,986	-	<50	<0.3	<0.3	<0.3	<0.5	-	52,000	8	0.52	0.83	1.5	-
08/03/98	346,521	257,125	867	Shut down system for carbon canisters replacement											
09/17/98	354,985	265,589	188	-	-	-	-	-	-	-	-	-	-	-	-
10/14/98	358,015	268,619	112	<50	<0.3	<0.3	<0.3	1.6	-	3,100	45	13	3.5	350	-
11/05/98	359,600	270,204	72	System shut down due to vandalism and stolen equipment											
11/20/98	359,600	270,204	-	Restart											
12/11/98	369,452	280,056	469	-	-	-	-	-	-	-	-	-	-	-	-
12/24/98	-	280,056	-	No reading, meter broken											
01/15/99	0	280,056	-	Replaced Flowmeter started at 0											
01/21/99	985.5	281,042	164	57	<0.3	<0.3	<0.3	0.76	-	380	6.2	1	<0.3	9.1	-
02/12/99	1,971.0	282,027	45	-	-	-	-	-	-	-	-	-	-	-	-
03/12/99	4,390.0	284,446	86	-	-	-	-	-	-	-	-	-	-	-	-
04/15/99	8,595.0	288,651	124	<50	<0.3	<0.3	<0.3	<0.5	<5	410	1.6	0.78	<0.3	5	*580 / 330
05/04/99	9,410.0	289,466	43	-	-	-	-	-	-	-	-	-	-	-	-
05/18/99	9,410.0	289,466	-	Shut down system for pump controller repair by manufacturer											
09/20/99	9,411.0	289,467	0	Restart the system											
09/24/99	9,412.4	289,468	0	-	-	-	-	-	-	-	-	-	-	-	-
10/13/99	9,509.8	289,566	5	<50	<0.3	<0.3	<0.3	<0.5	<5	6,000	<0.3	<0.3	<0.3	<0.5	13,000
11/12/99	9,701.9	289,758	6	-	-	-	-	-	-	-	-	-	-	-	-
12/17/99	9,893.7	289,950	5	-	-	-	-	-	-	-	-	-	-	-	-
01/20/00	10,052.1	290,108	5	<50	<0.3	<0.3	<0.3	<0.5	-	<50	<0.3	<0.3	<0.3	<0.5	-
02/17/00	10,156.6	290,213	4	-	-	-	-	-	-	-	-	-	-	-	-
03/13/00	10,354.7	290,411	8	-	-	-	-	-	-	-	-	-	-	-	-
04/05/00	10,545.7	290,602	8	72.7	1.8	4.1	0.7	6.7	-	119,000	2,360	6,440	6,240	25,200	*30,800 / 21,800
05/19/00	11,071.7	291,128	12	Shut down system for carbon drum replacement											
06/05/00	11,075.4	291,131	0	Restart the system											
06/14/00	11,131.6	291,188	6	<50	<0.3	<0.3	<0.3	<0.6	<5	<1,000	<6	<6	<6	14	24,500
07/06/00	11,362.0	291,418	10	Shut down system for carbon replacement											
07/17/00	0.0	291,418	-	Restart the system after carbon change, repipe and flowmeter change (starting at 0.0)											
07/24/00	411.0	291,829	59	<50	<0.3	<0.3	<0.3	<0.6	<5	205	<0.3	1	<0.3	<0.6	*99 / 104
08/21/00	8,193.0	299,611	278	-	-	-	-	-	-	-	-	-	-	-	-
09/18/00	27,251.0	318,669	681	-	-	-	-	-	-	-	-	-	-	-	-
10/18/00	54,280.0	345,698	901	<50	<0.18	<0.14	<0.18	<0.26	<0.24	357,000	2,380	2,960	1,290	6,850	9,630
10/30/00	64,610.0	356,028	861	-	-	-	-	-	-	-	-	-	-	-	-
11/27/00	79,870.0	371,289	545	-	-	-	-	-	-	-	-	-	-	-	-
12/22/00	99,240.0	390,658	775	-	-	-	-	-	-	-	-	-	-	-	-
01/17/01	101,250.0	392,668	77	<50	<0.18	<0.14	<0.18	<0.26	<0.24	24,700	783	373	2	3,480	15,000
02/23/01	144,120.0	435,538	1,159	-	-	-	-	-	-	-	-	-	-	-	-
03/30/01	195,400.0	486,818	1,465	-	-	-	-	-	-	-	-	-	-	-	-

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**GROUNDWATER REMEDIATION SYSTEM MONITORING PROGRAM**  
 Thrifty Oil Co. Station No 049, OAKLAND, CA

Date	Totalizer (gallons)	Total/Cum. Discharge (gallons)	Flow (gal/day)	EFFLUENT (ug/L)						INFLUENT (ug/L)					
				TPH-g	B	T	E	X	MTBE	TPH-g	B	T	E	X	MTBE
04/06/01	199,090.0	490,508	527	System shut down for carbon replacement, Replaced on 4/11/01, restart on 4/13/01.											
04/20/01	207,050.0	498,468	569	88	<0.18	<0.14	<0.18	<0.26	93	36,500	855	716	659	1,570	11,400
04/27/01	210,640.0	502,058	513	System shut down for repair/replacement of compressor's pressure switch and exhaust valve											
04/30/01	210,640.0	502,058	-	320	<0.18	<0.14	<0.18	<0.26	*337 / 60	7,620	268	22	10	124	*13,600 / 9,130
05/11/01	210,640.0	502,058	-	Replaced pressure switch on 5/7/01, system still off for carbon replacement.											
05/21/01	210,640.0	502,058	-	Restart the system											
05/30/01	226,830.0	518,248	1,799	<50	<0.18	<0.14	<0.18	<0.26	<0.24	96,600	4,980	1,660	2,770	11,300	*53,600 / 41,600
06/29/01	267,230.0	558,648	1,347	-	-	-	-	-	-	-	-	-	-	-	-
07/11/01	310,010.0	601,428	3,565	<50	<0.18	<0.14	<0.18	<0.26	<0.24	162,000	<0.18	4,140	4,760	24,000	<0.24
08/17/01	441,270.0	732,688	3,548	-	-	-	-	-	-	-	-	-	-	-	-
09/28/01	498,310.0	789,728	1,358	-	-	-	-	-	-	-	-	-	-	-	-

<b>WD PERMIT LIMITS:</b>	NE	5.0	5.0	5.0	5.0	NE
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**Note:** < = less than laboratory detection level indicated      TPH is analyzed by EPA Method 8015 M  
 - = no sample / not analyzed      BTEX is analyzed by EPA Method 802 or 8020  
 NE = Permit Limit not established      \*MTBE 8020/8260  
 In February 2000, the total cumulative discharge amount was corrected to reflect all system maintenance and flowmeter changeouts since the startup of the system. The total number may be different from previous versions of this table.

# APPENDIX A





FIELD DATA -GROUNDWATER SAMPLING PROGRAM

Site:	# 049	Date:	02.18.01
Address:			
Personnel:	BERBAK	Weather:	SUNNY DAY
Well No:	MW-2	Equip:	BAUER

<b>Before Purging:</b>			
Total Well Depth: (ft.)	23.80	Well Diameter	24
Depth to Water (ft)	6.92	Est. Purge Volume:	11

<b>Sampling Data:</b>							
<b>Initial Turbidity:</b>				<b>Final Turbidity:</b>			
Time	10:40	10:42	10:43	10:45	10:46	10:48	10:50
EC	990	970	990	970	920	930	920
pH	6.04	6.01	6.01	6.04	6.01	6.06	6.02
Temp	21.2	21.1	20.9	20.9	20.7	20.6	20.4
Gal.	1	3	4	6	7	9	11
Time							
EC							
pH							
Temp							
Gal.							

<b>After Purging/Before Sample Collection</b>			
Depth to Water (ft.)	8.90	Total Well Depth(ft).	23.80

FIELD DATA -GROUNDWATER SAMPLING PROGRAM

Site:	H 049	Date:	07.18.01
Address:			
Personnel:	SERBON, P.	Weather:	SUNNY Day
Well No:	MW 3	Equip:	BWIUER

<b>Before Purging:</b>			
Total Well Depth: (ft.)	24.20	Well Diameter	27
Depth to Water (ft)	2.32	Est. Purge Volume:	M

<b>Sampling Data:</b>							
<b>Initial Turbidity:</b>				<b>Final Turbidity:</b>			
Time	9:05	9:07	9:08	9:10	9:11	9:13	9:15
EC	810	830	870	880	820	870	880
pH	6.18	6.16	6.18	6.04	6.10	6.06	6.03
Temp	70.6	70.7	70.3	70.2	70.1	70.1	69.9
Gal.	1	3	4	6	7	9	M
Time							
EC							
pH							
Temp							
Gal.							

<b>After Purging/Before Sample Collection</b>	
Depth to Water (ft.)	10.10
Total Well Depth(ft).	24.20



FIELD DATA -GROUNDWATER SAMPLING PROGRAM

Site:	<u># 044</u>	Date:	<u>02.19.01</u>
Address:			
Personnel:	<u>BERNARD</u>	Weather:	<u>SUNNY DAY</u>
Well No:	<u>MW 5</u>	Equip:	<u>BATLER</u>

<b>Before Purging:</b>			
Total Well Depth: (ft.)	<u>13.78</u>	Well Diameter	<u>24</u>
Depth to Water (ft)	<u>6.12</u>	Est. Purge Volume:	<u>5</u>

<b>Sampling Data:</b>							
<b>Initial Turbidity:</b>				<b>Final Turbidity:</b>			
Time	<u>9:44</u>	<u>9:45</u>	<u>9:46</u>	<u>9:47</u>	<u>9:48</u>	<u>9:49</u>	<u>9:50</u>
EC	<u>830</u>	<u>810</u>	<u>830</u>	<u>850</u>	<u>870</u>	<u>880</u>	<u>870</u>
pH	<u>6.14</u>	<u>6.16</u>	<u>6.20</u>	<u>6.14</u>	<u>6.20</u>	<u>6.20</u>	<u>6.20</u>
Temp	<u>21.4</u>	<u>21.3</u>	<u>21.3</u>	<u>21.1</u>	<u>20.9</u>	<u>20.8</u>	<u>20.2</u>
Gal.	<u>1</u>	<u>1.5</u>	<u>2</u>	<u>2.5</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>8.40</u>
Total Well Depth(ft.)	<u>13.78</u>



FIELD DATA -GROUNDWATER SAMPLING PROGRAM

Site:	<u># 049</u>	Date:	<u>07.18.01</u>
Address:			
Personnel:	<u>SERBAY</u>	Weather:	<u>SUNNY DAY</u>
Well No:	<u>MW-7</u>	Equip:	<u>BATUER</u>

<b>Before Purging:</b>			
Total Well Depth: (ft.)	<u>13.58</u>	Well Diameter	<u>4"</u>
Depth to Water (ft)	<u>6.30</u>	Est. Purge Volume:	<u>19</u>

<b>Sampling Data:</b>							
<b>Initial Turbidity:</b>				<b>Final Turbidity:</b>			
Time	<u>9:23</u>	<u>9:26</u>	<u>9:29</u>	<u>9:31</u>	<u>9:34</u>	<u>9:37</u>	<u>9:40</u>
EC	<u>380</u>	<u>860</u>	<u>840</u>	<u>860</u>	<u>940</u>	<u>860</u>	<u>840</u>
pH	<u>6.06</u>	<u>6.04</u>	<u>6.01</u>	<u>5.97</u>	<u>5.96</u>	<u>5.93</u>	<u>5.93</u>
Temp	<u>20.4</u>	<u>20.2</u>	<u>20.2</u>	<u>20.1</u>	<u>69.9</u>	<u>69.7</u>	<u>69.6</u>
Gal.	<u>2</u>	<u>5</u>	<u>8</u>	<u>10</u>	<u>13</u>	<u>16</u>	<u>19</u>
Time							
EC							
pH							
Temp							
Gal.							

<b>After Purging/Before Sample Collection</b>			
Depth to Water (ft.)	<u>8.30</u>	Total Well Depth(ft.)	<u>13.58</u>

THRIFTY OIL CO. SERVICE STATION #

9  
29

GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERBON POPESCU

DATE OF INSPECTION: 07.18.01

OBSERVATIONS AND COMMENTS: check oil, clean water filter bag  
replace cartridge water filter

FLOW METER READING: 0329240

SAMPLES OBTAINED: yes

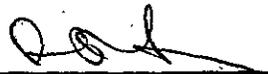
PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: 14

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: 11

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

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: 

(049)



DATE: 02.13.01

START UP / SHUT DOWN REPORT  
STATION # 049  
SYSTEM TYPE : G.W.

START UP REPORT:

SHUT DOWN REPORT:

Shut down for Q. U. S.

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

*[Handwritten Signature]*

THRIFTY OIL CO. SERVICE STATION #

49

GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: TERESA POPE

DATE OF INSPECTION: 07.11.01

OBSERVATIONS AND COMMENTS: check oil, belt, hoses for connection  
replace cartridge water filter

FLOW METER READING: 0310010

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: 1.0

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

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

INSPECTOR'S SIGNATURE: [Signature]

049

THRIFTY OIL CO. SERVICE STATION # 49

GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: BERTHA POPPER

DATE OF INSPECTION: 0206.01

OBSERVATIONS AND COMMENTS: Add oil, check belt, hoses, clean  
meter filter bag,

FLOW METER READING: 0293130

SAMPLES OBTAINED: N/A

PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: 14

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: 12

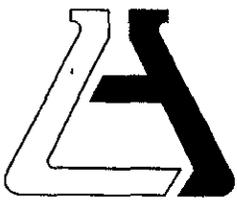
PRESSURE GAUGE READING DOWN STREAM OF THE PRIMARY GAC UNIT: 1.4

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]

# APPENDIX B



**ASSOCIATED LABORATORIES**

806 North Batavia - Orange, California 92868 - 714/771-6900

FAX 714/538-1209

CLIENT Thrifty Oil (8871)  
ATTN: Jeff Suryakusuma  
13539 E. Foster Rd.  
Santa Fe Springs, CA 90670

LAB REQUEST 76561

REPORTED 07/31/2001

RECEIVED 07/19/2001

PROJECT Station #049  
3400 San Pablo Ave., Oakland

SUBMITTER Client

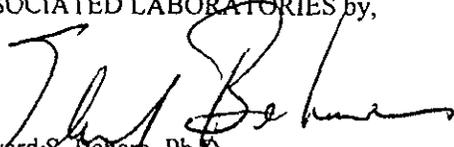
COMMENTS Added 8260 MTBE to 279878, 881 and 882 per DR 7-23-01 AV

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report. This cover letter is an integral part of the final report.

<u>Order No.</u>	<u>Client Sample Identification</u>
279876	TOC #049, MW6
279877	TOC #049, MW3
279878	TOC #049, MW7
279879	TOC #049, MW5
279880	TOC #049, MW1
279881	TOC #049, MW4
279882	TOC #049, MW2
279883	TOC #049, Trip Blank

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,

  
Edward S. Behare, Ph.D.  
Vice President

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported.

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TESTING & CONSULTING  
Chemical  
Microbiological  
Environmental

Order #: 279876

Client Sample ID TOC #049, MW6

Matrix: WATER

Date Sampled: 07/18/2001 Time Sampled: 13:00

Analyte	Result	DF	PQL	MDL	Units	Date/Analyst
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8021B BTEX + MTBE

Benzene	ND	1	0.3	0.18	ug/L	07/22/01 HP
Ethyl benzene	ND	1	0.3	0.18	ug/L	07/22/01 HP
Methyl t - butyl ether	ND	1	5	0.24	ug/L	07/22/01 HP
Toluene	ND	1	0.3	0.14	ug/L	07/22/01 HP
Xylene (total)	ND	1	0.6	0.26	ug/L	07/22/01 HP

8015M - Total Petroleum Hydrocarbons

Gasoline	ND	1	50	50	ug/L	07/22/01 HP
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Order #: 279877

Client Sample ID TOC #049, MW3

Matrix: WATER

Date Sampled: 07/18/2001 Time Sampled: 13:10

Analyte	Result	DF	PQL	MDL	Units	Date/Analyst
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8021B BTEX + MTBE

Benzene	ND	1	0.3	0.18	ug/L	07/22/01 HP
Ethyl benzene	ND	1	0.3	0.18	ug/L	07/22/01 HP
Methyl t - butyl ether	ND	1	5	0.24	ug/L	07/22/01 HP
Toluene	ND	1	0.3	0.14	ug/L	07/22/01 HP
Xylene (total)	ND	1	0.6	0.26	ug/L	07/22/01 HP

8015M - Total Petroleum Hydrocarbons

Gasoline	ND	1	50	50	ug/L	07/22/01 HP
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Order #: 279878

Client Sample ID TOC #049, MW7

Matrix: WATER

Date Sampled: 07/18/2001 Time Sampled: 13:20

Analyte	Result	DF	PQL	MDL	Units	Date/Analyst
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8021B BTEX + MTBE

Benzene	ND	1	0.3	0.18	ug/L	07/22/01 HP
Ethyl benzene	ND	1	0.3	0.18	ug/L	07/22/01 HP
Methyl t - butyl ether	9.0	1	5	0.24	ug/L	07/22/01 HP
Toluene	ND	1	0.3	0.14	ug/L	07/22/01 HP
Xylene (total)	ND	1	0.6	0.26	ug/L	07/22/01 HP

8260B BTEX/MTBE Only

Methyl-tert-butylether (MTBE)	3.5	1	1	0.6	ug/L	07/26/01 MB
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PQL - Practical Quantitation Limit. MDL = Method detection limit. DF = Dilution Factor

ND - Not detected below indicated MDL. J=Trace



**8015M - Total Petroleum Hydrocarbons**

Gasoline	ND	1	50	50	ug/L	07/22/01	HP
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<b>Order #:</b> 279879	<b>Client Sample ID</b> TOC #049, MW5
<b>Matrix:</b> WATER	<b>Date Sampled:</b> 07/18/2001 <b>Time Sampled:</b> 13:30

Analyte	Result	DF	PQL	MDL	Units	Date/Analyst
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**8021B BTEX + MTBE**

Benzene	ND	1	0.3	0.18	ug/L	07/22/01	HP
Ethyl benzene	ND	1	0.3	0.18	ug/L	07/22/01	HP
Methyl t - butyl ether	ND	1	5	0.24	ug/L	07/22/01	HP
Toluene	ND	1	0.3	0.14	ug/L	07/22/01	HP
Xylene (total)	ND	1	0.6	0.26	ug/L	07/22/01	HP

**8015M - Total Petroleum Hydrocarbons**

Gasoline	ND	1	50	50	ug/L	07/22/01	HP
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<b>Order #:</b> 279880	<b>Client Sample ID</b> TOC #049, MW1
<b>Matrix:</b> WATER	<b>Date Sampled:</b> 07/18/2001 <b>Time Sampled:</b> 13:35

Analyte	Result	DF	PQL	MDL	Units	Date/Analyst
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**8021B BTEX + MTBE**

Benzene	ND	1	0.3	0.18	ug/L	07/22/01	HP
Ethyl benzene	ND	1	0.3	0.18	ug/L	07/22/01	HP
Methyl t - butyl ether	ND	1	5	0.24	ug/L	07/22/01	HP
Toluene	ND	1	0.3	0.14	ug/L	07/22/01	HP
Xylene (total)	ND	1	0.6	0.26	ug/L	07/22/01	HP

**8015M - Total Petroleum Hydrocarbons**

Gasoline	ND	1	50	50	ug/L	07/22/01	HP
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<b>Order #:</b> 279881	<b>Client Sample ID</b> TOC #049, MW4
<b>Matrix:</b> WATER	<b>Date Sampled:</b> 07/18/2001 <b>Time Sampled:</b> 13:45

Analyte	Result	DF	PQL	MDL	Units	Date/Analyst
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PQL = Practical Quantitation Limit, MDL = Method detection limit, DF = Dilution Factor  
 ND = Not detected below indicated MDL, J=Trace



**8021B BTEX + MTBE**

Benzene	3,320	100	30.0	0.18	ug/L	07/22/01	HP
Ethyl benzene	440	100	30.0	0.18	ug/L	07/22/01	HP
Methyl t - butyl ether	55,500	2500	12500.0	0.24	ug/L	07/22/01	HP
Toluene	2,090	100	30.0	0.14	ug/L	07/22/01	HP
Xylene (total)	5,520	100	60.0	0.26	ug/L	07/22/01	HP

**8260B BTEX/MTBE Only**

Methyl-tert-butylether (MTBE)	16,800	100	100.0	0.6	ug/L	07/29/01	MB
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**8015M - Total Petroleum Hydrocarbons**

Gasoline	52,200	100	5000.0	50	ug/L	07/22/01	HP
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<b>Order #:</b> 279882	<b>Client Sample ID</b> TOC #049, MW2					
<b>Matrix:</b> WATER	<b>Date Sampled:</b> 07/18/2001 <b>Time Sampled:</b> 13:50					
<b>Analyte</b>	<b>Result</b>	<b>DF</b>	<b>PQL</b>	<b>MDL</b>	<b>Units</b>	<b>Date/Analyst</b>

**8021B BTEX + MTBE**

Benzene	ND	1	0.3	0.18	ug/L	07/22/01	HP
Ethyl benzene	ND	1	0.3	0.18	ug/L	07/22/01	HP
Methyl t - butyl ether	7,960	500	2500.0	0.24	ug/L	07/22/01	HP
Toluene	ND	1	0.3	0.14	ug/L	07/22/01	HP
Xylene (total)	2.0	1	0.6	0.26	ug/L	07/22/01	HP

**8260B BTEX/MTBE Only**

Methyl-tert-butylether (MTBE)	1,710	1	1	0.6	ug/L	07/26/01	MB
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**8015M - Total Petroleum Hydrocarbons**

Gasoline	3,260	1	50	50	ug/L	07/22/01	HP
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<b>Order #:</b> 279883	<b>Client Sample ID</b> TOC #049, Trip Blank					
<b>Matrix:</b> WATER	<b>Date Sampled:</b> 07/18/2001 <b>Time Sampled:</b> 13:00					
<b>Analyte</b>	<b>Result</b>	<b>DF</b>	<b>PQL</b>	<b>MDL</b>	<b>Units</b>	<b>Date/Analyst</b>

**8021B BTEX + MTBE**

Benzene	ND	1	0.3	0.18	ug/L	07/22/01	HP
Ethyl benzene	ND	1	0.3	0.18	ug/L	07/22/01	HP
Methyl t - butyl ether	ND	1	5	0.24	ug/L	07/22/01	HP
Toluene	ND	1	0.3	0.14	ug/L	07/22/01	HP
Xylene (total)	ND	1	0.6	0.26	ug/L	07/22/01	HP

PQL = Practical Quantitation Limit, MDL = Method detection limit, DF = Dilution Factor  
 ND = Not detected below indicated MDL, J=Trace



8015M - Total Petroleum Hydrocarbons

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Gasoline	ND	1	50	50	ug/L	07/22/01	HP
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PQL = Practical Quantitation Limit, MDL = Method detection limit, DF = Dilution Factor  
ND = Not detected below indicated MDL, J=Trace



**ASSOCIATED LABORATORIES LAB REQUEST RESULTS SUMMARY**

Client: Thrifty Oil  
 Jeff Suryakusuma  
 13539 E. Foster Rd.  
 Santa Fe Springs, CA 90670

Lab Request: 76561  
 Date Received: 7/19/2001  
 Print Date: 07/31/2001

Project: Station #049  
 3400 San Pablo Ave., Oakland

Objectives: Confirm MTBE by 8260.

Sample ID.	Gasoline	Benzene	Toluene	Ethyl benzene	Xylene (total)	MTBE	MTBE by EPA8260
TOC #049, MW1	ND	ND	ND	ND	ND	ND	
TOC #049, MW2	3.260 ug/L	ND	ND	ND	2.0 ug/L	7,960 ug/L	1,710 ug/L
TOC #049, MW3	ND	ND	ND	ND	ND	ND	
TOC #049, MW4	52.200 ug/L	3.320 ug/L	2,090 ug/L	440 ug/L	5,520 ug/L	55,500 ug/L	16,800 ug/L
TOC #049, MW5	ND	ND	ND	ND	ND	ND	
TOC #049, MW6	ND	ND	ND	ND	ND	ND	
TOC #049, MW7	ND	ND	ND	ND	ND	9.0 ug/L	3.5 ug/L
TOC #049, Trip Blank	ND	ND	ND	ND	ND	ND	

ND = Not Detected  
 Blank Field = Component not analyzed by this method.

**ASSOCIATED LABORATORIES**  
LCS REPORT FORM

QC Sample: LCS / LCSD water samples

Method : 8260

Analysis Date: 07/29/01

Applies to: LR 76669, 76561

REPORTING UNITS = ug/L

**Lab Controlled Spike / Lab Controlled Spike Duplicate**

Test	Sample Result	Spike Added	LCS Spike	LCS Spk. Dup	%Rec LCS	%Rec LCS D	% RPD	QC Limits	
								RPD	%REC
1,1-Dichloroethene	ND	50.0	63.69	64.16	127	128	1	22	59-172
MTBE	ND	50.0	46.84	47.94	94	96	2	24	62-137
Benzene	ND	50.0	52.80	54.16	106	108	3	24	62-137
Trichloroethene	ND	50.0	50.40	54.79	101	110	8	21	66-142
Toluene	ND	50.0	59.64	58.59	119	117	2	21	59-139
Chlorobenzene	ND	50.0	59.93	59.08	120	118	1	21	60-133

ND - Not Detected

RPD - Relative Percent Difference of LCS and LCS Dup

%REC-MS & MSD - Percent Recovery of LCS & LCS Dup.

**Method Blank = All ND**

**ASSOCIATED LABORATORIES**  
LCS REPORT FORM

QC Sample: LCS / LCSD water samples

Method : 8260

Analysis Date: 07/26/01

Applies to: LR 76698, 76781, 76561

REPORTING UNITS = ug/L

**Lab Controlled Spike / Lab Controlled Spike Duplicate**

Test	Sample Result	Spike Added	LCS Spike	LCS Spk. Dup	%Rec LCS	%Rec LCS D	% RPD	QC Limits	
								RPD	%REC
1,1-Dichloroethene	ND	50.0	39.97	41.02	80	82	3	22	59-172
MTBE	ND	50.0	66.06	63.02	132	126	5	24	62-137
Benzene	ND	50.0	54.65	59.00	109	118	8	24	62-137
Trichloroethene	ND	50.0	40.04	44.09	80	88	10	21	66-142
Toluene	ND	50.0	46.65	51.20	93	102	9	21	59-139
Chlorobenzene	ND	50.0	50.54	55.70	101	111	10	21	60-133

ND Not Detected

RPD Relative Percent Difference of LCS and LCS Dup.

%REC-MS & MSD Percent Recovery of LCS & LCS Dup.

**Method Blank = All ND**

**ASSOCIATED LABORATORIES**  
QA REPORT FORM

QC Sample: LR 76381-042

Matrix: WATER

Prep. Date: 07/21/01

Analysis Date: 07/21/01-07/22/01

ID#'s in Batch: LR 76467, 76553, 76484, 76486, 76561

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULT**

Reporting Units = ug/L

Test	Method	Sample Result	Spike Added	Matrix Spike	Matrix Spike Dup	%Rec MS	%Rec MSD	RPD
TPH	8015M-G	ND	200	177.5	154	88.8	77.0	14.2

*ND = Not Detected*

*RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate*

*%REC-MS & MSD = Percent Recovery of Matrix Spike & Matrix Spike Duplicate*

<i>%REC LIMITS = 70 - 130</i>
-------------------------------

<i>RPD LIMITS = 30</i>
------------------------

**PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS**

Test	Method	PREP BLK	LCS				
		Value	Result	True	%Rec	L.Limit	H.Limit
TPH	8015M-G	U	165	200	82.5	80%	120%

*LCS Result = Lab Control Sample Result*

*True = True Value of LCS*

*L.Limit / H.Limit = LCS Control Limits*

**ASSOCIATED LABORATORIES**  
QA REPORT FORM

QC Sample: LR 76561-880  
 Matrix: WATER  
 Prep. Date: 07/22/01  
 Analysis Date: 07/22/01-07/23/01  
 LAB ID#'s in Batch: LR 76553, 76561, 76566, 76567

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULT**

REPORTING UNITS = ug/L

Test	Method	Sample Result	Spike Added	Matrix Spike	Matrix Spk. Dup	%Rec MS	%Rec MSD	RPD
Benzene	8021	ND	10.0	10.94	10.30	109	103	6
Toluene	8021	ND	10.0	11.35	10.57	114	106	7
Ethylbenzene	8021	ND	10.0	12.16	11.52	122	115	5
Xylenes	8021	ND	20.0	24.29	22.31	121	112	8

ND = Not Detected

RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Dup

%REC-MS & MSD = Percent Recovery of Matrix Spike & Matrix Spike Duplicate

%REC LIMITS = 70 - 130
RPD LIMITS = 30

**PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS**

Test	Method	PREP. BLK	LCS				
		Value	Result	True	%Rec	L.Limit	H.Limit
Benzene	8021	ND	8.95	10.0	90	80%	120%
Toluene	8021	ND	10.24	10.0	102	80%	120%
Ethylbenzene	8021	ND	11.31	10.0	113	80%	120%
Xylenes	8021	ND	21.38	20.0	107	80%	120%

LCS = Lab Control Sample Result

TRUE = True Value of LCS

# Chain of Custody Record

**ASSOCIATED LABORATORIES**

806 North Batavia • Orange, CA 92868

Phone: (714) 771-6900 • Fax: (714) 538-1209



Company <b>THRIFTY OIL CO.</b>		Phone <b>(562) 921-3581</b>		A.L. Job No. <b>76561</b>		Page _____ of _____												
Project Manager <b>JEFF DURYAKUSUMA</b>		Fax <b>(562) 921-7510</b>		Analysis Requested				Test Instructions & Comments										
Project Name <b>Q. W. S.</b>		Project # <b>49</b>		<table border="1"> <tr> <td>T</td><td>B</td><td>M</td> </tr> <tr> <td>P</td><td>T</td><td>B</td> </tr> <tr> <td>#</td><td>X</td><td>E</td> </tr> </table>				T	B	M	P	T	B	#	X	E	CONFIRMED BY EPA METHOD 8260B	
T	B	M																
P	T	B																
#	X	E																
Site Name and Address <b>3400 SAN PABLO AVE OAKLAND CA. 94612</b>																		
Sample ID	Lab ID	Date	Time	Matrix	Container Number/Size	Pres.												
1 MW 6		07.18.01	13:00	H <sub>2</sub> O	3 VIALS	HCL	X	X	X									
2 MW 3		↑	13:10	↑	↑	↑	X	X	X									
3 MW 7			13:20				X	X	X									
4 MW 5			13:30				X	X	X									
5 MW 1			13:35				X	X	X									
6 MW 4			13:45				X	X	X									
7 MW 2			13:50				X	X	X									
8 TRIP BLANK			13:00				2 VIALS	X	X	X								
9																		
10																		
11																		
12																		
13																		
14																		
15																		

<b>Sample Receipt - To Be Filled By Laboratory</b>				Relinquished by 1. Sampler: _____		Relinquished by 2. FEDEX		Relinquished by 3. _____	
Total Number of Containers	23	Property Cooled Y / N / NA	Y	Signature:	[Signature]	Signature:		Signature:	
Custody Seals Y / N / NA	Y	Samples Intact Y / N / NA	Y	Printed Name:	JEFF DURYAKUSUMA	Printed Name:		Printed Name:	
Received in Good Condition Y / N	Y	Samples Accepted Y / N	Y	Date:	07.19.01	Time:	16:00	Date:	
<b>Turn Around Time</b>				Received By: 1. FEDEX		Received By: 2. _____		Received By: 3. _____	
<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <input type="checkbox"/> Same Day <input type="checkbox"/> 48 hrs. <input type="checkbox"/> 24 hrs. <input type="checkbox"/> 72 hrs.				Signature:	[Signature]	Signature:	[Signature]	Signature:	[Signature]
				Printed Name:	DURYAKUSUMA	Printed Name:	DURYAKUSUMA	Printed Name:	
				Date:		Date:		Date:	
				Time:		Time:		Time:	

# APPENDIX C

THRIFTY OIL CO. SERVICE STATION #49

GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERBAN POPESCU

DATE OF INSPECTION: 09.28.01

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

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

FLOW METER READING: 0498310

SAMPLES OBTAINED: N/A

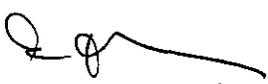
PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: 13

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: 11

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

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

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: 0.6

INSPECTOR'S SIGNATURE: 

THRIFTY OIL CO. SERVICE STATION #49

GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERBAY POPESCU

DATE OF INSPECTION: 09.21.01

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

FLOW METER READING: 0497340

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: 1.0

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

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: 0.7

INSPECTOR'S SIGNATURE: [Signature]

THRIFTY OIL CO. SERVICE STATION #49

GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERBANI POPESCU

DATE OF INSPECTION: 09.14.01

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

FLOW METER READING: 0491010

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: 1.0

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

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: 0.7

INSPECTOR'S SIGNATURE: R Popescu

THRIFTY OIL CO. SERVICE STATION # 49

GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERBAN POPESCU

DATE OF INSPECTION: 09.05.01

OBSERVATIONS AND COMMENTS: Add oil, clean water bag filter, re-  
place cartridge water filter,

FLOW METER READING: 0473610

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: 1.1

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

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: 0.6

INSPECTOR'S SIGNATURE: [Signature]

THRIFTY OIL CO. SERVICE STATION #

19

GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERBATA POPESCU

DATE OF INSPECTION: 08.27.01

OBSERVATIONS AND COMMENTS: I find the system shut down. Over the weekend the station has few hours power down. The compressor don't restart again.

FLOW METER READING: 0469430

SAMPLES OBTAINED: N/A

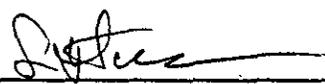
PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: \_\_\_\_\_

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: \_\_\_\_\_

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

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

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

INSPECTOR'S SIGNATURE: 

THRIFTY OIL CO. SERVICE STATION #

49

GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERBAN POPESCU

DATE OF INSPECTION: 08.24.01

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

FLOW METER READING: 0467030

SAMPLES OBTAINED: Not

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: 1.1

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

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: 0.7

INSPECTOR'S SIGNATURE: [Signature]

THRIFTY OIL CO. SERVICE STATION

49

GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERBAN POPESCU

DATE OF INSPECTION: 08.22.01

OBSERVATIONS AND COMMENTS: ERMUD INSPECTOR CAME TO TAKE WATER SAMPLING FROM OUTLET

FLOW METER READING: 0457040 (# 99171308)

SAMPLES OBTAINED: YES, INSPECTOR TAKE 2 VOA.

PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: \_\_\_\_\_

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: \_\_\_\_\_

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

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

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

INSPECTOR'S SIGNATURE: 

THRIFTY OIL CO. SERVICE STATION #049  
GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERRAN POPESCU

DATE OF INSPECTION: 08.17.01

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

FLOW METER READING: 0441270

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: 1.1

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

PRESSURE GAUGE READING DOWN STREAM OF THE THIRD GAC UNIT: 0.6

INSPECTOR'S SIGNATURE: 

049

THRIFTY OIL CO. SERVICE STATION # 049

GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: JERRY POPPICO

DATE OF INSPECTION: 08-10-01

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

FLOW METER READING: 0372630

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: 1.1

PRESSURE GAUGE READING DOWN STREAM OF THE SECONDARY GAC UNIT: 1.0

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

INSPECTOR'S SIGNATURE: [Signature]

THRIFTY OIL CO. SERVICE STATION #

(49)

GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERBAN POPESCU

DATE OF INSPECTION: 08.03.01

OBSERVATIONS AND COMMENTS: Add oil, replace cartridge water filter, check belt, hoses. System was shut down ??

FLOW METER READING: 0864230

SAMPLES OBTAINED: NA

PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: \_\_\_\_\_

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: \_\_\_\_\_

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

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

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

INSPECTOR'S SIGNATURE: [Signature]

THRIFTY OIL CO. SERVICE STATION #49

GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERBAN POPESCU

DATE OF INSPECTION: 07-25-01

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

FLOW METER READING: 0.359550

SAMPLES OBTAINED: N/A

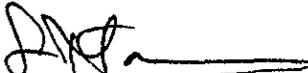
PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: 14

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: 12

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

PRESSURE GAUGE READING DOWN STREAM OF THE SECONDARY GAC UNIT: 1.0

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

INSPECTOR'S SIGNATURE: 

? 9  
THRIFTY OIL CO. SERVICE STATION #  
GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: SERBON POPESCU

DATE OF INSPECTION: 07.18.01

OBSERVATIONS AND COMMENTS: check oil, clean water filter bag  
replace cartridge water filter

FLOW METER READING: 0329240

SAMPLES OBTAINED: yes

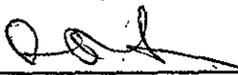
PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: 1.4

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: 1.1

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

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: 

(049)



DATE: 07.13.01

START UP / SHUT DOWN REPORT  
STATION # 049  
SYSTEM TYPE : G.W.

START UP REPORT:

SHUT DOWN REPORT:

Shut down for Q. U.S.

SIGNATURE: *[Handwritten Signature]*

THRIFTY OIL CO. SERVICE STATION #

9  
49

GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: JEROME PODERU

DATE OF INSPECTION: 02.11.01

OBSERVATIONS AND COMMENTS: check oil, belt, hoses for connection

replace cartridge water filter

FLOW METER READING: 0310010

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: 1.0

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

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

INSPECTOR'S SIGNATURE: [Signature]

049

THRIFTY OIL CO. SERVICE STATION # 49  
GROUNDWATER EXTRACTION/TREATMENT SYSTEM INSPECTION FORM

NAME OF INSPECTOR: BERTHA POPPER

DATE OF INSPECTION: 0206.01

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

FLOW METER READING: 0293130

SAMPLES OBTAINED: N/A

PRESSURE GAUGE READING UP STREAM OF THE BAG FILTER: 14

PRESSURE GAUGE READING DOWN STREAM OF THE CARTRIDGE FILTER: 12

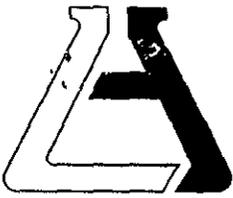
PRESSURE GAUGE READING DOWN STREAM OF THE PRIMARY GAC UNIT: 1.4

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: B. Popper

# APPENDIX D



**ASSOCIATED LABORATORIES**

806 North Batavia - Orange, California 92868 - 714/771-6900

FAX 714/538-1209

CLIENT Thrifty Oil (8871)  
ATTN: Jeff Suryakusuma  
13539 E. Foster Rd.  
Santa Fe Springs, CA 90670

LAB REQUEST 76154

REPORTED 07/16/2001

RECEIVED 07/12/2001

PROJECT Station #049

SUBMITTER Client

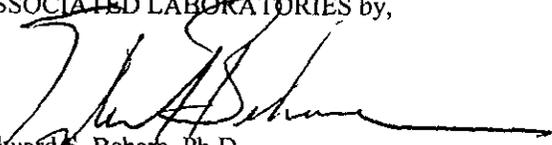
COMMENTS

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report. This cover letter is an integral part of the final report.

<u>Order No.</u>	<u>Client Sample Identification</u>
278289	TOC #049, SS#1 Outlet
278290	TOC #049, Int 1
278291	TOC #049, Int 2
278292	TOC #049, Int 3
278293	TOC #049, Inlet

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,

  
Edward S. Behare, Ph.D.  
Vice President

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported.

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TESTING & CONSULTING  
Chemical  
Microbiological  
Environmental

**Order #:** 278289**Client Sample ID** TOC #049, SS#1 Outlet**Matrix:** WATER**Date Sampled:** 07/11/2001 **Time Sampled:** 08:40

Analyte	Result	DF	PQL	MDL	Units	Date/Analyst
---------	--------	----	-----	-----	-------	--------------

**8021B BTEX + MTBE**

Benzene	ND	1	0.3	0.18	ug/L	07/15/01 HP
Ethyl benzene	ND	1	0.3	0.18	ug/L	07/15/01 HP
Methyl t - butyl ether	ND	1	5	0.24	ug/L	07/15/01 HP
Toluene	ND	1	0.3	0.14	ug/L	07/15/01 HP
Xylene (total)	ND	1	0.6	0.26	ug/L	07/15/01 HP

**8015M - Total Petroleum Hydrocarbons**

Gasoline	ND	1	50	50	ug/L	07/15/01 HP
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**Order #:** 278290**Client Sample ID** TOC #049, Int 1**Matrix:** WATER**Date Sampled:** 07/11/2001 **Time Sampled:** 08:50

Analyte	Result	DF	PQL	MDL	Units	Date/Analyst
---------	--------	----	-----	-----	-------	--------------

**8021B BTEX + MTBE**

Benzene	ND	1	0.3	0.18	ug/L	07/15/01 HP
Ethyl benzene	ND	1	0.3	0.18	ug/L	07/15/01 HP
Methyl t - butyl ether	ND	1	5	0.24	ug/L	07/15/01 HP
Toluene	ND	1	0.3	0.14	ug/L	07/15/01 HP
Xylene (total)	ND	1	0.6	0.26	ug/L	07/15/01 HP

**8015M - Total Petroleum Hydrocarbons**

Gasoline	ND	1	50	50	ug/L	07/15/01 HP
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**Order #:** 278291**Client Sample ID** TOC #049, Int 2**Matrix:** WATER**Date Sampled:** 07/11/2001 **Time Sampled:** 09:00

Analyte	Result	DF	PQL	MDL	Units	Date/Analyst
---------	--------	----	-----	-----	-------	--------------

**8021B BTEX + MTBE**

Benzene	ND	1	0.3	0.18	ug/L	07/15/01 HP
Ethyl benzene	ND	1	0.3	0.18	ug/L	07/15/01 HP
Methyl t - butyl ether	24	1	5	0.24	ug/L	07/15/01 HP
Toluene	ND	1	0.3	0.14	ug/L	07/15/01 HP
Xylene (total)	ND	1	0.6	0.26	ug/L	07/15/01 HP

**8015M - Total Petroleum Hydrocarbons**

Gasoline	ND	1	50	50	ug/L	07/15/01 HP
----------	----	---	----	----	------	-------------

PQL = Practical Quantitation Limit, MDL = Method detection limit, DF = Dilution Factor

ND = Not detected below indicated MDL, J=Trace

**Order #:** 278292**Client Sample ID:** TOC #049, Int 3**Matrix:** WATER**Date Sampled:** 07/11/2001 **Time Sampled:** 09:10

Analyte	Result	DF	PQL	MDL	Units	Date/Analyst
<b>8021B BTEX + MTBE</b>						
Benzene	ND	1	0.3	0.18	ug/L	07/15/01 HP
Ethyl benzene	ND	1	0.3	0.18	ug/L	07/15/01 HP
Methyl t - butyl ether	ND	1	5	0.24	ug/L	07/15/01 HP
Toluene	ND	1	0.3	0.14	ug/L	07/15/01 HP
Xylene (total)	ND	1	0.6	0.26	ug/L	07/15/01 HP

**8015M - Total Petroleum Hydrocarbons**

Gasoline	ND	1	50	50	ug/L	07/15/01 HP
----------	----	---	----	----	------	-------------

**Order #:** 278293**Client Sample ID:** TOC #049, Inlet**Matrix:** WATER**Date Sampled:** 07/11/2001 **Time Sampled:** 09:20

Analyte	Result	DF	PQL	MDL	Units	Date/Analyst
<b>8021B BTEX + MTBE</b>						
Benzene	ND	100	30.0	0.18	ug/L	07/15/01 HP
Ethyl benzene	4,760	100	30.0	0.18	ug/L	07/15/01 HP
Methyl t - butyl ether	ND	100	500.0	0.24	ug/L	07/15/01 HP
Toluene	4,140	100	30.0	0.14	ug/L	07/15/01 HP
Xylene (total)	24,000	500	300.0	0.26	ug/L	07/15/01 HP

**8015M - Total Petroleum Hydrocarbons**

Gasoline	162,000	100	5000.0	50	ug/L	07/15/01 HP
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PQL = Practical Quantitation Limit, MDL = Method detection limit, DF = Dilution Factor  
 ND = Not detected below indicated MDL, J=Trace



**ASSOCIATED LABORATORIES**  
**QA REPORT FORM**

QC Sample: LR 76122-165  
 Matrix: WATER  
 Prep. Date: 07/13/01  
 Analysis Date: 07/13/01-07/14/01  
 ID#'s in Batch: LR 76122, 76123, 75998, 76239, 76153, 76154

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULT**

Reporting Units = ug/L

Test	Method	Sample Result	Spike Added	Matrix Spike	Matrix Spike Dup	%Rec MS	%Rec MSD	RPD
TPH	8015M-G	ND	200	182.8	185.1	91.4	92.6	1.3
Surrogate	8015	ND	20	22.3	22.2	111.5	111.0	0.4

ND = Not Detected

RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate

%REC-MS & MSD = Percent Recovery of Matrix Spike & Matrix Spike Duplicate

%REC LIMITS = 70 - 130

RPD LIMITS = 30

**PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS**

Test	Method	PREP BL	LCS				
		Value	Result	True	%Rec	L.Limit	H.Limit
TPH	8015M-G	ND	190.1	200	95.1	80%	120%
Surrogate	8015	105	22.6	20	113.0	80%	120%

LCS Result = Lab Control Sample Result

True = True Value of LCS

L.Limit / H.Limit = LCS Control Limits

**ASSOCIATED LABORATORIES**  
**QA REPORT FORM**

QC Sample: LR 76154-289

Matrix: WATER

Prep. Date: 017/15/01

Analysis Date: 07/15/01-07/16/01

LAB ID#'s in Batch: LR 76239, 76153, 76154, 76194, 76193

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULT**

REPORTING UNITS = ug/L

Test	Method	Sample Result	Spike Added	Matrix Spike	Matrix Spk. Dup	%Rec MS	%Rec MSD	RPD
Benzene	8021	ND	10.0	10.20	9.90	102	99	3
Toluene	8021	ND	10.0	10.20	9.90	102	99	3
Ethylbenzene	8021	ND	10.0	11.20	11.00	112	110	2
Xylenes	8021	ND	20.0	21.20	20.70	106	104	2
Surrogate	8021	ND	20.0	20.20	20.10	101	101	0

ND = Not Detected

RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Dup

%REC-MS & MSD = Percent Recovery of Matrix Spike & Matrix Spike Duplicate

%REC LIMITS = 70 - 130
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RPD LIMITS = 30
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**PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS**

Test	Method	PREP. BL	LCS				
		Value	Result	True	%Rec	L.Limit	H.Limit
Benzene	8021	ND	10.60	10.0	106	80%	120%
Toluene	8021	ND	10.60	10.0	106	80%	120%
Ethylbenzene	8021	ND	11.60	10.0	116	80%	120%
Xylenes	8021	ND	21.90	20.0	110	80%	120%
Surrogate	8021	ND	20.50	20.0	103	80%	120%

LCS = Lab Control Sample Result

TRUE = True Value of LCS



**Chain of Custody Record**

Company: THRIFTY OIL CO. Phone: (562) 921-3581 A.L. Job No. 76154 ✓ Page      of     

Project Manager: JEFF SURYAKUSUMA Fax: (562) 921-7510

Project Name: SYSTEM WATER SAMPLING Project #: 049

Site Name and Address: # 049 ✓

Sample ID	Lab ID	Date	Time	Matrix	Container Number/Size	Pres.	Analysis Requested			Test Instructions & Comments
							T	B	M	
							H	E	B	
1		07.11.01	8:40	H <sub>2</sub> O	3 VIALS	HCL	X	X	X	GRAB SAMPLE
2		↓	8:50	↑	↓	↓	X	X	X	
3			9:00	↑	↓	↓	X	X	X	
4			9:10	↑	↓	↓	X	X	X	
5			9:20	↑	↓	↓	X	X	X	
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

<b>Sample Receipt - To Be Filled By Laboratory</b>				Relinquished by Sampler: 1.	Relinquished by: 2.	Relinquished by: 3.
Total Number of Containers	15	Properly Cooled Y / N / NA	Y	Signature: <u>[Signature]</u>	Signature: <u>FRD EX</u>	Signature:
Custody Seals Y / N / NA	Y	Samples Intact Y / N / NA	Y	Printed Name: <u>KERBAH POTRECU</u>	Printed Name:	Printed Name:
Received in Good Condition Y / N	Y	Samples Accepted Y / N	Y	Date: <u>7.11.01</u> Time: <u>15:10</u>	Date:                      Time:	Date:                      Time:
<b>Turn Around Time</b>				Received By: 1.	Received By: 2.	Received By: 3.
<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <input type="checkbox"/> Same Day <input type="checkbox"/> 48 hrs.				Signature: <u>FRD EX</u>	Signature: <u>[Signature]</u>	Signature:
<input type="checkbox"/> 24 hrs. <input type="checkbox"/> 72 hrs.				Printed Name:	Printed Name: <u>DUONG VU</u>	Printed Name:
				Date:                      Time:	Date: <u>7/12/01</u> Time: <u>1040</u>	Date: <u>7/12</u> Time: <u>8:45</u>